

Draft

BOGUE-STEWART MASTER PLAN

Environmental Impact Report
SCH No. 2017012009

Prepared for
Yuba City Development Services Department

May 2019



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SUMMARY

Bogue-Stewart Master Plan Environmental Impact Report

S.1 Introduction

This Environmental Impact Report (EIR) is an informational document intended to inform the public and decision-makers about the environmental consequences of the proposed Bogue-Stewart Master Plan (BSMP or proposed plan) for the City of Yuba City. The EIR considers the environmental impacts of the proposed plan as well as the additive effects of growth throughout the Yuba City area and the region. These latter impacts are referred to as cumulative impacts. The EIR has been prepared by the City of Yuba City pursuant to the requirements of the California Environmental Quality Act (CEQA).

Upon publication, the environmental documents described above are available online at www.yubacity.net/BSMP, and may be viewed in printed form at the Yuba City Development Services Department; 1201 Civic Center Boulevard; Yuba City, CA 95993. Hearings regarding the project will occur at various times, and the City posts agendas at kiosks at City Hall and on its website at <https://www.yubacity.net/>.

City staff responsible for the drafting of the environmental document may be contacted with questions:

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The Final EIR will be submitted to the City Council for their consideration. As part of the project review and consideration, the City Council, prior to approving the project, is required under CEQA to certify that the EIR has been prepared in compliance with CEQA, and would also consider adoption of Findings of Fact pertaining to this EIR, specific mitigation measures, a Statement of Overriding Considerations relating to any identified significant and unavoidable effects, and a Mitigation Monitoring and Reporting Program.

S.2 Project Description

Bogue-Stewart Master Plan

The purpose of the proposed BSMP is to provide guidance for an orderly and cohesive planned community consistent with the Yuba City General Plan and Yuba City zoning regulations for future annexation into the City. The proposed BSMP combines elements from the Yuba City General Plan and zoning regulations in a comprehensive manner that establishes the regulatory structure to guide development directly adjacent to the southern edge of the City. The proposed plan would provide for the development of two property assemblages totaling 741 acres as a planned community with a mix of residential, commercial, office/business, park and recreational sites, and public facilities.

The proposed BSMP would provide direction for land use and community design, mobility, utilities, public services, and implementation. It would also function as the BSMP area's zoning mechanism, regulating allowed uses, development standards, design expectations, and guidance on roadway alignment and right-of-way to correspond with the neighborhood pattern in existing residential neighborhoods adjacent to the plan area.

The proposed BSMP would be the primary land use, policy, and regulatory document used to guide the overall development of the plan area. It would establish a development framework for land use, mobility, utilities and services, resource protection, and implementation to promote the systematic and orderly development of the plan area. All subsequent development projects and related activities proposed within the plan area would be required to be consistent with the proposed BSMP.

Sphere of Influence Amendment

The entirety of the 741-acre plan area is proposed to be included in the City of Yuba City's SOI using a SOI amendment (SOIA). Consistent with the requirements of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, Sutter County LAFCo is the lead agency to consider and approve any SOIA within the county. This document is meant to provide the environmental analysis needed so that Sutter County LAFCo can make an appropriate determination regarding this action.

Annexation

The proposed project includes annexation of 304 acres to the City of Yuba City (Phase 1 and Phase 2 as shown on Figure 2-5 in Chapter 2, Project Description). Annexation can only occur if and once Sutter LAFCo has approved an SOIA, however, this may happen shortly after the SOIA is approved. Sutter County LAFCo is the responsible agency for the annexation request. It is anticipated that the Sutter County LAFCo would use this EIR in its decision making process, as required under CEQA. LAFCo policies and procedures are discussed in Section 3.11, Land Use and Planning.

General Plan Map Amendments

The plan area is currently located in the unincorporated area of Sutter County (**Figure S-1**). The Yuba City General Plan designates the plan area as an Agricultural/Rural area outside of the City limits and the Yuba City SOI, subject to Sutter County General Plan land use designation and zoning.

Assuming LAFCo approval of Phase 1 and 2 annexation to the City of Yuba City, all subsequent development within these areas would need to be consistent with the proposed BSMP, as well as the City's General Plan, and Yuba City Municipal Code, policies, and design guidelines, as applicable. Part of the application to LAFCo includes a land use plan of the entire plan area (**Figure S-2**). Thus, the City would amend its General Plan map to include the plan area, and to reflect the General Plan land use assigned to parcels within the plan area in the proposed BSMP.

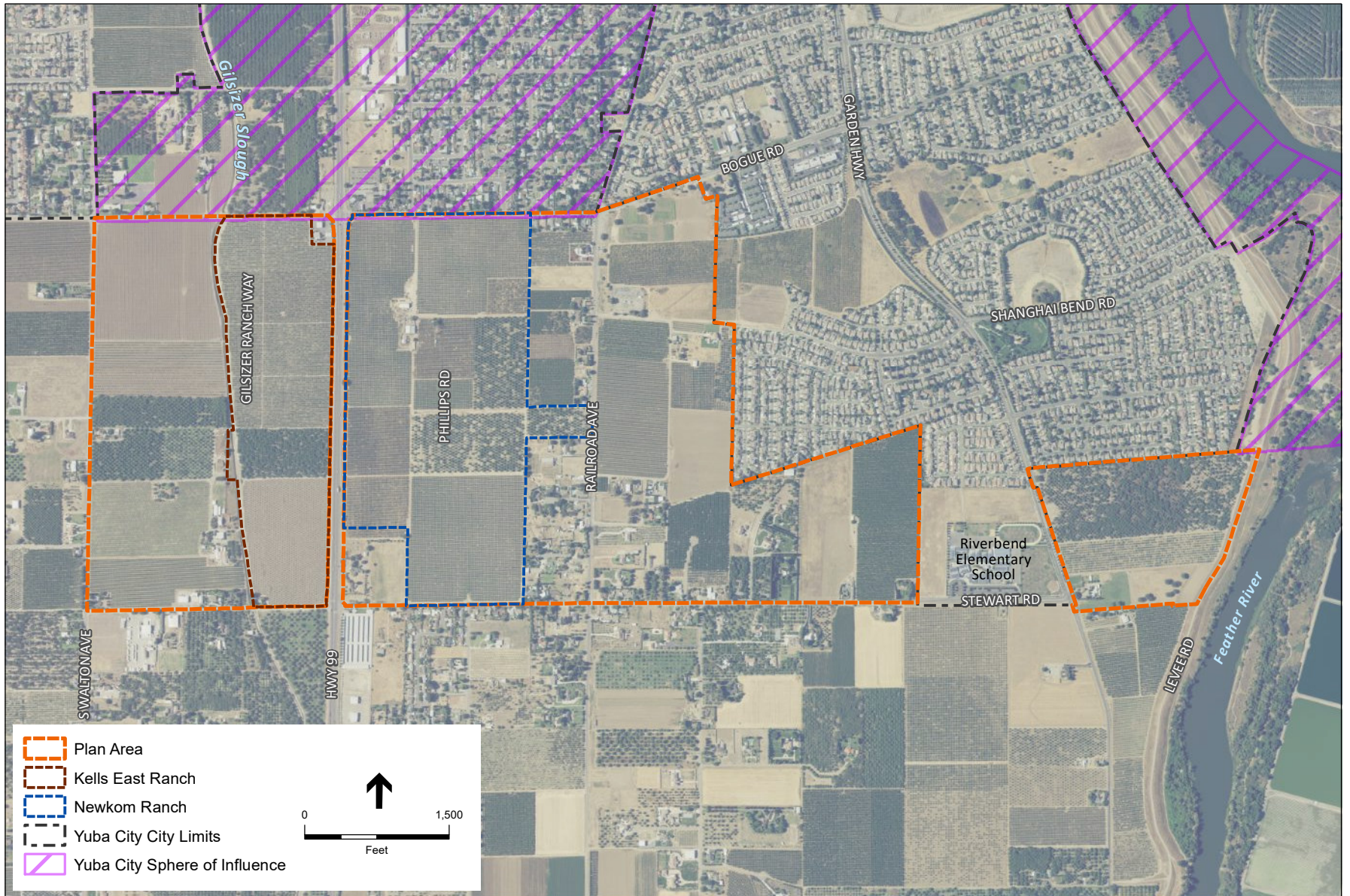
Zoning Amendments

The plan area is currently zoned by Sutter County for Agriculture, Estate Residential, Commercial-Industrial, and Single-Family. Assuming LAFCo approval of the SOIA, the entire plan area would be pre-zoned by the City of Yuba City.

S.3 Areas of Concern

In response to the notice of preparation, the City received 11 comment letters addressing the scope of the environmental analysis for the EIR. Those comments focused on several issues:

- A Central Valley Flood Protection Board permit may be required for work on or near the Feather River levee (i.e., within 20 feet of the west levee toe);
- A request that the BSMP EIR address consistency with the Sutter County General Plan policies regarding the expansion of the Yuba City SOI;
- Water quality permits may be needed from the Central Valley Regional Water Quality Control Board;
- Impacts to biological resources, including wetlands and sensitive species including nesting raptors and other avian species, should be evaluated;
- Project impacts to traffic and parking should be evaluated particularly along Railroad Avenue and school traffic along Stewart Road near Garden Highway;
- Project impacts to noise should be evaluated;
- Impacts to air quality should be evaluated;
- Alternatives analysis should consider development of sites within the City of Yuba City;
- The proposed project would result in the conversion of farmland to nonagricultural uses. Mitigation should be identified to mitigate the impact of the conversion of agricultural lands;
- Police protection services and facilities requirements to serve the proposed project should be evaluated;



SOURCE: USDA, 2016; City of Yuba City, 2016; ESA, 2019

Bogue-Stewart Master Plan and EIR . 140720

Figure S-2
Plan Area

- Some letters question whether there is adequate water supply for the proposed project and how restrictions for groundwater pumping may be implemented; and
- Some commenters questioned the land use compatibility of planned medium low density residential zoning (apartments) adjacent to existing rural low density residential uses.

S.4 Environmental Effects

As required by the CEQA Guidelines Section 15123(b)(1), an EIR must provide a summary of the impacts, mitigation measures and significant impacts after mitigation for a proposed project. This information is presented in Chapter 3, Environmental Impacts, Setting, and Mitigation Measures, of this EIR, and summarized in **Table S-1** at the end of this chapter. Based on the analysis contained in the EIR, implementation of the proposed General Plan Update would result in the following significant and unavoidable impacts:

Impact 3.1-1: Development pursuant to the proposed BSMP could result in a substantial adverse effect on a scenic vista.

Impact 3.1-2: Development pursuant to the proposed BSMP could substantially degrade the existing visual character or quality of the site and its surroundings.

Impact 3.1-4: Implementation of the proposed project, in conjunction with development of other projects in the Yuba City Sphere of Influence and within nearby Sutter County, could contribute to cumulative impacts on scenic vistas.

Impact 3.1-5: Implementation of the proposed BSMP, in combination with other projects in the Yuba City Sphere of Influence and within adjacent Sutter County, could contribute to cumulative degradation of visual character and quality.

Impact 3.2-3: Implementation of the proposed project would contribute to cumulative conversion of Important Farmland to non-agricultural use.

Impact 3.3-1: Construction of land uses under the proposed BSMP could generate criteria pollutant emissions that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Impact 3.3-2: Operational activities associated with development under the proposed BSMP would result in emissions of criteria air pollutants at levels that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Impact 3.3-3: The proposed BSMP project would not conflict with or obstruct implementation of an applicable air quality plan.

Impact 3.3-7: The proposed BSMP could contribute to cumulative increases in short-term (construction) emissions.

Impact 3.3-8: The proposed BSMP could contribute to cumulative increases in long-term (operational) emissions.

Impact 3.5-1: Development pursuant to the proposed BSMP could cause a substantial adverse change in the significance of an historical architectural resource.

Impact 3.14-9: Implementation of the proposed BSMP, in combination with other cumulative development, would cause cumulatively significant LOS-related impacts at intersections maintained by Caltrans.

Impact 3.14-10: Implementation of the proposed BSMP, in combination with other cumulative development, would cause significant queuing-related impacts at intersections maintained by Caltrans.

S.5 Alternatives to the Proposed Project

Pursuant to State CEQA Guidelines, this EIR must present a discussion of a reasonable range of alternatives to the proposed BSMP. The alternatives should be designed to feasibly accomplish most of the basic objectives of the proposed project while looking to avoid or substantially lessen one or more of the significant effects. The feasibility of an alternative is determined by the lead agency based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control.

The alternatives evaluated in the EIR are described below. Of the alternatives considered for the proposed BSMP, there were a number of alternatives found to be overtly infeasible or worthy of dismissal prior to further consideration that are also analyzed in Chapter 5, Alternatives, of this EIR. In identifying alternatives to the proposed plan, primary consideration was given to alternatives that could reduce significant unavoidable impacts resulting from the proposed plan while still obtaining the plan's objectives. Certain impacts that are identified as being significant and unavoidable under the proposed plan (e.g., increase in air pollutants from project construction and operation) are due primarily to developing an area that is currently undeveloped or intensifying development activity beyond current levels. These impacts would not be possible to eliminate, but could be reduced, for example, by limiting the scope of the proposed plan, reconfiguring uses, or implementing mitigation measures. The alternatives considered in this section include:

- Alternative 1: No Project/No Build Alternative
- Alternative 2: No Project/Existing Sutter County General Plan
- Alternative 3: Reduced Project Alternative

Alternative 1: No Project/No Build Alternative

Alternative 1 is the No Project alternative as required by CEQA Guidelines section 15126.6(e). Under the No Project alternative, no building or development would occur in the plan area. The site is assumed to remain in its existing condition, including the existing agriculture and estate residential uses.

Alternative 2: No Project/Existing Sutter County General Plan

Alternative 2 would develop the plan area under the existing Sutter County General Plan land use and zoning designations, which include the Estate Residential (ER), Low Density Residential (LDR), Industrial (IND), and Agriculture (AG-20).

Alternative 3: Reduced Project Alternative

Alternative 3 would develop the plan area with the same land uses proposed in the BSMP, however there would be 25 percent less development within those land uses.

Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126.6 (e)(2) of the State CEQA Guidelines requires that an environmentally superior alternative be designated and states that if the environmentally superior alternative is the No Project alternative, the EIR also is required to identify an environmentally superior alternative among the other alternatives.

Based on the summary of information presented in Chapter 5, Alternatives (Table 5-7), the environmentally superior alternative is Alternative 1: No Project/No Build. Because Alternative 1 would leave the project site essentially unchanged and would not have the operational effects that would be associated with any of the alternatives, this alternative has fewer environmental impacts than the proposed project or any of the other alternatives.

As discussed above, if the environmentally superior alternative is the No Project alternative, the EIR must also identify an environmentally superior alternative from the other alternatives. Aside from Alternative 1, Alternative 2 would have the least environmental impacts because it would be result in much less development and would maintain much of the existing agricultural and rural attributes of the project site, relative to the proposed BSMP.

S.6 Summary Table

Table S-1 (Summary of Impacts and Mitigation Measures), has been organized to correspond with the environmental issues discussed in Chapter 4. The summary table is arranged in four columns:

1. Environmental impacts (“Impact”).

2. Level of significance without mitigation (“Significance Before Mitigation”).
3. Mitigation measures (“Mitigation Measure”).
4. The level of significance after implementation of mitigation measures (“Significance After Mitigation”).

If an impact is determined to be significant or potentially significant, mitigation measures are identified, where appropriate. More than one mitigation measure may be required to reduce the impact to a less-than-significant level. This EIR assumes that all applicable plans, policies, and regulations would be implemented, including, but not necessarily limited to, City General Plan policies, laws, and requirements or recommendations of the City of Yuba City. Applicable plans, policies, and regulations are identified and described in the Regulatory Setting of each issue area and within the relevant impact analysis. A description of the organization of the environmental analysis, as well as key foundational assumptions regarding the approach to the analysis, is provided in Section 4.0, Introduction to the Analysis.

**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.1 Aesthetics, Light and Glare			
3.1-1: Development pursuant to the proposed BSMP could result in a substantial adverse effect on a scenic vista.	S	None available.	SU
3.1-2: Development pursuant to the proposed BSMP could substantially degrade the existing visual character or quality of the site and its surroundings.	S	None available.	SU
3.1-3: The proposed project could create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	S	None available	SU
3.1-4: Implementation of the proposed project, in conjunction with development of other projects in the Yuba City Sphere of Influence and within nearby Sutter County, could contribute to cumulative impacts on scenic vistas.	S	None available.	SU
3.1-5: Implementation of the proposed BSMP, in combination with other projects in the Yuba City Sphere of Influence and within adjacent Sutter County, could contribute to cumulative degradation of visual character and quality.	S	None available.	SU
3.1-6: Implementation of the proposed BSMP would contribute to a cumulative increase in light and glare in the vicinity of the BSMP project site.	S	None available	SU
3.2 Agriculture and Forestry Resources			
3.2-1: The proposed BSMP would result in conversion of Important Farmland to non-agricultural use.	PS	None feasible.	SU

LTS = less than significant; NA = not applicable; NI = no impact; PS = potentially significant; SU = significant and unavoidable.

**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.2-2: The proposed BSMP would involve other changes in the existing environment which, due to their location or nature, could result in indirect conversion of Farmland to non-agricultural use.	LS	None required.	NA
3.2-3: Implementation of the proposed project would contribute to cumulative conversion of Important Farmland to non-agricultural use.	PS	None feasible.	SU
3.3 Air Quality			
3.3-1: Construction of land uses under the BSMP could generate criteria pollutant emissions that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.	S	<p>Mitigation Measure 3.3-1(a): Fugitive Dust Control Plan (BSMP/NR/KER)</p> <p>The applicant shall submit to FRAQMD a Fugitive Dust Control Plan with the following mitigation measures to be implemented:</p> <ul style="list-style-type: none"> a) All grading operations on a project shall be suspended when sustained winds exceed 20 miles per hour (mph) or when winds carry dust beyond the property line despite implementation of all feasible dust control measures; b) Construction sites shall be watered as directed by the FRAQMD and as necessary to prevent fugitive dust violations. c) An operational water truck shall be on-site at all times. Water shall be applied to control dust as needed to prevent visible emissions violations and off-site dust impacts. d) On-site dirt piles or other stockpiled particulate matter shall be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce wind-blow dust emissions. The use of approved nontoxic soil stabilizers shall be incorporated according to manufacturers' specifications to all inactive construction areas. e) All transfer processes involving a free fall of soil or other particulate matter shall be operated in such a manner as to minimize the free fall distance and fugitive dust emissions. f) Approved chemical soil stabilizers shall be applied according to the manufacturers' specifications to all inactive construction areas (previously graded areas that remain inactive for 96 hours), including unpaved roads and employee/equipment parking areas. g) To prevent track-out, wheel washers shall be installed where project vehicles and/or equipment exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed before each trip. Alternatively, a gravel bed may be installed as appropriate at vehicle/equipment site exit points to effectively remove soil buildup on tires and tracks and prevent/diminish track-out. h) Paved streets shall be swept frequently (water sweeper with reclaimed water recommended; wet broom permitted) if soil material has been carried onto adjacent paved, public thoroughfares from the project site. i) Temporary traffic control shall be provided as needed during all phases of construction to improve traffic flow, as deemed appropriate by the appropriate department of public works and/or California Department of Transportation (Caltrans), and to reduce vehicle dust emissions. An effective measure is to enforce vehicle traffic speeds at or below 15 mph. 	SU

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.3-1 (cont.)		<p>j) Traffic speeds on all unpaved surfaces shall be reduced to 15 mph or less, and unnecessary vehicle traffic shall be reduced by restricting access. Appropriate training to truck and equipment drivers, on-site enforcement, and signage shall be provided.</p> <p>k) Ground cover shall be reestablished on the construction site as soon as possible and before final occupancy through seeding and watering.</p> <p>l) Open burning shall be prohibited at the project site. No open burning of vegetative waste (natural plant growth wastes) or other legal or illegal burn materials (e.g., trash, demolition debris) may be conducted at the project site. Vegetative wastes shall be chipped or delivered to waste-to-energy facilities (permitted biomass facilities), mulched, composted, or used for firewood. It is unlawful to haul waste materials off-site for disposal by open burning.</p>	
		<p>Mitigation Measure 3.3-1(b): Control Exhaust Emissions (BSMP/NR/KER)</p> <p>Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions Limitations (40 percent opacity or Ringelmann 2.0). Operators of vehicles and equipment found to exceed opacity limits shall take action to repair the equipment within 72 hours or remove the equipment from service. Failure to comply may result in a notice of violation from FRAQMD.</p>	
		<p>Mitigation Measure 3.3-1(c): Limit Equipment Idling (BSMP/NR/KER)</p> <p>Idling time shall be minimized to 5 minutes in accordance with ARB airborne air toxic control measure 13 (CCR Chapter 10 Section 2485) unless more time is required per engine manufacturers' specifications or for safety reasons.</p>	
		<p>Mitigation Measure 3.3-1(d): Equipment Registration (BSMP/NR/KER)</p> <p>Portable engines and portable engine-driven equipment units used on the project site, with the exception of on-road and off-road motor vehicles, may require ARB Portable Equipment Registration with the state or a local district permit. The owner/operator of the equipment shall be responsible for arranging appropriate consultations with ARB or the FRAQMD to determine registration and permitting requirements before the equipment is operated at the site.</p>	
		<p>Mitigation Measure 3.3-1(e): Equipment Emissions Plan (BSMP/NR/KER)</p> <p>During the construction of the BSMP, individual project applicants shall assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that will be used an aggregate of 40 or more hours for a construction project. Applicants shall provide a plan for approval by FRAQMD demonstrating that the heavy-duty (equal to or greater than 50 horsepower) off-road equipment to be used for construction, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent ARB fleet average at the time of construction.</p>	

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.3-1 (cont.)		These equipment emission reductions can be demonstrated using the most recent version of the Construction Mitigation Calculator developed by the SMAQMD. Acceptable options for reducing emissions may include use of late-model engines, low emission diesel products, alternative fuels, engine retrofit technology (Carl Moyer Guidelines), after-treatment products, voluntary off-site mitigation projects, the provision of funds for air district off-site mitigation projects, and/or other options as they become available. In addition, implementation of these measures would also result in a 5 percent reduction in ROG emissions from heavy-duty diesel equipment. FRAQMD shall be contacted to discuss alternative measures.	
3.3-2: Operational activities associated with development under the BSMP would result in emissions of criteria air pollutants at levels that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.	S	<p>Mitigation Measure 3.3-2: Implement Operational Mitigation Measures (BSMP/NR/KER)</p> <p>The project applicant(s) for tentative subdivision maps and development projects proposed under the BSMP shall implement the mitigation measures, as applicable to the proposed subdivision map or development project. At the time entitlements are sought, the City will evaluate measures below, determine which measures are applicable, and include those measures as conditions of approval or some other enforceable mechanism. All feasible measures listed below shall be incorporated into subdivision maps and development projects within the BSMP.</p> <ul style="list-style-type: none"> <li>a) Subdivision maps and development projects located in areas designated Community Commercial, Neighborhood Commercial, Office Park, and Business Park shall be developed in coordination with local transit providers to ensure proper placement and design of transit stops and accommodate public transit for both employees and patrons. <li>b) Subdivision maps and improvement plans shall be designed to provide convenient and safe bicycle, pedestrian, and transit access between neighborhoods and areas designated Community Commercial, Neighborhood Commercial, Office Park, and Business Park, as well as parks, trails, and other destinations. <li>c) Subdivision maps and development projects within Community Commercial and Neighborhood Commercial areas shall distribute proposed parking and not concentrate parking exclusively between the front building façade and the primary abutting street where feasible. <li>d) Cul-de-sacs are allowed only where they would not create a barrier for pedestrian and bicycle access or circulation between homes and destinations. <li>e) Employment generating projects that anticipate more than 50 full-time equivalent employees shall participate in the Yuba-Sutter Transportation Management Association. <li>f) Subdivision maps and improvement plans shall be designed to accommodate safe and frequent pedestrian crosswalks, with more frequent crossings in areas expected to have higher pedestrian traffic, such as schools, parks, trail connections, higher-density residential areas, and areas with retail, services, office uses, and other non-residential uses. <li>g) Subdivision maps and improvement plans shall be designed to discourage concentration of traffic at a few intersections. Multiple points of access shall be provided whenever feasible. Roads shall be arranged in an interconnected block pattern. The maximum average block length in subdivisions is 600 feet unless unusual existing physical conditions warrant an exception to this standard, but shorter block lengths should be used around areas designated Community Commercial and Neighborhood Commercial. <li>h) Subdivision maps and improvement plans shall be designed to connect with adjacent roadways and stubbed roads and shall provide frequent stubbed roadways in coordination with future planned development areas. 	SU

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<ul style="list-style-type: none"> i) Subdivision maps and development projects within Community Commercial and Neighborhood Commercial areas shall be designed to minimize the amount of on-site land required to meet parking, internal circulation, and delivery/loading needs. j) Subdivision maps and development projects within Community Commercial and Neighborhood Commercial areas shall be designed to break up any proposed surface parking with landscaping and provide pedestrian routes from parking areas to building entrances. k) The City will reduce the amount of off-street parking required or eliminate off-street parking requirements for projects that propose housing units restricted to lower-, very low-, or extremely low-income households. l) Residential subdivision maps shall orient the majority of buildings so that the longer axis of the building, also known as the ridge line, is oriented east-to-west, in order to maximize the potential for passive solar heating in the winter and to minimize heat gain from the afternoon summer sun. m) Subdivision maps and development projects proposing off-street surface parking lots shall incorporate shade trees or shade structures to provide a minimum of 50 percent shading (at maturity, where trees are used). n) Subdivision maps and development projects shall use climate-appropriate landscaping in parks and open space, landscaping within new rights of way, yards, and other appropriate spaces. o) Provide secure, covered bicycle parking for employees of projects located in areas designated Community Commercial, Neighborhood Commercial, Office Park, and Business Park. This may consist of a separate secure, covered bicycle parking area at each employment location or larger shared bicycle parking area/s located and designed to serve multiple locations. p) Shower and locker facilities shall be provided for employees of projects located in areas designated Community Commercial, Neighborhood Commercial, Office Park, and Business Park. This may be achieved by incorporating a shower and locker facility into the design of each proposed use, or facilities located and designed to serve multiple locations. q) Residential development that proposes fireplaces shall use the lowest emitting commercially available fireplace. r) Provide electric vehicle charging facilities and priority parking at non-residential uses for electric and carpool/vanpool vehicles. 	
3.3-3: The proposed BSMP project would not conflict with or obstruct implementation of an applicable air quality plan.	S	Mitigation Measure 3.3-3: Consistency with the Triennial Air Quality Attainment Program (BSMP/NR/KER) Implement Mitigation Measure 3.3-1(a) through Mitigation Measure 3.3-1(e) and Mitigation Measure 3.3-2	SU
3.3-4: Traffic associated with development under the BSMP could result in exposure of persons to substantial localized carbon monoxide concentrations.	LS	None required.	NA
3.3-5: Construction of the proposed BSMP could result in short-term exposure to Toxic Air Contaminants (TACs).	PS	Mitigation Measure 3.3-5: Equipment Emissions Plan (BSMP/NR/KER) Mitigation Measure 3.3-1(e)	LS

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.3-6: Land uses to be developed under the BSMP could result in exposure of substantial persons to objectionable odors.	LS	None required.	NA
3.3-7: The proposed BSMP could contribute to cumulative increases in short-term (construction) emissions.	S	<p>Mitigation Measure 3.3-7(a): Fugitive Dust Control Plan (BSMP/NR/KER) Implement Mitigation Measure 3.3-1(a)</p> <p>Mitigation Measure 3.3-7(b): Control Exhaust Emissions (BSMP/NR/KER) Implement Mitigation Measure 3.3-1(b)</p> <p>Mitigation Measure 3.3-7(c): Limit Equipment Idling (BSMP/NR/KER) Implement Mitigation Measure 3.3-1(c)</p> <p>Mitigation Measure 3.3-7(d): Equipment Registration (BSMP/NR/KER) Implement Mitigation Measure 3.3-1(d)</p> <p>Mitigation Measure 3.3-7(e): Equipment Emissions Plan (BSMP/NR/KER) Implement Mitigation Measure 3.3-1(e)</p>	SU
3.3-8: The proposed BSMP could contribute to cumulative increases in long-term (operational) emissions.	S	<p>Mitigation Measure 3.3-8: FRAQMD Best Available Mitigation Measures (BSMP/NR/KER) Implement Mitigation Measure 3.3-2.</p>	SU
3.3-9: The proposed BSMP could contribute to cumulative increases in CO concentrations.	LS	None required.	NA
3.3-10: The proposed BSMP could contribute to cumulative increases in short- and long-term exposures to Toxic Air Contaminants.	PS	<p>Mitigation Measure 3.3-10: Equipment Emissions Plan (BSMP/NR/KER) Implement Mitigation Measure 3.3-1(e).</p>	LS
3.4 Biological Resources			
3.4-1: Development pursuant to the proposed BSMP could impact wetlands or other waters of the U.S.	S	<p>Mitigation Measure 3.4-1: Protection of Jurisdictional Waters and Wetlands (BSMP/NR/KER)</p> <p>a) Prior to grading activities, the City shall require the project applicant [for an individual project pursuant to the BSMP] to prepare a formal aquatic resources delineation in accordance with the USACE Minimum Standards for Acceptance of Aquatic Resources Delineation Reports for all areas of the individual development project site to determine if any wetlands or other waters of the U.S. potentially subject to Sections 401 and 404 of the CWA exist on that site. If no potential wetlands or other waters of the U.S. are identified, a report shall be submitted to the City for its records and no additional measures are required. If the formal aquatic resources delineation identifies potentially jurisdictional features on an individual project site, then measure 3.4-1(b) shall be implemented (below). If potential canals, streams, or lakes are identified that may be impacted by project activities, mitigation 3.4-1(c) shall also be implemented.</p>	LS

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.4-1 (cont.)		<p>b) If the formal aquatic resources delineation identifies potentially jurisdictional features on an individual development project site, then the report shall be submitted to the USACE for verification and issuance of a jurisdictional determination. If any wetlands or waters are determined to be under the jurisdiction of the USACE or the RWQCB and may be impacted by project development, then the individual project applicant shall obtain Section 404/401 permits based on the jurisdictional determination with the appropriate regulatory agency for the potentially impacted features. During the permitting process, mitigation measures shall be developed as necessary to reduce impacts on wetlands through avoidance, minimization and/or compensatory mitigation. Permanent losses to potentially jurisdictional wetlands and other waters of the U.S. shall be compensated at a minimum 1:1 ratio (or otherwise agreed upon ratio with the USACE and RWQCB) to achieve a no net loss of wetlands.</p> <p>c) If the individual development project would result in impacts to the bed and banks of Gilsizer Slough, or other jurisdictional water courses with a defined bed and bank as identified in an aquatic resources delineation or jurisdictional determination, the City shall notify, or require the project applicant to notify, the CDFW will determine whether a Section 1600 Lake and Streambed Alteration Agreement (LSAA) is required. If required, the individual project applicant shall apply for and adhere to the conditions of the LSAA. This action shall be completed prior to issuance of a grading permit or initiation of other project activities that may impact the canal or other jurisdictional water courses.</p>	
3.4-2: Development pursuant to the proposed BSMP could impact valley elderberry longhorn beetle if suitable elderberry shrubs are present within 165 feet of any BSMP construction footprint.	S	<p>Mitigation Measure 3.4-2: Protection of Valley Elderberry Longhorn Beetle (BSMP/NR/KER)</p> <p>a) The individual project applicant shall engage a qualified biologist to conduct a survey of the construction footprint and 165-foot buffer around the proposed construction footprint to determine whether any elderberry shrubs with stems at least one inch dgl are present. If no such elderberry shrubs are present within 165 feet of construction activities, a report shall be submitted to the City for its records and no additional measures are required.</p> <p>b) If elderberry shrubs with stems at least one inch dgl are present within 165 feet of construction activities, the following avoidance measures shall be implemented, at minimum, in accordance with the VELB Impact Assessment.</p> <ol style="list-style-type: none"> 1. Fencing shall be installed as close to the construction limits as feasible for shrubs occurring within 165 feet. 2. In areas where work would occur within near proximity to elderberry shrub, exclusion fencing shall be established a minimum of a 20-foot radius around the shrubs. 3. An individual project applicant shall engage a qualified biologist to provide worker awareness training for all contractors, work crews, and any onsite personnel, on the status of the VELB, its host plant and habitat, the need to avoid damaging the shrubs, and the possible penalties for non-compliance. 4. Mechanical weed removal within the drip-line of the shrub shall be limited to the season when adults are not active (August - February) and shall avoid damaging the elderberry. <p>c) If elderberry shrubs cannot be avoided or if indirect effects will result in the death of stems or entire shrubs, the elderberry shrubs with stems greater than one inch dgl shall be transplanted.</p> <ol style="list-style-type: none"> 1. The individual project applicant shall engage a qualified biologist to monitor the transplanting activities. 2. Elderberry shrubs shall be transplanted when the shrubs are dormant (November through February 14) and after they have lost their leaves. 	LS

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.4.2 (cont.)		d) For shrubs that cannot be avoided, the individual project applicant shall purchase compensatory mitigation for impacts to elderberry shrubs. The appropriate type and amount of compensatory mitigation shall be determined through coordination with the USFWS. Appropriate compensatory mitigation may include purchasing credits at a USFWS-approved conservation bank at a minimum 1:1 ratio, providing onsite mitigation, and/or establishing and/or protecting habitat for the valley elderberry longhorn beetle.	
3.4-3: Development pursuant to the proposed BSMP could result in impacts to nesting migratory birds and raptors.	S	<p>Mitigation Measure 3.4-3: Protection of Migratory Birds and Raptors (BSMP/NR/KER)</p> <p>a) Building demolition and vegetation clearing operations, including initial grading and tree removal, shall occur outside of the nesting season (September 1 through January 31) to the extent feasible. If vegetation removal or building demolition begins during the nesting season (February 1 to August 31), the individual project applicant shall engage a qualified biologist to conduct a pre-construction survey for active nests within a 500-foot buffer around the individual project footprint. The pre-construction survey shall be conducted within 14 days prior to commencement of ground disturbing activities. If the pre-construction survey shows that there is no evidence of active nests, then a report shall be submitted to the City for its records and no additional measures are required. If construction does not commence within 14 days of a pre-construction survey, or halts for more than 14 days, an additional pre-construction survey is required for each period of delay.</p> <p>b) If any active nests are located within the construction footprint – including, but not limited to individual project site, staging areas, spoils sites, construction access – an appropriate buffer zone shall be established around the nests, as determined by the qualified biologist based on applicable regulatory requirements in force at the time of construction activity. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of breeding season or until the young have successfully fledged or the nest is determined to no longer be active. Buffer zones are typically 50-100 feet for migratory bird nests and 250-500 feet for raptor nests (excluding Swainson's hawk). If active nests are found within the vicinity of the construction areas, the qualified biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. If establishing the typical buffer zone is impractical, the qualified biologist shall adjust the buffer depending on the species and daily monitoring would be required to ensure that the nest is not disturbed and no forced fledging occurs. This daily monitoring shall occur until the qualified biologist determines that the nest is no longer occupied.</p> <p>Additional Measures for Burrowing Owl</p> <p>c) Prior to any individual project construction, the project applicant shall engage a qualified biologist to conduct a habitat assessment to determine if potential nesting habitat is present with an individual project area. If potential nesting habitat is present, nesting and wintering season surveys for burrowing owl shall be conducted to determine if potential habitat within 500 feet of ground disturbance is used by this species. As described in Table 3.4.2, suitable burrowing owl habitat includes the annual grassland and agricultural land. The timing and methodology for the surveys shall be conducted in accordance with the current CDFW Staff Report on Burrowing Owl Mitigation (Appendix D-3). A minimum of three survey visits should be conducted at least three weeks apart during the peak breeding season between April 15 and July 15. One of these surveys could be conducted at the same time as the nesting bird survey (Mitigation Measure 3.4-3a) should work be anticipated to commence within 14 days and between April 15 and July 15. A winter survey shall be conducted between December 1 and January 31, during the period when wintering owls are most likely to be present.</p>	LS

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TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.4-3 (cont.)		<p>d) If an active burrowing owl nest site/active burrow is discovered in the vicinity of an individual project construction footprint – including, but not limited to individual project site, staging areas, spoils sites, construction access – the project applicant shall notify the City and CDFW. A qualified biologist shall monitor the owls and establish a fenced exclusion zone around each occupied burrow. No construction activities shall be allowed within the exclusion buffer zone until such time that the burrows are determined by a qualified biologist to be unoccupied. The buffer zones shall be a minimum of 150 feet from an occupied burrow during the non-breeding season (September 1 through January 31) and a minimum of 250 feet from an occupied burrow during the breeding season (February 1 through August 31).</p> <p>e) If avoidance is not feasible, the CDFW shall be consulted to develop and the implement avoidance or passive relocation methods. All activities that will result in a disturbance to burrows shall be approved by the CDFW prior to implementation.</p> <p><i>Additional Measures for Swainson's Hawk</i></p> <p>f) If construction activities are anticipated to commence during the Swainson's hawk nesting season (March 1 to September 15), the individual project applicant shall engage a qualified biologist to conduct a minimum of two pre-construction surveys during the recommended survey periods in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Appendix D-4). All potential nest trees within 0.25 mile of the proposed project footprint shall be visually examined for potential Swainson's hawk nests, as accessible. If no active Swainson's hawk nests are identified on or within 0.25 mile of the proposed project, a report documenting the survey methodology and findings should be submitted to the City for its files and no additional mitigation measures are required.</p> <p>g) If active Swainson's hawk nests are found within 0.25 mile of construction activities, a survey report shall be submitted to the CDFW and the CNDDDB, and an avoidance and minimization plan shall be provided to and approved by the CDFW prior to the start of construction of the given development proposal. The avoidance plan shall identify measures to avoid or minimize impacts to the active Swainson's hawk nest. These measures may include, but are not limited to:</p> <ol style="list-style-type: none"> 1. Conducting a Worker Awareness Training Program prior to the start of construction; 2. Establishing a buffer zone and work schedule to avoid impacting the nest during critical periods. If practicably feasible, no work will occur within 200 yards of the nest while it is in active use. If work will occur within 200 yards of the nest, then construction shall be monitored by a qualified biologist to ensure that no work occurs within 50 yards of the nest during incubation or within ten days after hatching; 3. Having a qualified biological monitor conduct regular monitoring of the nest during construction activities; and 4. Allowing the qualified biologist to halt construction activities until CDFW determines that the construction activities are disturbing the nest. 	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.4-4: Implementation of the proposed project could result in impacts to roosting bats including pallid bat.	S	<p>Mitigation Measure 3.4-4: Protection of Bat Species (BSMP/NR/KER)</p> <p>a) The individual project applicant shall engage a qualified biologist to conduct a pre-construction survey for special-status bat species within 14 days prior to the start of tree or building removal within the BSMP project site. If no special-status bats are observed roosting, a report shall be submitted to the City for its records and no additional measures are required. If construction does not commence or if any trees or buildings anticipated for removal are not removed within 14 days of the pre-construction survey or halts for more than 14 days, a new survey and reporting shall be conducted.</p> <p>b) If bats including pallid bats are found, the qualified biologist shall consult with the CDFW to determine and implement avoidance measures. Avoidance measures may include, but are not limited to, establishing a buffer around the roost tree or building until it is no longer occupied or installing exclusion material around the tree/ opening of the building after dusk, once the qualified biologist has determined that the bat has left the roost to forage. The tree or building shall not be removed until a biologist has determined that the tree or building is no longer occupied by the bats.</p>	LS
3.4-5: Development of the proposed project could result in the loss of protected trees and street trees.	S	<p>Mitigation Measure 3.4-5: Protection of Heritage and Street Trees (BSMP/NR/KER)</p> <p>a) The individual project applicant shall engage a certified arborist to conduct a tree survey and prepare an arborist report. The arborist report shall include the species, diameter at breast height, location, condition of each street tree and native oak tree, and identify whether the native oak tree should be considered for preservation. The arborist report shall also recommend whether oak trees and heritage oak trees should be preserved. The arborist report shall include compensatory mitigation for impacts to native and heritage oak trees at a minimum 1:1 ratio based on diameter at breast height (DBH) for each tree.</p> <p>b) The individual project applicant shall submit an application to the Director of the City of Yuba City for any street tree proposed for removal. If authorized by the Director, the street tree may be removed at the expense of the applicant.</p> <p>c) During any construction activities, construction shall be avoided within the critical root zones of preserved/ protected trees, unless the area has been previously paved. Encroachments shall be held to no more than 20 percent of the critical root zone area. Avoidance areas shall be fenced prior to any activities onsite or offsite.</p> <p>d) During project construction, the individual project applicant shall retain an arborist to supervise all grade cuts in the critical root zone of protected trees, and properly treat all roots subject to damage as soon as possible after excavation. Cut-faces exposed for more than two to three days shall be covered with a dense burlap fabric and watered to maintain soil moisture at least on a daily basis until the area is permanently covered.</p> <p>e) Avoid placement of fill exceeding one foot in depth within the critical root zone of all preserved/protected trees. If unavoidable, either design drainage away from the critical root zone of the tree or consider tree removal. Placement of fill material less than one foot in depth and encroachment of less than 20 percent into the critical root zone area shall not require such additional mitigation measures.</p> <p>f) Any proposed structures shall not encroach more than 20 percent into the critical root zone area of a preserved/ protected tree. If unavoidable, tree removal shall be considered.</p> <p>g) Onsite and offsite utilities shall be designed to avoid the critical root zone of preserved/protected trees. In some circumstances, hand digging of utilities through the critical root zone areas would be an option. Boring beneath the critical root zone area would also be an option.</p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.4-5 (cont.)		h) Branches and limbs that have been torn, broken, or spilt during construction shall be removed. In addition, any dead, diseased, or rubbing limbs shall be removed.	
3.4-6: Implementation of the proposed project could result in the loss and/or degradation of rare plant populations.	S	<p>Mitigation Measure 3.4-6: Rare Plant Protection (BSMP only; not NR or KER)</p> <p>a) The individual project applicant shall retain a qualified biologist to conduct focused botanical protocol-level surveys in the nonnative annual grassland for dwarf downingia (blooms March through May) and Ferris' mile-vetch (blooms April through May) and in the non-native grassland and oak woodland for Baker's navarretia (blooms April through July) and Hartweg's golden sunburst (blooms March through April). Surveys shall be conducted during blooming periods for all special-status species. (It is noted that the blooming periods for these plant species overlap in the month of April.) If no special-status plants are observed within the survey area, then a report shall be submitted to the City and no additional mitigation is required so long as construction commences within two years of the survey.</p> <p>b) If Baker's navarretia, dwarf downingia, or Ferris' milk-vetch are observed within the project site, the plants should be avoided with a minimum 10-foot avoidance buffer with exclusion fencing, to the extent feasible. If these special-status plants cannot be avoided, a mitigation plan shall be prepared by a qualified botanist. At minimum, the mitigation plan shall include locations where the plants will be transplanted, success criteria, and monitoring activities for the transplanted populations. The mitigation plan shall be finalized prior to transplantation and commencement of construction activities.</p> <p>c) If the federal and state endangered Hartweg's golden sunburst is observed, the plants shall be avoided to the extent feasible.</p> <ol style="list-style-type: none"> 1. If the plants cannot be avoided, the individual project applicant shall obtain a CESA Section 2081(b) Incidental Take Permit. Measures to minimize the take and to mitigate the impacts caused by the take shall be set forth in one or more conditions of the permit. Potential conservation measures include, but are not limited to, purchasing credits from a mitigation bank, establishing a preserve, and/or preparing a mitigation plan. 2. If the plants cannot be avoided and if the project requires USFWS Section 7 consultation (i.e., would impact a jurisdictional wetland or water of the U.S. requiring a Section 404 CWA permit), consultation with the USFWS through the Section 7 process shall occur to determine any additional avoidance, conservation, and mitigation measures that may be needed for the species, if any. The individual project applicant is not required to consult for impacts to federally listed plants without a federal nexus. 	LS
3.4-7: Implementation of the proposed project could result in the loss of Swainson's hawk foraging habitat.	S	<p>Mitigation Measure 3.4-7: Protection of Swainson's Hawk Foraging Habitat (BSMP only; not NR or KER)</p> <p>a) Prior to disturbance of a minimum of five acres of non-native annual grassland, the individual project applicant shall engage a qualified biologist to conduct a CNDDDB search for active Swainson's hawk nests occurring within 10 miles of the individual project footprint and documented within five years of commencement of ground disturbance. The CNDDDB search shall be conducted within one year prior to commencement of construction activities. If no nests are documented within 10 miles within the last five years, then a report shall be submitted to the City documenting the results. No additional mitigation is required.</p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>b) If an active nest is documented within 10 miles of the individual project footprint and within five years prior to the anticipated start of ground disturbance, the individual project applicant shall mitigate at ratios that correspond to the distance of the nest or shall establish a conservation easement, in accordance with the Staff Report (Appendix D-5). These ratios are identified below:</p> <ol style="list-style-type: none"> 1. Projects within one mile of an active nest tree shall provide: <ol style="list-style-type: none"> i. One acre of Habitat Management (HM) land (at least 10 percent of the HM Land requirements shall be met by fee title acquisition or a conservation easement allowing for the active management of the habitat, with the remaining 90 percent of the HM lands protected by a conservation easement (acceptable to the CDFW) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk) for each acre of development authorized (1:1 ratio); or ii. One-half acre of HM land (all of the HM land requirements shall be met by fee title acquisition or a conservation easement (acceptable to the CDFW) which allows for the active management of the habitat for prey production on-the HM lands) for each acre of development authorized (0.5:1 ratio). 2. Projects within five miles of an active nest tree but greater than one mile from the nest tree shall provide 0.75 acres of HM land for each acre of urban development authorized (0-75:1 ratio). All HM lands protected under this requirement may be protected through fee title acquisition or conservation easement (acceptable to the CDFW) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk. 3. Projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree shall provide 0.5 acres of HM land for each acre of urban development authorized (0.5:1 ratio). All HM lands- protected under this requirement may be protected through fee title acquisition or a conservation easement (acceptable to the CDFW) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk. <p>c) Management Authorization holders/project sponsors shall provide for the long-term management of the HM lands by funding a management endowment (the interest on which shall be used for managing the HM lands) at the rate of 400 dollars per HM land acre (adjusted annually for inflation and varying interest rates).</p> <p>d) Implement Mitigation Measures 3.4-3(f) and 3.4-3(g).</p>	
3.4-8: Implementation of the proposed project, in combination with other development in the Central Sacramento Valley, could result in the loss of special-status plants and wildlife, protected trees, and wildlife resources.	PS	<p>Mitigation Measure 3.4-8: Protection of Special Status Species Implement Mitigation Measures 3.4-5a through 3.4-5h.</p>	SU
3.4-9: Implementation of the proposed project, in combination with other development in the Central Sacramento Valley, could result in cumulative impacts to heritage oaks and street trees.	LS	None required.	NA

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.5 Cultural Resources			
3.5-1: Development pursuant to the proposed BSMP could cause a substantial adverse change in the significance of an historical architectural resource.	PS	<p>Mitigation Measure 3.5-1: Protection of Historic Architectural Resources (BSMP project site outside NR/KER)</p> <p>a) Concurrent with submittal of project-level development plans, the project applicant shall submit a built-environment resource investigation, for review and approval by the City, that includes, at a minimum:</p> <ul style="list-style-type: none"> o An updated records search at the Northeast Information Center; o An intensive built-environment resources survey, documenting buildings and structures 45 years or older within and adjacent to the project footprint for listing in the National, California, or local registers; o A report that documents the results of the investigation; and o Recommendations for mitigation to resolve adverse impacts to significant historic architectural resources. <p>The survey shall be carried out by a qualified historian or architectural historian meeting the Secretary of the Interior’s Standards for Architectural History.</p> <p>b) Demolition or substantial alteration of all previously recorded historic resources, including significant historic resources encountered during the survey and evaluation efforts, shall be avoided, if feasible.</p> <p>c) Any alterations to historic buildings or structures, including relocation, shall conform to the Secretary of the Interior’s Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.</p> <p>d) If avoidance of identified historic resources is deemed infeasible, the project applicant shall prepare a treatment plan, subject to City review and approval, to include, but not limited to, adaptive reuse, photo-documentation and public interpretation of the resource.</p> <p>The treatment plan shall include retention of a qualified architectural historian to document the affected historic resource in accordance with the National Park Service’s Historic American Buildings Survey (HABS) and/or Historic American Engineering Record (HAER) standards. Such standards typically include large format photography using (4x5) negatives, written data, and copies of original plans if available. The HABS/HAER documentation packages shall be archived at local libraries and historical repositories, as well as the Northeast Information Center of the California Historical Resources Information System.</p> <p>Public interpretation of historic resources at their original site shall occur in the form of a plaque, kiosk, or other method of describing the building’s historic or architectural importance to the general public.</p>	SU
3.5-2: Development pursuant to the BSMP could result in adverse impacts on prehistoric archaeological resources, tribal cultural resources, and human remains.	S	<p>Mitigation Measure 3.5-2(a): Protection of Archaeological Resources (NR/KER)</p> <p>Archaeological Monitoring Plan. Prior to issuance of grading permits or ground-disturbing construction activity in the Newkom Ranch and Kells East Ranch properties, the project applicant shall prepare and submit an Archaeological Monitoring Plan to the City of Yuba City for review and approval. Monitoring shall be required for all surface alteration and subsurface excavation work, including trenching, boring, grading, use of staging areas and access roads, and driving vehicles and equipment. A Secretary of the Interior-qualified professional archaeologist (project archaeologist) shall prepare the plan. The plan shall address (but not be limited to) the following issues:</p> <ul style="list-style-type: none"> • Training program for all construction and field workers involved in site disturbance; • Person(s) responsible for conducting monitoring activities, including both archaeological and Native American monitors; 	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.5-2 (cont.)		<ul style="list-style-type: none"> • How the monitoring shall be conducted and the required format and content of monitoring reports, including the need to conduct trenching, shovel-test units or auger samples to identify archaeological deposits in advance of construction, assessment, designation and mapping of the sensitive cultural resource areas on final project maps, assessment and survey of any previously unsurveyed areas; • Person(s) responsible for overseeing and directing the monitors; • Schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports; • Procedures and construction methods to avoid sensitive cultural resource areas (i.e., planning construction to avoid the resource, incorporating the resource within open space, capping and covering the resource, or deeding the site into a permanent conservation easement); • Clear delineation and fencing of sensitive cultural resource areas; • Physical monitoring boundaries; • Protocol for notifications in case of encountering of cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, curation); • Methods to ensure security of cultural resources; • Protocol for notifying local authorities (i.e. Sheriff, Police) should site looting and other illegal activities occur during construction. <p>Archaeological and Native American Monitoring. If an intact archaeological resource is encountered, all soil disturbing activities in the vicinity of the resource shall cease until it is evaluated. The project archaeologist shall immediately notify the City of Yuba City of an encountered archaeological resource. The project archaeologist and Native American monitor shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological resource, present the findings of this assessment to the City.</p> <p>During the course of the monitoring, the project archaeologist and Native American monitor may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to impact resources.</p> <p>If the City, in consultation with the project archaeologist and Native American monitor, determines that a significant archaeological resource is present and that the resource could be adversely impacted by the project, the City shall:</p> <ul style="list-style-type: none"> • Determine whether preservation in place is feasible. Consistent with CEQA Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. • If avoidance is not feasible, prepare and implement a detailed Archaeological Research Design and Treatment Plan. Treatment of archaeological resources will follow the applicable requirements of Public Resources Code Section 21083.2. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals. 	

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.5-2 (cont.)		<ul style="list-style-type: none"> If potential human remains are encountered, all work will halt in the vicinity of the find and the City will contact the county coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the coroner determines the remains are Native American, the coroner shall contact the Native American Heritage Commission. As provided in Public Resources Code Section 5097.98, the Commission will identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent makes recommendations for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. <p>Mitigation Measure 3.5-2(b): Protection of Historic Archaeological Resources (Full BSMP project site except NR/KER)</p> <p>When BSMP-level development plans outside the Newkom Ranch and Kells East Ranch properties are submitted to the City of Yuba City for approval, the project applicant shall be required to complete a cultural resources investigation for review and approval by the City that includes, at a minimum:</p> <ul style="list-style-type: none"> An updated records search at the Northeast Information Center; Updated Native American consultation in coordination with the Native American Heritage Commission. An intensive archaeological survey of the development area; A geoarchaeological assessment for the potential for buried archaeological resources; A report that documents the results of the investigation; and Recommendations for mitigation to resolve adverse impacts to significant archaeological resources or human remains. <p>The survey shall be carried out by a qualified archaeologist meeting the Secretary of the Interior's Standards for Archaeology, and can be documented in the same document as required in Mitigation Measure 3.5-1(a).</p>	
3.5-3: Development pursuant to the BSMP, in combination with other cumulative development in the Yuba City limits and the Yuba City sphere of influence could contribute to cumulative impacts on historic architectural resources.	PS	<p>Mitigation Measure 3.5-3: Protection of Historic Architectural Resources (BSMP project site outside NR/KER)</p> <p>Implement Mitigation Measure 3.5-1.</p>	LS
3.5-4: Development pursuant to the BSMP, in combination with other cumulative development, could contribute to cumulative impacts on archaeological resources, tribal cultural resources, and human remains.	PS	<p>Mitigation Measure 3.5-4(a): Protection of Archaeological Resources (NR/KER)</p> <p>Implement Mitigation Measure 3.5-2(a).</p> <p>Mitigation Measure 3.5-4(b): Protection of Historic Archaeological Resources (Full BSMP project site except the Newkom Ranch and Kells East Ranch properties)</p> <p>Implement Mitigation Measure 3.5-2(b).</p>	LS

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.6 Geology, Soils, Mineral Resources and Paleontological Resources			
3.6-1: Development pursuant to the proposed BSMP would not expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving strong seismic ground shaking or seismic related ground failure, such as liquefaction.	LS	None required	NA
3.6-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.	LS	None required	NA
3.6-3: The BSMP project would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse due to being located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project.	LS	None required	NA
3.6-4: Development pursuant to the proposed BSMP could be located on expansive soil, as defined in California Building Code, creating substantial risks to life or property.	LS	None required	NA
3.6-5: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	LS	None required	NA
3.6-6: The proposed project combined with other cumulative development would not contribute to a cumulative increase in substantial soil erosion or the loss of topsoil.	LS	None required	NA
3.6-7: The proposed project could directly or indirectly destroy unique paleontological resource or site or unique geologic feature.	LS	None required	NA

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.7 Green House Gas Emissions and Energy			
3.7-1: Implementation of the proposed BSMP could conflict with the City of Yuba's Climate Action Plan.	PS	<p>Mitigation Measure 3.7-1(a): Residential Building Insulation (BSMP/NR/KER) Prior to building construction, individual project applicants shall submit to the City building plans demonstrating how all proposed residential buildings include greatly enhanced building insulation materials such as spray foam wall insulated walls R-15 or greater, roof/attic R-38 or higher. The individual project applicants shall also demonstrate how all proposed residential buildings include modestly enhanced window insulation such as 0.4 U-Factor or 0.32 SHGC.</p> <p>Mitigation Measure 3.7-1(b): Commercial Building Insulation (BSMP/NR/KER) Prior to building construction, individual project applicants shall submit to the City building plans demonstrating how all proposed commercial buildings include enhanced building insulation materials (e.g., rigid wall installation, roof/attic R-38).</p>	LS
3.7-2: Development pursuant to the proposed BSMP would increase demand for energy, specifically electricity and natural gas, which could cause significant environmental effects.	LS	None required.	NA
3.7-3: The proposed BSMP could result in the wasteful, inefficient, or unnecessary use of energy.	PS	<p>Mitigation Measure 3.7-3: Compliance with Yuba City REP (BSMP/NR/KER) Implement Mitigation Measure 3.7-1(a) and Mitigation Measure 3.7-1(b).</p>	LS
3.7-4: The proposed BSMP, in combination with other cumulative development, would contribute to cumulative increases in demand for energy.	LS	None required.	NA
3.8 Hazards and Hazardous Materials			
3.8-1: Development pursuant to the proposed BSMP could create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.	LS	None required.	NA

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.8-2: Construction activities related to development pursuant to the proposed BSMP could encounter hazardous materials from unknown hazardous materials release sites resulting in exposure to construction workers, nearby residents and other members of the public, and nearby environmental resources.	PS	<p>Mitigation Measure 3.8-2: Conduct Phase I Environmental Site Assessments (BSMP/NR/KER)</p> <p>a) Prior to final project design of any individual project pursuant to the BSMP that includes any earth-disturbing activities, the applicant shall submit to the City a Phase I Environmental Site Assessment (Phase I ESA). The Phase I ESA shall be prepared in general accordance with ASTM Standard E1527-13, <i>Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process</i> (or most current edition that is in force at the time of final project design), which is the current industry standard. The Phase I ESA shall include a records review of appropriate federal, State, and local databases within ASTM-listed search distances regarding hazardous materials use, storage, or disposal at the given site, a review of historical topographic maps and aerial photographs, a site reconnaissance, interviews with persons knowledgeable about the sites historical uses, and review of other relevant existing information that could identify the potential existence of Recognized Environmental Conditions, including hazardous materials, or contaminated soil or groundwater. If no Recognized Environmental Conditions are identified, then no further action would be required.</p> <p>b) If Recognized Environmental Conditions are identified and the Phase I ESA recommends further action, the applicant shall conduct the appropriate follow-up actions, which may include further records review, sampling of potentially hazardous materials, and possibly site cleanup. In the event that site cleanup is required, the project shall not proceed until the site has been cleaned up to the satisfaction of the appropriate regulatory agency (e.g., DTSC, RWQCB, or SC EHD) such that the regulatory agency issues a No Further Action letter or equivalent.</p>	LS
3.8-3: Demolition or renovation activities related to implementation of the proposed BSMP could expose people to asbestos-containing materials (ACM), lead-containing paint (LBP), polychlorinated biphenyls (PCBs), or other hazardous building materials.	LS	None required.	NA
3.8-4: Construction and operation of development pursuant to the proposed BSMP could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	None required.	NA
3.8-5: The proposed project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.	PS	<p>Mitigation Measure 3.8-5: Conduct Phase I Environmental Site Assessment (BSMP)</p> <p>Implement Mitigation Measure 3.8-2.</p>	LS

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.8-6: Development pursuant to the proposed BSMP would be located within two miles of a public airport or public use airport, and could result in a safety hazard for people residing or working in the project area.	LS	None required.	NA
3.8-7: Construction of new development pursuant to the proposed BSMP could impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	PS	<p>Prior to construction, the applicant for an individual project, or its construction contractor(s), shall prepare and implement a traffic control plan to minimize traffic impacts on all roadways at and near the work site affected by construction activities. The traffic control plan shall reduce potential traffic safety hazards and ensure adequate access for emergency responders. The applicant and construction contractor(s) shall coordinate preparation and implementation of this traffic control plan with the City of Yuba City Fire Department and Police Department, the CHP, and/or CAL FIRE, as appropriate. To the extent applicable, this traffic control plan shall conform to the 2014 California Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control). The traffic control plan shall provide, but not be limited to, the following elements:</p> <ul style="list-style-type: none"> • Circulation and detour plans to minimize impacts on local road circulation during road and lane closures. Flaggers and/or signage shall be used to guide vehicles through and/or around the construction zone; • Identifying truck routes designated by Sutter County, where applicable. Haul routes that minimize truck traffic on local roadways shall be utilized to the extent possible; • Sufficient staging areas for trucks accessing construction zones to minimize the disruption of access to adjacent existing public rights-of-way; • Controlling and monitoring construction vehicle movement through the enforcement of standard construction specifications by onsite inspectors; • Scheduling truck trips outside the peak morning and evening commute hours to the extent possible; • Limiting the duration of road and lane closures to the extent possible; • Storing all equipment and materials in designated contractor staging areas on or adjacent to the worksite, such that traffic obstruction is minimized; • Implementing roadside safety protocols. Advance "Road Work Ahead" warning and speed control signs (including those informing drivers of State legislated double fines for speed infractions in a construction zone) shall be posted to reduce speeds and provide safe traffic flow through the work zone; • Coordinating construction administrators of police and fire stations (including all fire protection agencies). Operators shall be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures, where applicable; and • Repairing and restoring affected roadway rights-of way to their original condition after construction is completed. 	LS

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.8-8: Implementation of the proposed project, in combination with other cumulative development, could contribute to cumulative impacts by creating a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.	LS	None required.	NA
3.8-9: Implementation of the proposed BSMP, in combination with other cumulative development, could contribute to cumulative impacts by emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	None required.	NA
3.8-10: Implementation of the proposed BSMP, in combination with other cumulative development, could contribute to cumulative impacts by being located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and could result in a safety hazard for people residing or working in the project area.	LS	None required.	NA
3.8-11: Implementation of the proposed BSMP, in combination with other cumulative development, could contribute to cumulative impacts by impairing with implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.	PS	Mitigation Measure 3.8-11: Traffic Control Plan (BSMP/NR/KER) Implement Mitigation Measure 3.8-7.	LS

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.9 Hydrology and Water Quality			
3.9-1: Development pursuant to the BSMP could substantially degrade water quality.	LS	None required.	NA
3.9-2: Development pursuant to the proposed BSMP could substantially deplete groundwater supplies or reduce groundwater recharge.	LS	None required.	NA
3.9-3: Development pursuant to the proposed BSMP would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which could result in flooding on- or off-site.	LS	None required.	NA
3.9-4: Development pursuant to the proposed BSMP would place residential and other uses within a designated flood hazard zone.	LS	None required.	NA
3.9-5: Development pursuant to the proposed BSMP could expose people or structures to flooding associated with dam failure.	LS	None required.	NA
3.9-6: Development pursuant to the proposed BSMP, in conjunction with cumulative development within the Lower Feather River watershed, could contribute to cumulative degradation of water quality.	LS	None required.	NA
3.9-7: Development pursuant to the proposed BSMP, in conjunction with other development overlying the Sutter Subbasin, could cumulatively contribute to substantial interference with groundwater recharge.	LS	None required.	NA

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.9-8: Development pursuant to the proposed BSMP could contribute to cumulative substantial alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.	LS	None required.	NA
3.9-9: Development pursuant to the proposed BSMP could contribute to cumulative placement of housing and structures within a 100-year flood hazard area, or within a 200-year floodplain that could impede or redirect flood flows.	LS	None required.	NA
3.9-10: Development pursuant to the proposed BSMP, in combination with other development within Sutter County, could increase the number of people and structures that could be exposed to dam failure inundation hazard.	LS	None required.	NA
3.11 Noise and Vibration			
3.11-1: Construction of development pursuant to the proposed BSMP could generate noise that would conflict with the City of Yuba City standards or result in substantial temporary or periodic increase in ambient noise levels.	PS	<p>Mitigation Measure 3.11-1: Construction Noise Measures (BSMP/NR/KER)</p> <p>Individual project applicants of new development (excluding renovation of existing buildings) shall require construction contractors to implement the following measures during all phases of project construction:</p> <ul style="list-style-type: none"> a) Whenever stationary noise sources – such as generators and compressors – are used within light of sight to occupied residences (on or offsite), temporary barriers shall be constructed around the source to shield the ground floor of the noise-sensitive uses. These barriers shall be of ¾-inch Medium Density Overlay (MDO) plywood sheeting, or other material of equivalent utility and appearance to achieve a Sound Transmission Class of STC-30, or greater, based on certified sound transmission loss data taken according to ASTM Test Method E90 or as approved by the City of Yuba City Building Official. b) Construction equipment staging areas shall be located as far as feasible from residential areas while still serving the needs of construction contractors. 	LS

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.11-1 (cont.)		<ul style="list-style-type: none"> c) Equipment and trucks used for construction will use the industry standard noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible). d) Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically- or electrically-powered where feasible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dB. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dB. Quieter procedures, such as use of drills rather than impact tools, shall be used whenever feasible. 	
3.11-2: Operation of uses developed pursuant to the proposed BSMP could increase local traffic that could result in a substantial permanent increase in ambient exterior noise levels in the project vicinity.	PS	<p>Mitigation Measure 3.11-2: Transportation Source Mitigation (BSMP)</p> <p>Prior to approval of a map, an acoustical study shall be submitted to the City demonstrating that the project would include noise attenuation to reduce noise levels at the existing residences adjacent to Stewart Road, between SR 99 and Phillips Road, to below the noise standard specified in the City's general plan Policy 9.1-I-3. If sound walls are proposed, they must be constructed of a material and at a height sufficient to reduce traffic noise to either 4 dB below existing conditions or below 60 dBA L_{dn}.</p>	LS
3.11-3: Operation of uses developed pursuant to the proposed BSMP could introduce new stationary noise sources that could result in a substantial permanent increase in ambient exterior noise levels in the project vicinity or conflict with the City of Yuba City noise standards.	PS	<p>Mitigation Measure 3.11-3: Stationary Source Mitigation (BSMP/NR/KER)</p> <p>The project sponsor shall ensure that the following measures are implemented for all development under the proposed BSMP:</p> <ul style="list-style-type: none"> a) Prior to the issuance of building permits, individual project applicants shall submit engineering and acoustical specification for project mechanical HVAC equipment and the proposed locations of onsite loading docks to the Planning Director demonstrating that the HVAC equipment and loading dock design (types, location, enclosure, specification) will control noise from the equipment to not exceed 55 dBA during the daytime and 45 dBA during nighttime hours. b) Noise-generating stationary equipment associated with proposed commercial and/or office uses, such as portable generators, compressors, and compactors, within line-of-sight of adjacent noise-sensitive uses shall be enclosed or acoustically shielded to reduce noise-related impacts. 	LS
3.11-4: Construction of development pursuant to the proposed BSMP could expose existing and/or planned buildings, and persons within, to vibration that could disturb people or damage buildings.	LS	None required.	NA
3.11-5: The proposed BSMP could result in exposure of residents or workers to excessive aircraft noise levels.	LS	None required.	NA

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**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.11-6: Development pursuant to the proposed BSMP could result in exposure of people to cumulative increases in construction noise levels.	S	Mitigation Measure 3.11-6: Construction Noise Measures (BSMP/NR/KER) Implement Mitigation Measure 3.11-1.	NA
3.11-7: Development pursuant to the proposed BSMP would contribute to cumulative construction that could expose existing and/or planned buildings, and persons within, to significant vibration.	LS	None required.	NA
3.11-8: Development pursuant to the proposed BSMP would contribute to cumulative increases in traffic noise levels.	LS	None required.	NA
3.11-9: Development pursuant to the proposed BSMP would contribute to cumulative increases in stationary noise levels.	LS	Mitigation Measure 3.11-9: Stationary Source Mitigation (BSMP/NR/KER) Implement Mitigation Measure 3.11-3.	NA
3.12 Population and Housing			
3.12-1: Development pursuant to the proposed BSMP would induce substantial population growth in an area.	LS	None required.	NA
3.13-2: Development pursuant to the BSMP would not displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.	LS	None required.	NA
3.12-3: Development pursuant to the proposed BSMP, in combination with future buildout of the City of Yuba City as well as the City's sphere of influence, could directly or indirectly induce substantial population growth in the area.	LS	None required.	NA

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.13 Public Services and Recreation			
Police Protection			
3.13-1: Development pursuant to the proposed BSMP could result in the construction of new or expanded police protection facilities that could cause a substantial physical adverse environmental impact.	LS	None required.	NA
3.13-2: Development pursuant to the proposed BSMP, in combination with other cumulative development in the City of Yuba City, could require, or result in, the construction of new or expanded facilities related to the provision of police protection, such that a substantial physical adverse environmental impact could result.	LS	None required.	NA
Fire Protection			
3.13-3: Development pursuant to the proposed BSMP could result in the construction of new or expanded fire protection facilities that would cause a substantial adverse physical environmental impact.	LS	None required.	NA
3.13-4: Development pursuant to the proposed BSMP, in combination with other cumulative development within the boundaries of the City of Yuba City, could result in the construction of new or expanded fire protection facilities that could cause a substantial adverse physical environmental impact.	LS	None required.	NA

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
Public Schools			
3.13-5: Development pursuant to the proposed BSMP could generate students that would exceed the design capacity of existing or planned schools that would result in the need for new or physically altered school facilities, the construction of which could cause substantial adverse physical environmental impacts.	LS	None required.	NA
3.13-6: Development pursuant to the proposed BSMP, in combination with other cumulative development, would result in the need for new or physically altered school facilities which could cause substantial adverse physical environmental impacts.	LS	None required.	NA
Parks and Recreation Facilities			
3.13-7: Development pursuant to the proposed BSMP could cause existing parks within the BSMP site to physically deteriorate, requiring additional parks to be constructed and/or expanded.	LS	None required.	NA
3.13-8: Development pursuant to the proposed BSMP, in combination with other cumulative development in Yuba City, could cause existing parks in the City to physically deteriorate.	LS	None required.	NA

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.14 Transportation and Traffic			
3.14-1: Implementation of the proposed BSMP would cause significant impacts at intersections in the City of Yuba City.	S	<p>Mitigation Measure 3.14-1(a): Yuba City Intersections (BSMP)</p> <p>The project applicant(s) shall construct the following improvements. The timing of the need for these improvements will depend on the amount of development on the west versus east side of SR 99, mix of land uses, and level of background traffic growth. The applicant shall coordinate with City staff regarding construction of these improvements as individual projects within the BSMP are proposed. The financial responsibility for each project applicant shall be determined by the City and shall be included in each applicant's project approval documentation.</p> <ol style="list-style-type: none"> i. Install a traffic signal and widen the eastbound and southbound approaches to provide dedicated left-turn pockets at the Bogue Road/South Walton Avenue intersection (in conjunction with lane configurations planned under existing plus BSMP conditions). ii. Install a traffic signal at the Railroad Avenue/Lincoln Road intersection (in conjunction with existing lane configurations). iii. Install a traffic signal at the Bogue Road/Phillips Road intersection (in conjunction with lane configurations planned under existing plus BSMP conditions). iv. Install a traffic signal at the Bogue Road/Railroad Avenue intersection and widen/restripe the northbound and southbound approaches to provide dedicated left-turn pockets (in conjunction with lane configurations planned under existing plus BSMP conditions). v. Install a traffic signal at the Gilsizer Ranch Way/Bogue Road intersection (in conjunction with lane configurations planned under existing plus BSMP conditions). 	LS
3.14-2: Implementation of the proposed BSMP would not cause significant impacts at intersections or roadways in Sutter County.	LS	None required.	NA
3.14-3: Implementation of the proposed BSMP would cause significant LOS-related impacts at intersections maintained by Caltrans	S	<p>Mitigation Measure 3.14-3: Caltrans Intersections LOS (BSMP)</p> <p>The project applicant(s) shall construct the improvements described below. The timing of the need for these improvements will depend on the amount of development on the west versus east side of SR 99, mix of land uses, and level of background traffic growth. The applicant shall coordinate with City staff and Caltrans regarding construction of these improvements as individual projects within the BSMP are proposed. The financial responsibility for each project applicant shall be determined by the City and shall be included in each applicant's project approval documentation.</p> <ol style="list-style-type: none"> i. Widen the SR 99/Bogue Road intersection to provide a second southbound left-turn lane that provides 500 feet of storage in each lane. Widen Bogue Road to construct a second eastbound and westbound left-turn lane. Restripe westbound Bogue Road approaching SR 99 to consist of two left-turn lanes, one through lane, and one right-turn lane (with the right-turn consisting of an overlap arrow); and ii. Install a traffic signal at the SR 99/Stewart Road intersection. 	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.14-4: Implementation of the proposed BSMP would cause significant queuing-related impacts at intersections maintained by Caltrans.	S	<p>Mitigation Measure 3.14-4(a): Caltrans Intersections Queuing (BSMP)</p> <p>Implement Mitigation Measure 3.14-3(i), which consists of adding a second southbound left-turn lane at the SR 99/Bogue Road intersection and providing 500 feet of storage in each turn lane. To address queuing impacts in the southbound left-turn lane prior to the overall intersection LOS reaching an unacceptable level, the second left-turn lane is necessary. The timing of the need for these improvements will depend on the amount of development on the west versus east side of SR 99, mix of land uses, and level of background traffic growth. The applicant shall coordinate with City staff and Caltrans regarding construction of these improvements as individual projects within the BSMP are proposed. The financial responsibility for each project applicant shall be determined by the City and shall be included in each applicant's project approval documentation.</p> <p>Mitigation Measure 3.14-4(b): Caltrans Intersections Queuing (NR/KER)</p> <p>The project applicant(s) shall construct the following improvements at the SR 99/Bogue Road intersection. These improvements shall be in place at such time that the 21-acre retail center located in the southwest quadrant of the Bogue Road/Phillips Road intersection and 20 additional acres of residential in Newkom Ranch or Kells East Ranch are constructed. The financial responsibility for each project applicant shall be determined by the City and shall be included in each applicant's project approval documentation.</p> <p>i. Widen the SR 99/Bogue Road intersection to provide a second southbound left-turn lane that provides 500 feet of storage in each lane.</p>	LS
3.14-5: Implementation of the proposed BSMP would include the provision of new bicycle and pedestrian facilities to support bicycle and pedestrian travel within the project, and connect the project with adjacent areas in the City of Yuba City.	LS	None required.	NA
3.14-6: Implementation of the proposed BSMP would include designated bus stops and transit shelters to support transit use as a means of travel within the project and between the project and the surrounding area.	LS	None required.	NA

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.14-7: Implementation of the proposed BSMP, in combination with other cumulative development, would cause cumulatively considerable significant impacts at intersections in the City of Yuba City.	S	Mitigation Measure 3.14-7(a): Cumulative Yuba City Intersections (BSMP)	LS
		<ul style="list-style-type: none"> i. Implement Mitigation Measure 3.14-1(a)(i): Install traffic signal and add turn lanes at the Bogue Road/South Walton Avenue intersection. ii. Implement Mitigation Measure 3.14-1(a)(iii): Install traffic signal at the Bogue Road/Phillips Road intersection. iii. Implement Mitigation Measure 3.14-1(a)(iv): Install a traffic signal and add turn lanes at the Bogue Road/Railroad Avenue intersection. iv. Implement Mitigation Measure 3.14-1(a)(v): Install traffic signal at the Gilsizer Ranch Way/Bogue Road intersection. v. Contribute fair share cost for restriping the eastbound approach at the Garden Highway/Bogue Road intersection from a through lane to a shared through/right lane, and modifying the signal phasing to east-west split-phase. 	
		Mitigation Measure 3.14-7(b): Cumulative Yuba City Intersections (NR/KER)	
		<ul style="list-style-type: none"> i. Implement Mitigation Measure 3.14-1(b)(i): Install traffic signal at the Bogue Road/Phillips Road intersection. ii. Implement Mitigation Measure 3.14-1(b)(ii): Install a traffic signal and add turn lanes at the Bogue Road/Railroad Avenue intersection. iii. Contribute fair share cost for installing a traffic signal at the South Walton Avenue/Bogue Road intersection. iv. Contribute fair share cost for installing a traffic signal at the Phillips Road/Lincoln Road intersection. v. Contribute fair share cost for installing a traffic signal at the Gilsizer Ranch Way/Bogue Road intersection. 	
3.14-8: Implementation of the proposed BSMP, in combination with other cumulative development, would not cause significant impacts at intersections or roadways in Sutter County.	LS	None required.	NA
3.14-9: Implementation of the proposed BSMP, in combination with other cumulative development, would cause cumulatively significant LOS-related impacts at intersections maintained by Caltrans.	S	Mitigation Measure 3.14-9(a): Cumulative Caltrans Intersections LOS (BSMP)	SU
		<ul style="list-style-type: none"> i. Implement Mitigation Measure 3.14-3(a)(i): Add turn lanes at the SR 99/Bogue Road intersection. ii. Implement Mitigation Measure 3.14-3(a)(ii): Install traffic signal at the SR 99/Stewart Road intersection. iii. Contribute fair share cost for adding a second northbound left-turn lane and adding dedicated eastbound and westbound right-turn lanes at the SR 99/Bogue Road intersection. iv. Contribute fair share cost for installing a traffic signal at the SR 99/Hunn Road intersection. v. Contribute fair share cost for installing a traffic signal at the SR 99/Smith Road intersection. 	

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.14-9 (cont.)		<p>Mitigation Measure 3.14-9(b): Cumulative Caltrans Intersections LOS (NR/KER)</p> <ul style="list-style-type: none"> i. Implement Mitigation Measure 3.14-4(b)(i): Add second southbound left-turn lane at the SR 99/Bogue Road intersection. ii. Contribute fair share cost for adding a second northbound left-turn lane and adding dedicated eastbound and westbound right-turn lanes at the SR 99/Bogue Road intersection. iii. Contribute fair share cost for installing a traffic signal at the SR 99/Hunn Road intersection. iv. Contribute fair share cost for installing a traffic signal at the SR 99/Smith Road intersection. v. Contribute fair share cost for installing a traffic signal at the SR 99/Stewart Road intersection. 	
3.14-10: Implementation of the proposed BSMP, in combination with other cumulative development, would cause significant queuing-related impacts at intersections maintained by Caltrans.	S	<p>Mitigation Measure 3.14-10(a): Cumulative Caltrans Intersections Queuing (BSMP)</p> <ul style="list-style-type: none"> i. Implement Mitigation Measure 3.14-3(a)(i), which consists of adding a second southbound left-turn lane at the SR 99/Bogue Road intersection and providing 500 feet of storage in each turn lane. ii. Implement Mitigation Measure 3.14-9(a)(iii), which consists of paying fair share cost of adding a second northbound left-turn lane and dedicated eastbound and westbound right-turn lanes at the SR 99/Bogue Road intersection. <p>Mitigation Measure 3.14-10(b): Cumulative Caltrans Intersections Queuing (NR/KER)</p> <ul style="list-style-type: none"> i. Implement Mitigation Measure 3.14-4(a)(i), which consists of adding a second southbound left-turn lane at the SR 99/Bogue Road intersection and providing 500 feet of storage in each turn lane. ii. Implement Mitigation Measure 3.14-9(b)(ii), which consists of paying fair share cost of adding a second northbound left-turn lane and dedicated eastbound and westbound right-turn lanes at the SR 99/Bogue Road intersection. iii. Implement Mitigation Measure 3.14-9(b)(v), which consists of paying fair share cost for installing a traffic signal at the SR 99/Stewart Road intersection. iv. Contribute fair share cost for adding a second northbound left-turn lane at the SR 99/Stewart Road intersection, or contributing fair share cost for widening Bogue Road to four lanes from Gilsizer Ranch Way to South Walton Avenue. 	SU
3.14-11: Implementation of the proposed BSMP would include the provision of new bicycle and pedestrian facilities to support bicycle and pedestrian travel within the project, and connect the project with adjacent areas in the City of Yuba City.	LS	None required.	NA

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.14-12: Implementation of the proposed BSMP would include designated bus stops and transit shelters to support transit use as a means of travel within the project and between the project and the surrounding area.	LS	None required.	NA
3.15 Utilities and Service Systems			
Wastewater and Drainage			
3.15-1: Implementation of the proposed BSMP could result in inadequate wastewater treatment capacity.	LS	None required.	NA
3.15-2: The proposed BSMP could result in either the construction of new wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts.	LS	None required.	NA
3.15-3: Implementation of the proposed BSMP, in combination with other past, present, and reasonably foreseeable cumulative development, would contribute to the need for construction of new or expanded wastewater facilities, which could cause significant environmental impacts.	LS	None required.	NA

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
Water Supply			
3.15-4: The proposed project could increase demand for potable water in excess of existing supplies	S	<p>Mitigation Measure 3.15-1: Wastewater Treatment Capacity (BSMP/NR/KER)</p> <p>a) Individual project applicants shall pay the fair share of costs for each development's proportion of the water supply deficits estimated through 2040. The payments shall be directed to a City fund for the construction and operation of new groundwater well(s) as determined by the City. The City shall reflect the requirement for the fair share payment for each development in any future development agreement in the BSMP site, and payment shall be made to the City prior to final tentative map approval and building permit.</p> <p>b) The City shall construct new groundwater well(s) to be operable and sufficient to serve the water supply demands of each development approved prior to year 2030. The groundwater well(s) shall be constructed to produce sufficient water to make up the shortfalls in any given single-dry year or the first year of a multi-dry year scenario as determined by the City.</p> <p>c) The City shall not approve a final tentative map or building permit for any development pursuant to the proposed BSMP or City beyond the supplies available from 2030 through 2040 without a reliable source of water supply to meet the shortfalls in the single-dry year or the first year of a multi-dry year scenario, as detailed above.</p>	LS
3.15-5: The proposed BSMP project could result in inadequate capacity in the City's water supply facilities to meet the water supply demand, resulting in the construction of new water supply facilities.	LS	None required.	NA
3.15-6: Implementation of the proposed BSMP, in combination with other past, present, and reasonably foreseeable cumulative development, would contribute to cumulative increases in demand for water supply.	S	<p>Mitigation Measure 3.15-4: Wastewater Treatment Capacity (BSMP/NR/KER)</p> <p>Implement Mitigation Measure 3.15-1(a) through (c).</p>	LS
Solid Waste			
3.15-7: Implementation of the proposed BSMP, in combination with other past, present, and reasonably foreseeable cumulative development, would contribute to cumulative increases in demand for water treatment.	LS	None required.	NA

LTS = less than significant; NA = not applicable; NI = no impact; PS = potentially significant; S = significant; SU = significant and unavoidable.

TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES EVALUATED IN THE DRAFT EIR

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.15-8: The proposed BSMP could require or result in either the construction of new solid waste facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.	LS	None required.	NA
3.15-9: Implementation of the proposed BSMP, in combination with other past, present, and reasonably foreseeable cumulative development, would contribute to cumulative increases in solid waste.	LS	None required.	NA

LTS = less than significant; NA = not applicable; NI = no impact; PS = potentially significant; SU = significant and unavoidable.

CHAPTER 1

Introduction

1.1 Purpose and Use of this EIR

This Draft Environmental Impact Report (Draft EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA) of 1970 (as amended), for the City of Yuba City, which is acting as lead agency for the preparation of environmental documentation for the proposed Bogue-Stewart Master Plan (BSMP or the project). The project is described briefly below and in detail in Chapter 2, Project Description. This Draft EIR (SCH # 2017012009) has been prepared in conformance with CEQA (Public Resources Code (PRC) Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulations (CCR), Title 14, Chapter 3, Section 15000, et seq.) to disclose the environmental impacts associated with the proposed BSMP.

CEQA requires public agencies to consider the potential adverse physical environmental impacts of their actions. Under CEQA, the purpose of an EIR is to disclose to the public and the decision makers, in this case the City of Yuba City's City Council and Planning Commission, the significant impacts of the project, and to identify potentially feasible mitigation measures that would avoid or reduce the severity of the impacts. The EIR must also consider potentially feasible alternatives to the project that would meet most of the basic objectives of the project as well as reduce or avoid one or more of the significant impacts that could result from implementation of the proposed project.

1.2 Background and Project Overview

The BSMP proposes a mix of master planned residential, retail, and industrial uses, and public/semi-public facilities, including a school, parks, and open space land uses. The proposed project is located in unincorporated Sutter County outside of the City of Yuba City's sphere of influence (SOI). The City of Yuba City is processing the application for the Master Plan and associated approvals, including annexation to the City's SOI, which must occur before the Master Plan could be developed.

1.2.1 Project Location

The plan area is located along State Route 99 (east and west) in unincorporated Sutter County and is generally bounded by Bogue Road to the north, the Feather River West Levee to the east, Stewart Road to the south, and South Walton Avenue to the west. The BSMP Area is bordered by urban and agricultural uses to the north, west, and south, and the Feather River West Levee to the east.

Existing land uses within the BSMP Area include agricultural and rural residential uses. The Sutter County General Plan land use designations for the BSMP Area are Agricultural (AG-20), Estates Residential (ER), and Low Density Residential (LDR). The existing Sutter County zoning designations for the plan area are AG (Agriculture), ER (Estate Residential), and R-1 (Single-Family).

1.2.2 Project Description

The BSMP is within an area anticipated for inclusion in the expanded Yuba City SOI. The BSMP provides a long-range vision for the development of an approximately 741-acre mixed-use community that would include a variety of land uses, including low-, medium-low-, and medium-high-density residential uses, along with community commercial, neighborhood commercial, office, business and light industrial, park, and public uses.

1.3 Lead Agency

In conformance with sections 15050 and 15367 of the State CEQA Guidelines, the City of Yuba City is the “lead agency” for this EIR, which is defined as the “public agency which has the principal responsibility for carrying out or disapproving a project.”

Lead Agency Contact

Please address all comments on the Draft EIR to:

Darin Gale
Deputy City Manager
Yuba City Development Services Department
1201 Civic Center Boulevard
Yuba City, CA 95993
Phone: 530-822-4700
Email: permits@yubacity.net

1.4 Scope of the EIR and Issues to be Addressed

This Draft EIR evaluates the existing environmental resources within the plan area and in the region (to the extent the Master Plan components could impact such resources), analyzes potential impacts on those resources due to implementation of the proposed project, and identifies mitigation measures to reduce significant impacts. The analysis covers a wide range of subject areas, including aesthetics; agriculture and forestry resources; air quality; biological resources; cultural and tribal resources; geology, soils, mineral resources and paleontological resources; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality; land use and planning; noise; population and housing; public services; transportation and traffic; and utilities and service systems. The evaluation of these subject areas is presented on a resource-by-resource basis in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, in Sections 3.1 through 3.15. Each section is divided into three parts: Environmental Setting, Regulatory Setting, and Impacts and Mitigation Measures.

Other CEQA-related issues, such as growth-inducing impacts resulting from implementation of the proposed project are analyzed in Chapter 4, Other CEQA Required Considerations. Cumulative impacts are evaluated in each section of Chapter 3 and are summarized in Chapter 4. In addition, four alternatives – No Project/No Build Alternative (Alternative 1), No Project/Existing Sutter County General Plan Alternative (Alternative 2), and Reduced Project Alternative (Alternative 3) – are analyzed in this Draft EIR. These alternatives are evaluated in Chapter 5, Alternatives, and an environmentally superior alternative will be identified.

1.5 CEQA Process

As provided in both CEQA and the CEQA Guidelines, public agencies are charged with the duty to substantially lessen or avoid significant environmental effects where feasible (see PRC Section 21002; State CEQA Guidelines, section 15002, subd. (a)(3), 15021, subd. (a)(2)). In discharging this duty, the public agency has an obligation to balance a variety of public objectives, and may consider specific economic, environmental, and social issues. This EIR is an informational document that informs public agency decision-makers and the general public of the significant environmental effects of a proposed project. An EIR must identify possible means to minimize the significant effects and describe reasonable alternatives to the project. The lead agency, the City of Yuba City, is required to consider the information in this EIR along with any other available information in making its decision. The basic informational requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, alternatives, significant irreversible changes, growth-inducing impacts, and cumulative impacts.

1.5.1 Levels of Significance

Under CEQA a significant effect on the environment is “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance” (State CEQA Guidelines section 15382). For all environmental issues addressed in this EIR, specific standards of significance are identified. Definitions of significance vary with the physical conditions and the setting in which the change occurs. Depending on the impact area, the standards are based on the CEQA Guidelines, the City’s General Plan, other applicable local or regional plans, and in some cases, professional judgment.

Section 15064 (b) of the State CEQA Guidelines states: “The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An inflexible definition of significant effect is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area”. In addition, to determine if an effect will be adverse or beneficial, the Guidelines go on to state, “. . .the lead agency shall consider the views held by members of the public in all areas affected as expressed in the whole record before the lead agency.”

Where explicit quantification of significance is identified, such as a violation of an ambient air quality standard, this quantity is used to assess the level of significance of a particular impact in

this Draft EIR. For less easily quantifiable impacts, events or occurrences that would be regarded as significant or potentially significant were identified. For example, a criterion for determining the level of significance of the loss of a particular habitat would be that habitat's importance to endangered, threatened, or rare species and/or whether the habitat itself has become depleted within the region.

This assessment of levels of significance also promotes consistent evaluation of impacts for all alternatives considered.

1.5.2 Level of Detail and Type of EIR

This Draft EIR evaluates the direct and indirect project impacts and cumulative impacts of construction and operation of the full BSMP. More detailed information is available about the first two phases of the proposed BSMP (Newkom Ranch and Kells East Ranch) and, thus, these two phases are evaluated at a greater level detail in situations where the additional detail allows for more detailed analysis.

The California Court of Appeal has recently addressed the question of how to properly identify the “type” of EIR that should be prepared for a project. In noting that there are many different names for EIRs, the court stated that “courts strive to avoid attaching too much significance to titles in ascertaining whether a legally adequate EIR has been prepared for a particular project” (*Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal. App. 4th 1036). In *Treasure Island*, the Court restated its findings in *California Oak Foundation v. Regents of University of California* (2010) 188 Cal.App.4th 227, 271) that the “fact that this EIR is labeled a ‘project’ rather than a ‘program’ EIR matters little for purposes of its sufficiency as an informative document. ‘The level of specificity of an EIR is determined by the nature of the project and the “rule of reason” [citation], rather than any semantic label accorded to the EIR.’”

The level of detail of the analyses of the proposed project considered in this EIR varies in response to the level of detail of the description of various elements of the proposed BSMP. For example, by its nature, the level of detail of the description of the proposed BSMP as a whole is least specific because, as a specific plan, the proposed BSMP establishes the regulatory and policy framework for future development in the BSMP Area, and does not identify and/or describe specific projects. This level of detail is commensurate with the requested approvals that include the proposed BSMP, General Plan Amendment, pre-annexation zoning, and development agreement.

In addition to the approvals and entitlements granted through the approval of the BSMP, the Newkom Ranch and Kells East Ranch applicants are seeking approval of small and large lot tentative subdivision maps. These tentative maps have more specific details than the BSMP. However, acknowledging the conceptual nature of the project plans and lack of precise design detail, the analysis is in greater detail as it relates to land use intensities and related activities, and less detailed as it pertains to the physical and design characteristics of the future buildings.

Thus, because the requested approvals and corresponding levels of detail of the descriptions of the proposed BSMP, Newkom Ranch and Kells East Ranch projects vary in level of detail, the level of detail of the analyses of these projects varies in the EIR.

1.5.3 Plan Implementation and Subsequent Projects

The subject of the City's approval decision is the overall plan (the BSMP) addressed in the EIR. When subsequent activities, defined in greater detail, in the Master Plan are proposed, the City must determine whether the environmental effects of those activities were covered in this Draft EIR and/or whether additional environmental documents must be prepared. Prior to approval of entitlements to develop each phase or activity, those actions or entitlements will be reviewed to determine if they are within the scope of this Draft EIR, or if additional environmental analysis is needed prior to approval. If a later activity would have effects that were not examined under the programmatic analysis of this EIR, a project-specific CEQA document must be prepared. The project-level CEQA documents may incorporate by reference general discussions from the broader EIR and focus on the impacts of the individual projects that implement the plan, program, or policy.

In addition to the programmatic analysis described above, this EIR also includes a more detailed project-level analysis of the initial phases (Newkom Ranch and Kells East Ranch) of the proposed plan for which the project applicants are currently requesting entitlements to implement. As more fully described in Chapter 2, Project Description, components associated with the proposed Newkom Ranch and Kells East Ranch developments are analyzed at a project-specific level of detail. The development proposals for these phases of the BSMP contains enough specificity for a site-specific, project-level environmental review under CEQA, and will allow the consideration of discretionary approvals, such as tentative subdivision maps for those phases of the master plan. The City's intention in evaluating Newkom Ranch and Kells East Ranch at a project-specific level of detail is that no further environmental review will be required for additional regulatory approvals following adoption of the specific plan, barring the occurrence of any of the circumstances described in PRC Section 21166.

In general, if it is determined that a subsequent project is consistent with the Master Plan and is within the scope of the EIR, further environmental review may not be necessary. Section 65457(a) of the California Government Code and section 15182(a) of the State CEQA Guidelines provide that no EIR or negative declaration is required for any residential project undertaken in conformity with an adopted Specific Plan – in this case, the BSMP – for which an EIR has been certified. If it is determined that a development application is inconsistent with the Master Plan and/or substantial evidence exists that supports the occurrence of any of the events set forth in Section 21166 of the PRC and section 15162 of the State CEQA Guidelines, a determination will be made as to the appropriate subsequent environmental document.

PRC section 21166 specifies that when an EIR has been prepared for a project, no subsequent or supplemental environmental review is required unless one or more of the following occurs:

- Substantial changes are proposed in the project which will require major revisions of the environmental impact report;

- Substantial changes occur with respect to the circumstances under which the project is being undertaken that will require major revisions in the environmental impact report; or
- New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

It should be noted that this EIR attempts to quantify the project and associated impacts as specifically as possible. Though used for analytical purposes, the numbers employed in the impact analyses are approximations, such as the number of pounds per day of solid waste a specific land use would produce. Where some uncertainty exists regarding quantification, the analysis makes certain assumptions to be conservative in the analysis; that is, approximations in calculations tend to overstate, rather than understate, anticipated impacts.

1.5.4 Public Review of the Draft EIR

The City released a notice of preparation (NOP) for the Bogue-Stewart Master Plan EIR on January 4, 2017 (see **Appendix A**). The purpose of the NOP is to provide responsible agencies and interested persons with sufficient information describing the proposed project and its potential environmental effects to enable them to make a meaningful response as to the scope and content of the information to be included in the EIR. A project scoping meeting was conducted on January 18, 2017. The purpose of the scoping meeting was to present a brief overview of the planning and environmental process, introduce the Project, and solicit feedback from responsible agencies, residents, and interested persons as to what environmental issues the Draft EIR should address (see **Appendix B**). The project described in the January 2017 NOP provided for development of an approximately 741-acre mixed-use community that would include a mix of land uses. As described in the NOP, buildout of the BSMP would be estimated to accommodate the development of 2,588 dwelling units and 1,288,723 square feet of non-residential uses.

This Draft EIR will be publicly circulated for a 45-day public review and comment period beginning on May 3, 2019 and ending on June 17, 2019. During the comment period, the general public, organizations, and agencies may submit comments addressing the Draft EIR's accuracy and completeness to the City of Yuba City. Written comments on this Draft EIR should be submitted by 5:00 PM on June 17, 2019 to Mr. Darin Gale at the address listed under Section 1.3, Lead Agency Contact, above.

This Draft EIR and all documents referenced herein are available for public review at the City of Yuba City, Development Services Department, 1201 Civic Center Boulevard, Yuba City, California, 95993. The Draft EIR is also available at the Sutter County Library, 750 Forbes Avenue, Yuba City, California, 95991. The Draft EIR is also available from the City on compact disc and is posted on the City's website: www.yubacity.net/BSMP.

1.5.5 Final EIR and Consideration of Project Approval

Comments received during the comment period will be addressed in a Final EIR. The Final EIR will include written comments on the Draft EIR received during the public review period, as well as comments received during any public hearing on the Draft EIR. The Final EIR will also include responses to all substantive comments received during the comment period, and revisions

to the Draft EIR made in response to public comments. The Draft EIR and Final EIR together will comprise the “EIR” for the project.

The Final EIR will be reviewed by the City of Yuba City’s City Council for its adequacy, accuracy, and completeness with regard to CEQA and the City's Guidelines, and ultimately the City Council will decide whether to certify the EIR.

If the decision-making body elects to proceed with the project or one of the alternatives, written Findings of Fact for each significant environmental impact identified in the EIR will be prepared pursuant to PRC Section 21081. For each significant impact of the proposed project the City must make one of the following findings:

- Changes or alterations have been required in, or incorporated into the project which mitigate or avoid the significant effects on the environment identified in the EIR;
- Those changes or alterations to the proposed project are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency; and/or
- Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or proposed project alternatives identified in the EIR.

The Findings of Fact prepared by the City must be based on substantial evidence in the administrative record and must include an explanation that bridges the gap between evidence in the record and the conclusions required by CEQA.

If the City elects to proceed with the proposed BSMP and if the EIR concludes that the project would result in significant impacts that cannot be mitigated below the level of significance, the City must also prepare a Statement of Overriding Considerations, in accordance with CEQA Guidelines section 15093. The Statement of Overriding Considerations must explain the decision to balance the benefits of the project against unavoidable environmental impacts based on substantial evidence in the record.

One or more public hearings will be held as part of the City Council’s consideration of the adequacy of the EIR and the merits of the proposed project.

1.6 Areas of Concern

In response to the NOP, the City received 11 comment letters addressing the scope of the environmental analysis for the EIR. Those comments focused on several issues:

- A Central Valley Flood Protection Board permit may be required for work on or near the Feather River levee (i.e., within 20 feet of the west levee toe);
- A request that the BSMP EIR address consistency with the Sutter County General Plan policies regarding the expansion of the Yuba City SOI;

- Water quality permits may be needed from the Central Valley Regional Water Quality Control Board;
- Impacts to biological resources, including wetlands and sensitive species including nesting raptors and other avian species, should be evaluated;
- Project impacts to traffic and parking should be evaluated particularly along Railroad Avenue and school traffic along Stewart Road near Garden Highway;
- Project impacts to noise should be evaluated;
- Impacts to air quality should be evaluated;
- Alternatives analysis should consider development of sites within the City of Yuba City;
- The proposed project would result in the conversion of farmland to nonagricultural uses. Mitigation should be identified to mitigate the impact of the conversion of agricultural lands;
- Police protection services and facilities requirements to serve the proposed project should be evaluated;
- Some letters question whether there is adequate water supply for the proposed project and how restrictions for groundwater pumping may be implemented; and
- Some commenters questioned the land use compatibility of planned medium low density residential zoning (apartments) adjacent to existing rural low density residential uses.

1.7 How to Use this Report

This report includes seven principal parts: Project Description, Summary of Impacts and Mitigation Measures, Environmental Analysis (Setting, Impacts, and Mitigation Measures), CEQA Considerations, Alternatives, and Appendices.

The **Project Description** includes a discussion of the location of the project and proposed plans for development of this area (Chapter 2).

The **Environmental Setting, Impacts, and Mitigation Measures** section includes a topic-by-topic analysis of impacts that would or could result from implementation of the proposed project. The results of field visits, data collection and review, and analysis are presented in the text (Chapter 3).

The **Other CEQA Considerations** section includes a discussion of other major issues required by CEQA, namely growth-inducing effects and urban decay (Chapter 4).

The **Project Alternatives** section includes an assessment of alternative methods for accomplishing the basic objectives of the proposed project. This assessment, required under CEQA, must provide adequate information for decision makers to make a reasonable choice between alternatives, based on the environmental aspects of the proposed project (Chapter 5).

This Draft EIR also includes chapters that identify the individuals and firms that prepared the EIR analysis (Chapter 6), Acronyms and Abbreviations (Chapter 7) and list references cited in the analysis (Chapter 8).

The **Appendices** (included on CD at the back of this Draft EIR) contain a number of reference items providing support and documentation of the analysis performed for this report.

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CHAPTER 2

Project Description

2.1 Introduction

Under CEQA, a complete project description must contain: (a) the precise location and boundaries of the plan area, shown on a detailed map, along with a regional map of the project's location; (b) a statement of the objectives sought by the proposed project, which should include the underlying purpose of the project; (c) a general description of the project's technical, economic, and environmental characteristics; and, (d) a statement briefly describing the intended uses of the EIR (State CEQA Guidelines section 15124). A project description need not be exhaustive, but should supply the information necessary for the evaluation and review of the project's significant effects on the environment. This project description for the proposed Bogue-Stewart Master Plan (BSMP or proposed project) provides an overview of the existing environmental setting, the objectives of the proposed project, and detailed information describing the characteristics of the proposed project. Discretionary actions required to adopt and implement the proposed project are also described.

2.2 Overview

Pursuant to section 15125 of the State CEQA Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of the proposed project to provide the “baseline condition” against which project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the notice of preparation (NOP) is published. The NOP for the Bogue-Stewart Master Plan EIR was published on January 4, 2017, with the NOP comment period ending on February 2, 2017. The environmental setting for each environmental issue is explained in the beginning of each section of Chapter 3 and in the corresponding technical reports. The following discussion provides a description of the proposed project's location, background, and characteristics.

2.2.1 Project Location

The BSMP area is located immediately south of the City of Yuba City in unincorporated Sutter County, in California's Central Valley (see **Figure 2-1**). The City of Yuba City is situated at the crossroads of State Route (SR) 99 and SR 20, approximately 42 miles north of Sacramento and immediately west of the Feather River and the City of Marysville located on the east side of the

Feather River in Yuba County. The City encompasses approximately 14 square miles and as of 2016 had a population of 68,052.¹

The BSMP project site (BSMP area or plan area) is approximately 741 acres, generally bounded by Bogue Road to the north, the toe of the Feather River levee to the east, Stewart Road to the south, and South Walton Avenue to the west (see **Figure 2-2**).

2.2.2 Project Background

The plan area is an assemblage of 114 parcels under multiple ownership. Two of the larger landowners are the project applicants, Newkom Ranch LLC and Bains Revocable Family Trust 2005, which own and/or control 170.2 acres (23 percent) and 95.3 acres (13 percent), respectively, within the plan area. For purposes of the BSMP and this environmental analysis, these areas are shown as Newkom Ranch and Kells East Ranch (Figure 2-2).

Existing land uses within the plan area include agricultural and rural residential uses. The plan area is outside of Yuba City's sphere of influence (SOI), as well as outside of city boundaries.

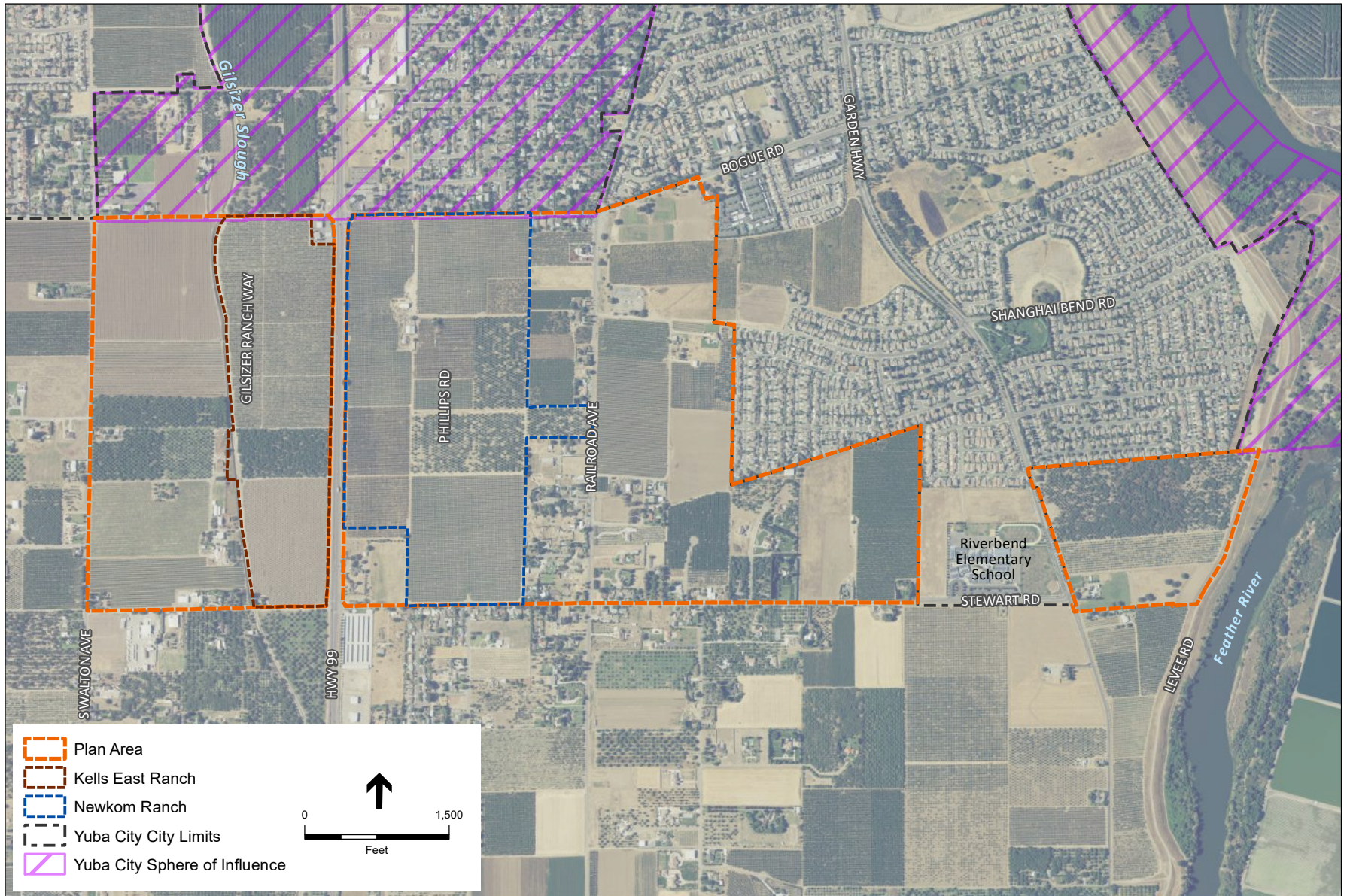
The current Sutter County General Plan land use designations for the plan area are Agricultural (AG-20); Estates Residential (ER), and Low Density Residential (LDR) (see **Figure 2-3**). The existing zoning designations for the plan area are AG (Agriculture), ER (Estate Residential), and R-1 (Single-Family) (see **Figure 2-4**). As part of the proposed project, the plan area would be added to Yuba City's SOI and Phase 1 and Phase 2 areas would be annexed into the City.

2.2.3 Project Objectives

As required under State CEQA Guidelines section 15124(b) the following are the objectives sought by the proposed project. These objectives establish the underlying purpose of the project, provide a framework for the City of Yuba City to develop a reasonable range of alternatives to the project (see Chapter 5), and may assist the decision makers in making findings and/or preparing a Statement of Overriding Considerations if the project is recommended for approval.

1. Creation of high-quality balanced neighborhoods that provide a wide range of housing opportunities, along with a mix of community- and neighborhood-commercial, office, and business/technology-oriented uses.
2. Maintain the integrity of surrounding residential neighborhoods by providing connections where necessary and continuing development in a visually compatible manner.
3. Support the long term operation of adjacent agricultural uses, as well as continued interim agricultural production within the BSMP plan area.

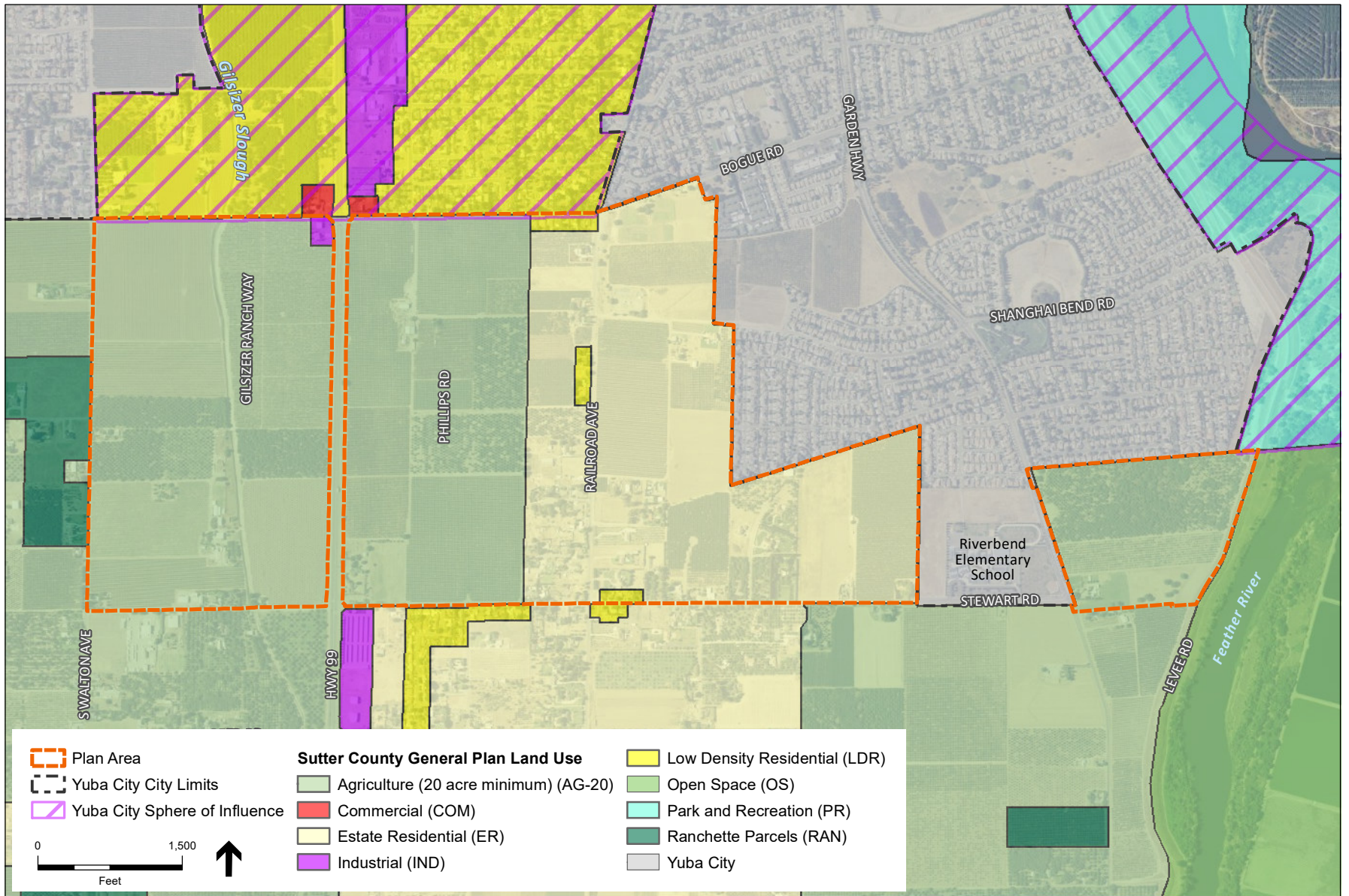
¹ California Department of Finance, Demographic Research Unit, 2016. Tables of January 2016 City Population Ranked by Size, Numeric and Percent Change. Available: www.dof.ca.gov/Forecasting/Demographics/Estimates/. Accessed February 1, 2017.



SOURCE: USDA, 2016; City of Yuba City, 2016; ESA, 2019

Bogue-Stewart Master Plan and EIR . 140720

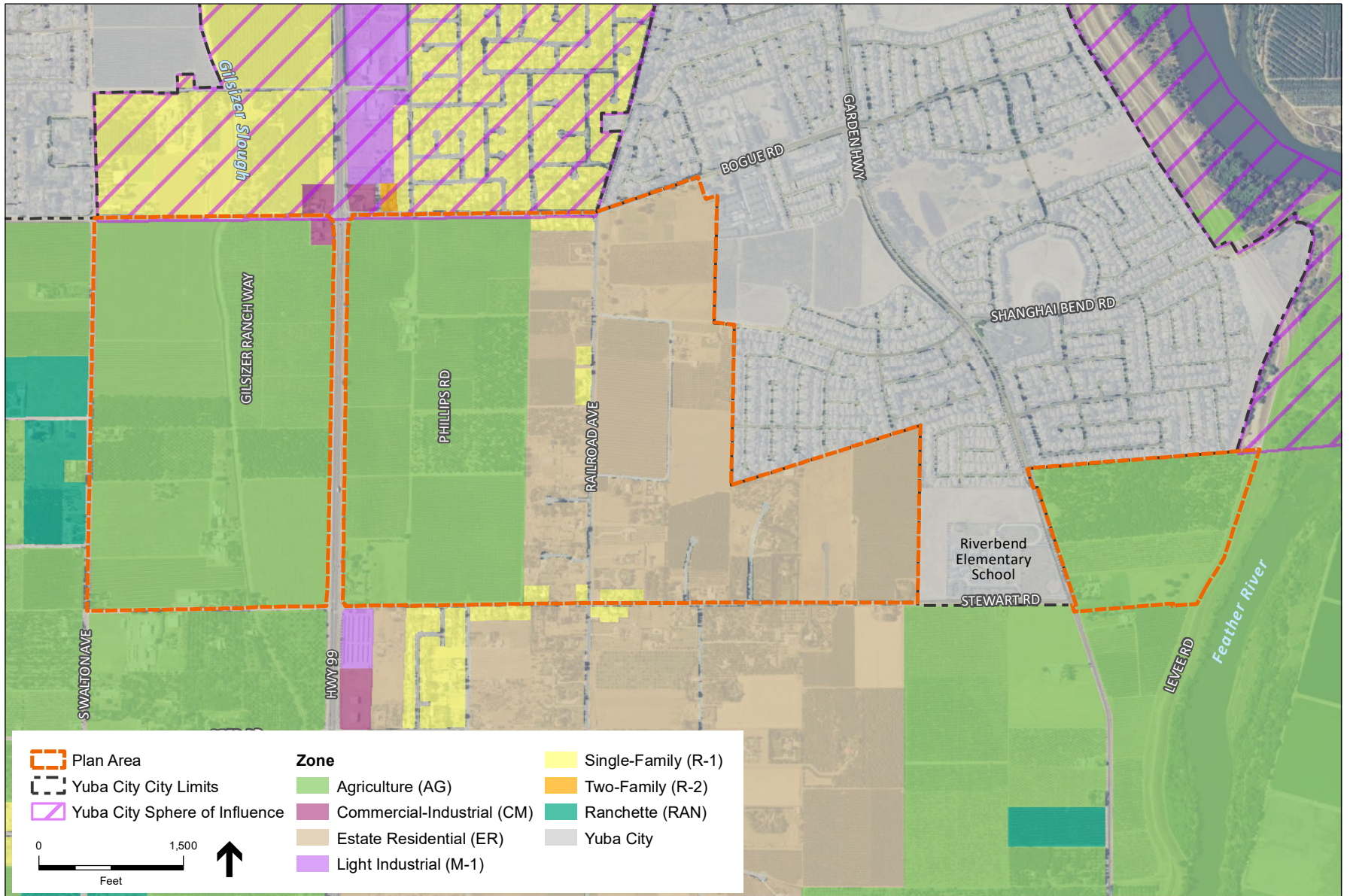
Figure 2-2
Plan Area



SOURCE: USDA, 2016; City of Yuba City, 2016; Sutter County, 2016; ESA, 2019

Bogue-Stewart Master Plan and EIR . 140720

Figure 2-3
Existing Sutter County General
Plan Land Use Designations



SOURCE: USDA, 2016; City of Yuba City, 2016; Sutter County, 2016; ESA, 2019

Bogue-Stewart Master Plan and EIR . 140720

Figure 2-4
Existing Sutter County Zoning Districts

4. Provide an interconnected modified grid street system that expands upon the existing and adjacent roadways in the plan area to provide adequate and ample travel options for pedestrians, bicyclists, transit, and vehicles.
5. Foster a positive community image through the incorporation of high-quality architectural details and landscaping features.
6. Coordinate the development of land uses and infrastructure to ensure that the infrastructure can support that development and the development can support the associated costs.
7. Support Sutter County Local Area Formation Commission (LAFCo) approval for the annexation of the plan area into the City of Yuba City.
8. Ensure that appropriate funding mechanisms are established to fully fund planned improvements and services over the 20-year buildout term without creating a negative fiscal impact to the City's General Fund.

2.3 Project Description

This section provides details regarding the land use approvals requested which comprise the project and project components of the proposed BSMP.

2.3.1 Bogue-Stewart Master Plan

The purpose of the proposed BSMP is to provide guidance for an orderly and cohesive planned community consistent with the Yuba City General Plan and Yuba City zoning regulations for future annexation into the City. The proposed BSMP combines elements from the Yuba City General Plan and zoning regulations in a comprehensive manner that establishes the regulatory structure to guide development directly adjacent to the southern edge of the City. The proposed plan would provide for the development of two property assemblages totaling 741 acres as a planned community with a mix of residential, commercial, office/business, park and recreational sites, and public facilities.

The proposed BSMP would provide direction for land use and community design, mobility, utilities, public services, and implementation. It would also function as the BSMP area's zoning mechanism, regulating allowed uses, development standards, design expectations, and guidance on roadway alignment and right-of-way to correspond with the neighborhood pattern in existing residential neighborhoods adjacent to the plan area.

The proposed BSMP would be the primary land use, policy, and regulatory document used to guide the overall development of the plan area. It would establish a development framework for land use, mobility, utilities and services, resource protection, and implementation to promote the systematic and orderly development of the plan area. All subsequent development projects and related activities proposed within the plan area would be required to be consistent with the proposed BSMP.

2.3.2 Sphere of Influence Amendment

The entirety of the 741-acre plan area is proposed to be included in the City of Yuba City's SOI using a SOI amendment (SOIA). Consistent with the requirements of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, Sutter County LAFCo is the lead agency to consider and approve any SOIA. This document is meant to provide the environmental analysis needed so that Sutter County LAFCo can make an appropriate determination regarding this action.

2.3.3 Annexation

The proposed project includes annexation of 304 acres to the City of Yuba City (Phase 1 and Phase 2 as shown on **Figure 2-5**). Annexation can only occur if and once Sutter LAFCo has approved an SOIA, however, this may happen shortly after the SOIA is approved. Sutter County LAFCo is the responsible agency for the annexation request. It is anticipated that the Sutter County LAFCo would use this EIR in its decision making process, as required under CEQA. LAFCo policies and procedures are discussed in Section 3.10, Land Use and Planning.

2.3.4 General Plan Map Amendments

The plan area is currently located in the unincorporated area of Sutter County. The Yuba City General Plan designates the plan area as an Agricultural/Rural area outside of the City limits and the Yuba City SOI, subject to Sutter County General Plan land use designation and zoning.

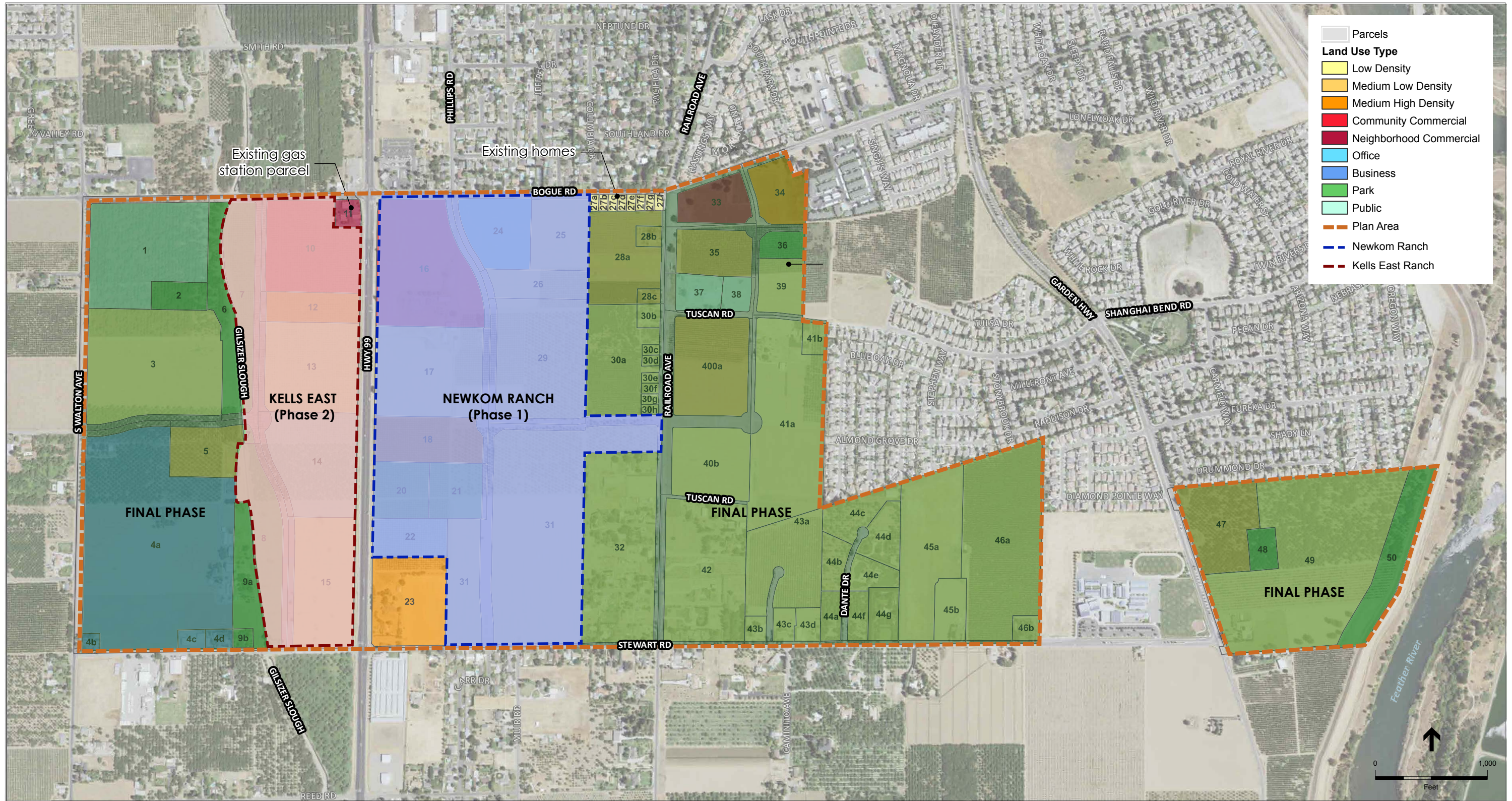
Assuming LAFCo approval of Phase 1 and 2 annexation to the City of Yuba City, all subsequent development within these areas would need to be consistent with the proposed BSMP, as well as the City's General Plan, and Yuba City Municipal Code, policies, and design guidelines, as applicable. Part of the application to LAFCo includes a land use plan and pre-zoning of the area. Thus, the City would amend its General Plan map to include the plan area, and to reflect the General Plan land use designations assigned to parcels within the plan area as shown in **Figure 2-6**. Proposed land use are described in the Proposed Land Uses Section, below.

2.3.5 Zoning Amendments

The plan area is currently zoned by Sutter County for Agriculture, Estate Residential, Commercial-Industrial, and Single-Family. Assuming LAFCo approval of the SOIA, the entire plan area would be pre-zoned by the City of Yuba City as shown in **Figure 2-7**.

2.3.6 Development Agreements

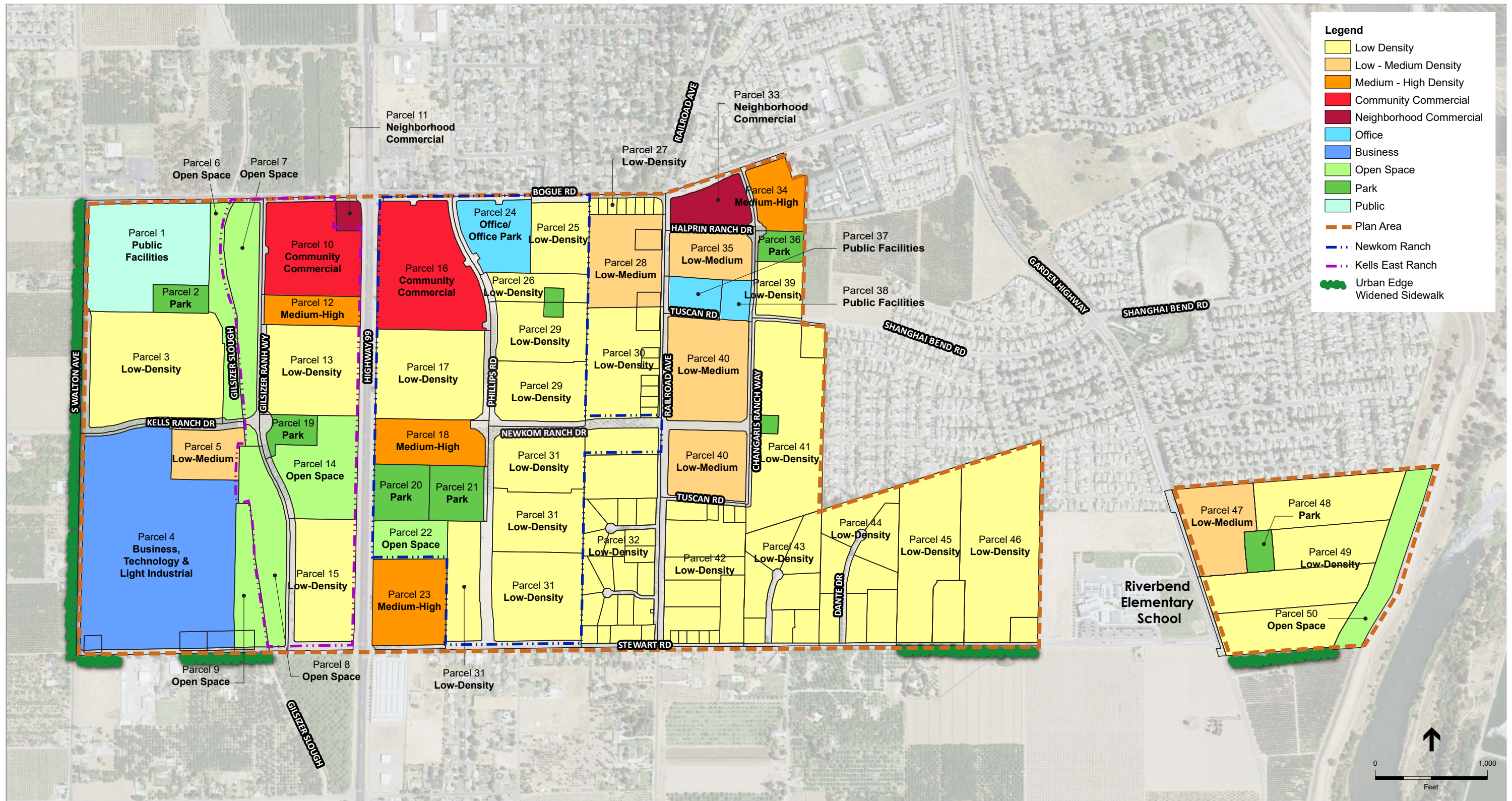
The City and project applicants may execute development agreements to implement the BSMP. Development agreements allow developers to complete long-term development projects as approved, regardless of future intervening changes in local regulations. The proposed development agreements would include commitments to project entitlements and development standards consistent with the BSMP, as well as other administrative and/or financial aspects of developing the plan area. Initial draft development agreements would be negotiated prior to project approval and included in all other BSMP entitlements presented to the City for approval.



SOURCE: USDA, 2014; City of Yuba City, 2016; MHM, 2016; ESA, 2016

Bogue-Stewart Master Plan and EIR . 140720

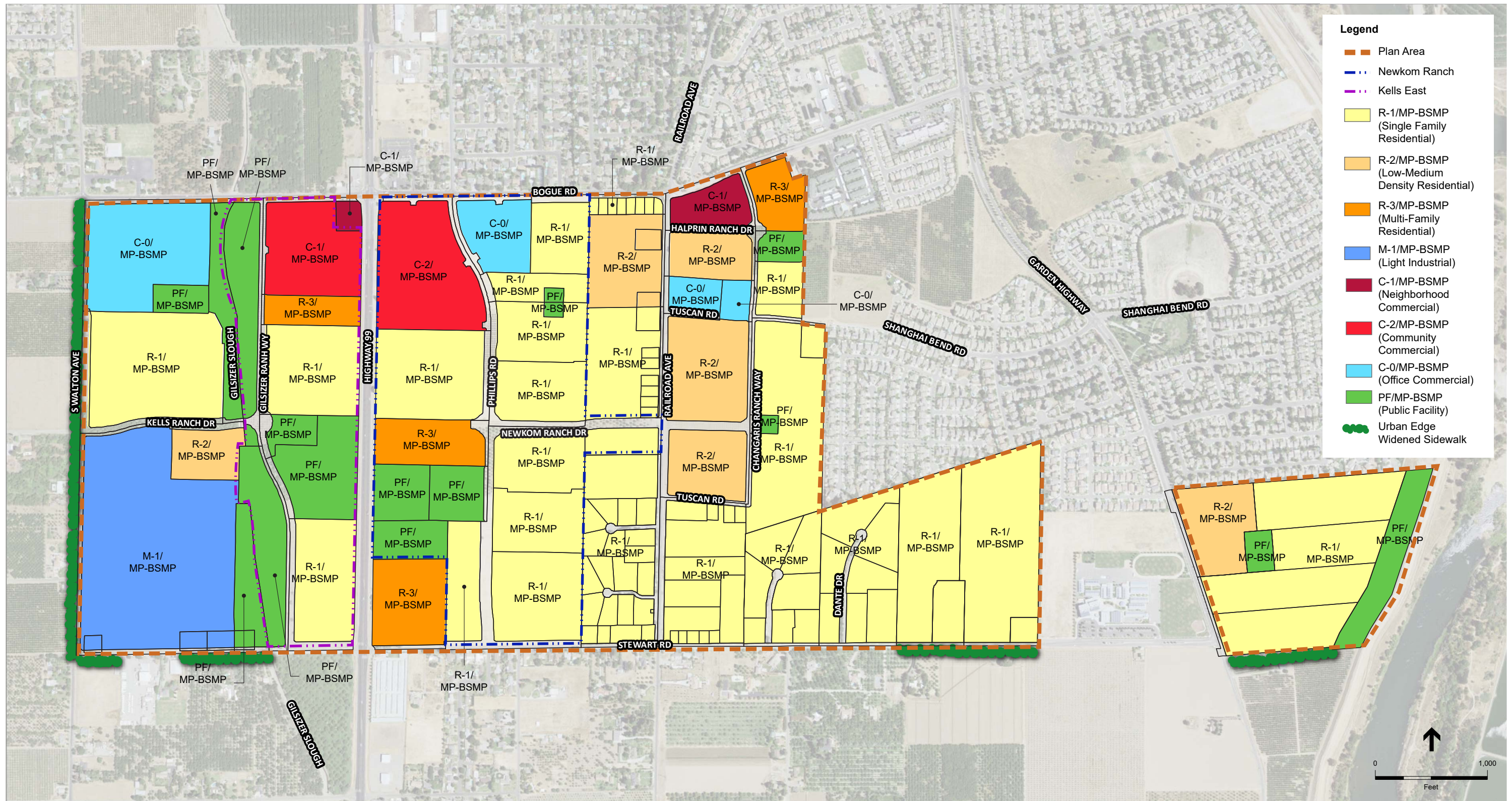
Figure 2-5
BSMP Phasing Diagram



SOURCE: USDA, 2014; City of Yuba City, 2016; MHM, 2016; ESA, 2016

Bogue-Stewart Master Plan . 140720

Figure 2-6
BSMP Land Use Plan



SOURCE: USDA, 2014; City of Yuba City, 2016; MHM, 2016; ESA, 2016

Bogus-Stewart Master Plan . 140720

Figure 2-7
BSMP Zoning Map

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2.3.7 Description of Project Elements

The following discussion focuses on the elements proposed in the BSMP. This discussion is organized to describe the master plan in its entirety (Full Master Plan), and then to focus on Phase 1 (Newkom Ranch) and Phase 2 (Kells East Ranch) in more detail (see Figure 2-5). The first two phases of the BSMP development include detailed development plans and are included in the annexation request to Sutter County LAFCo. Because these phases have a greater level of detail, they are addressed at a “project” level in this EIR and, where appropriate or applicable, this detail is provided under the headings “Newkom Ranch” or “Kells East Ranch.”

Phasing and Sequencing

The Newkom Ranch property would be Phase 1 of the BSMP developments. This phase would include development of property that is presently in agricultural use.

The Kells East Ranch development (Phase 2) would be anticipated to start one year following the initiation of Newkom Ranch construction, and would also include development of property that is presently in agricultural use.

The Final Phase would involve buildout of remaining BSMP area and would be anticipated to occur in response to market trends and demand, independent of the Newkom Ranch or Kells East Ranch developments.

CEQA requires the impact analysis for a project to include the temporal, or time-related, aspects of potential impacts (i.e., the impacts of a project over time). While the BSMP phasing plan does not specify a project implementation schedule for purposes of this environmental analysis, it is assumed that development of each phase of the proposed BSMP would occur over a 10- to 20-year period, as follows:

- Phase 1, Newkom Ranch: 2019 – 2039
- Phase 2, Kells East Ranch: 2020 – 2040
- Final Phase, remainder of BSMP: 2021 – 2041

Proposed Land Uses

Full Master Plan

The Full Master Plan area would be comprised of residential and employment-generating uses along with park/open space and public land uses. Housing types proposed include low density residential, low-medium density residential, and medium-high density residential detached and attached single-family homes. Development of the plan area is estimated to accommodate development of 2,517 new dwelling units in addition to 71 existing single-family homes that will remain on site (see **Table 2-1**). Approximately 1.29 million square feet of employment-generating and commercial land uses are proposed. The proposed land uses for the Full Master Plan area are shown in Figure 2-6.

Customized development standards would be incorporated into the master plan to ensure a consistent and predictable framework for all residential development within BSMP area. These development standards would supersede the requirements for the base zoning districts applied to implement BSMP development. All Full Master Plan area residential zoning districts would incorporate the SP/X (Specific Plan/Combining District) to acknowledge the modification to the base standards. The BSMP Zoning Map is included as Figure 2-7.

The BSMP land use designations are described below.

Low Density Residential

The Low Density Residential (LDR) land use designation would allow for single-family homes within a density range of 2 to 8 units per gross acre.² In the BSMP area, the average density of LDR uses would be approximately 4.25 dwelling units per acre (du/acre). In addition to detached single-family homes on conventional and small lots, this category also would provide for second units, parks, recreation, day care, civic, institutional and similar uses determined appropriate in a residential environment. The LDR land use category would be implemented by the (One-Family Residence/Specific Plan/X Combining (R-1/SP/X) Zone District. Permitted uses would be as specified in the Yuba City Zoning Code, including:

accessory buildings; daycare home (small and large); garage/yard sales; garden, orchard, field crops with no retail sales from site; keeping of animals; one-family residence; public parks and playgrounds; public utilities; recreational facilities (swimming pool, tennis courts and a clubhouse); residential care home (large); second family residence; and swimming pool/spa.

Low – Medium Density Residential

The Low – Medium Density Residential (LMDR) land use designation would allow for a mix of housing types within a density range of 6 to 14 units per gross acre. In the BSMP area the average density of LMDR would be approximately 9 du/ac. This category would provide for a wide range of detached and attached single-family housing types including varied small lot, court-oriented, cluster, duet/halfplex, and townhome designs. Parks, recreation, day care, civic, institutional and similar uses determined appropriate in a residential environment would be also permitted. The LMDR land use category would be implemented by the Two-Family Residence/Specific Plan/X Combining (R-2/SP/X) Zone District. Permitted uses would be as specified in the Yuba City Zoning Code, including:

accessory buildings; daycare home (small and large); garage/yard sales; garden, orchard, field crops with no retail sales from site; keeping of animals; mobile home; one-family residence; public parks and playgrounds; recreational facilities (swimming pool, tennis courts and a clubhouse); residential care home (small); swimming pool/spa; and two-family residence or two one-family residences.

² A “gross acre” refers to the total acreage owned, minus any part of the parcel that is subject to a “public way”.
A “public way” is defined for local property assessment and taxation purposes as any public street, road, avenue, drive, sidewalk, alley, jogging or bicycle path or other area maintained for public travel.

**TABLE 2-1
BSMP DEVELOPMENT SUMMARY TABLE**

Land Use Designation	Total BSMP site						Newkom Ranch Phase		Kells East Ranch Phase		Final Phase		
	Land Use (Gross Acres ¹)	Percent Land Allocation	Minimum/Maximum Density and Intensity	Assumed Density (du/ac) ²	Total Proposed Units ³	Assumed Intensity (square feet)	Total Square Feet	Total Units	Total Square Feet	Total Units	Total Square Feet	Total Units	Total Square Feet
Residential Neighborhoods													
Low Density Residential	368.9	50	2 to 8 du/ac	4.25	1,328			427		147		754	
Low-Medium Density Residential	62.6	8	6 to 14 du/ac	9	430							430	
Medium/High Density Residential	32.0	4	13 to 36 du/ac	24	759			216		123		420	
Commercial and Employment													
Neighborhood Commercial	7.2	1	0.5 max. FAR			82,328							82,328
Community Commercial	36.7	5	0.5 max. FAR			390,951		229,779		161,172			
Office & Office Park	8.6	1	1.0 max. FAR			108,464		108,464					
Business, Technology & Light Industrial	55.8	8	0.75 max. FAR			574,992							574,992
Public and Quasi-Public													
Parks, Recreation & Open Space ⁴	84.2	11											
Public Facilities ⁵	27.5	4	1.0 max. FAR			131,987							
Roads and Circulation	58.0	8											
TOTAL	741.5	100			2,517	1,288,723		643	338,243	270	161,172	1,604	657,320

NOTES:

- Gross acreage is calculated as the total number of acres dedicated to a particular land use parcel as measured from the centerline of proposed or dedicated streets bounding the parcel. Gross acreage includes the acreage dedicated for internal right-of-ways within a land use parcel.
- Average Density and Assumed Intensity relates to the density/FAR assumed for development under each land use category, with the intent that the development does not go below allowed minimum density/FAR or exceed maximum density/FAR per land use.
- 71 homes currently existing on the site will be included within the total BSMP development, but are not included under "Total Proposed Units" count. Therefore, at full build out the total residential unit count should be 2,588 units including proposed and existing homes.
- Neighborhood parks are not identified in this table, but the developer will be required to meet the requirement of a minimum of five (5) acres per 1,000 residents.
- A 20-acre site has been identified for K-8 school. In the event that the parcel is not acquired for the K-8 school, other potential appropriate land uses include single-family and multifamily residential, but any changes would require a Master Plan Amendment subject to CEQA review.

SOURCE: MHM Inc., 2018. *Bogue-Stewart Master Plan, Land Use Plan.*

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Medium – High Density Residential

The Medium – High Density Residential (MHDR) land use designation would allow for a density range of 12 to 36 units per gross acre. In the BSMP area the average density of MHDR would be approximately 24 du/ac. This category would accommodate primarily attached housing and higher-density detached housing including townhome, row house, courtyard, apartment and condominium designs. Parks, recreation, day care, civic, institutional and similar uses determined appropriate in a residential environment are also permitted. The MHDR land use category is implemented by the Multiple-Family Residence/Specific Plan/X Combining (R-3/SP/X) Zone District. Permitted uses are as specified in the Yuba City Zoning Code, including:

condominiums; day care home (small and large); garage/yard sale; garden, orchard, field crops with no retail sales from the site; group residences; keeping of animals; mobile home; Multiple-family residences; one-family residences; public parks and playgrounds; recreational facilities (swimming pool, tennis courts and clubhouse); residential care home (small and large); senior congregate care facility; skilled nursing and intermediate care facilities; swimming pool/spa; two-family residence; and townhouses.

Neighborhood Commercial

The Neighborhood Commercial (NC) land use designation would allow for small shopping centers containing local retail stores, services, restaurants (excluding drive-thru), offices, gas stations and similar uses intended to cater to the daily convenience needs of the surrounding residential neighborhoods. The scale and design of buildings within the NC district would be required to be compatible with the neighboring residential uses. In the proposed BSMP the average development intensity assumed for NC uses would be a 0.35 floor area ratio (FAR).³ The NC land use category would be implemented by the Neighborhood Convenience Commercial/Specific Plan/X Combining (C-1/SP/X) Zone District. Permitted uses would be as specified in the Yuba City Zoning Code.

Community Commercial

The Community Commercial (CC) land use designation would allow for more intense shopping centers typically anchored by a major tenant(s) containing a wide variety of businesses including retail and grocery stores, services, eating and drinking establishments, banks, indoor entertainment, garden supply, offices, auto services, lodging and similar uses. Mixed use development may be permitted subject to the transfer/allocation of residential units as approved by the City. In the proposed BSMP the average development intensity assumed for CC uses would be at a 0.25 FAR. The CC land use category would be implemented by the Community Commercial/Specific Plan/X Combining (C-2/SP/X) Zone District. Permitted uses would be as specified in the Yuba City Zoning Code.

³ A floor area ratio (FAR) is the gross building area on a site, excluding structured parking, to the net developable area of the site. The net developable area is the total area of a site excluding portions that cannot be developed (e.g., right-of-way, public parks, etc.). A site includes all contiguous parcels that will share parking or access.

Office and Office Park

The Office and Office Park (O/OP) land use designation would allow for professional and medical offices in a low intensity, campus like setting. Small scale support and related services also would be allowed, examples of which may include dry cleaners or small convenience retail. Mixed use development would be permitted subject to the transfer/allocation of residential units as approved by the City. In the proposed BSMP the average development intensity assumed for O/OP uses would be at a 0.3 FAR. The O/OP land use category would be implemented by the Office Commercial/Specific Plan/X Combining (C-O/SP/X) Zone District. Permitted uses would be as specified in the Yuba City Zoning Code.

Business, Technology, and Light Industry

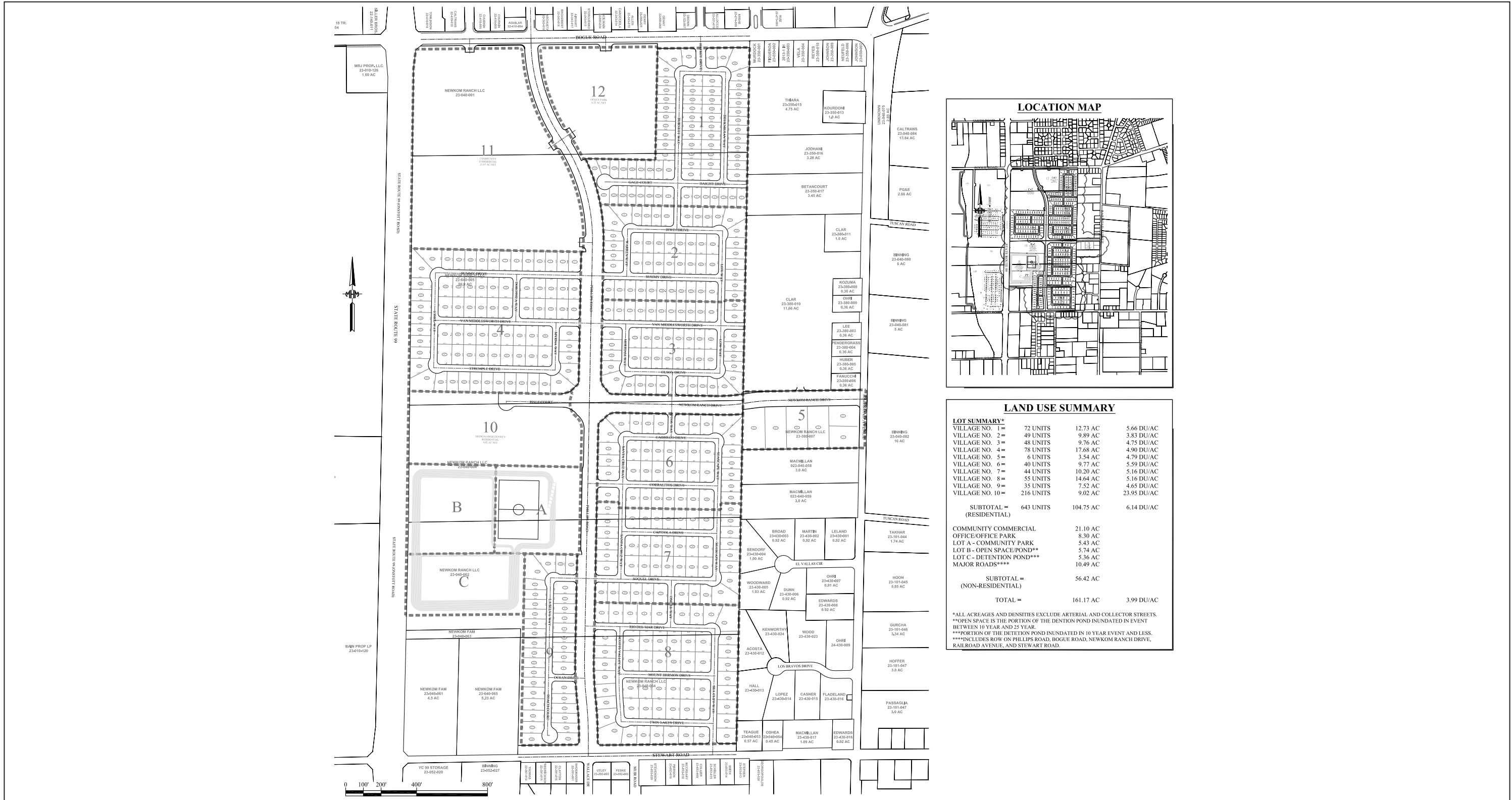
The Business, Technology and Light Industrial (BTLI) land use designation would allow for research and development activities, light industrial/manufacturing uses, offices, high-tech uses, and small-scale distribution centers that would not create a nuisance or otherwise unacceptable levels of noise, dust, odor, smoke, bright light or vibration. In the proposed BSMP the average development intensity assumed for BTLI uses would be at an 0.25 FAR. The BTLI land use category would be implemented by the Heavy Commercial/Light Industrial/Specific Plan/X Combining (C-M/SP/X) Zone District. Permitted uses would be as specified in the Yuba City Zoning Code.

Newkom Ranch

Newkom Ranch is an approximately 161-acre assemblage located in the center of the plan area. Newkom Ranch would be expected to be the portion of the plan area where development and construction of the proposed BSMP would be initiated. The Newkom Ranch site is generally bounded by SR 99, Bogue Road, Railroad Avenue and Stewart Road (see **Figure 2-8**). The eastern boundary of the Newkom Ranch site is formed by multiple parcels adjacent to the west side of Railroad Avenue, with a parcel in the central portion of the site extending all the way to Railroad Avenue. Currently, the Newkom Ranch site is in agricultural use.

As proposed, Newkom Ranch would include the following land uses (see **Table 2-2**)

- Low Density Residential –The Low Density Residential designation would comprise most of the eastern side of the Newkom Ranch project area and be adjacent to other Low Density Residential uses in the plan area to the east.
- Medium High Density Residential –The Medium High Density Residential use would be located in the southwestern section of the Newkom Ranch project area in two parcels of similar size that abut the eastern side of SR 99.
- Community Commercial –The Community Commercial use would be located southeast of the intersection of SR 99 and Bogue Road.
- Office –The Office use would be located along the south side of Bogue Road along the northern edge of the Newkom Ranch project area.



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- Park – Park uses would be located in the southwestern section of the Newkom Ranch project area along the east side of SR 99.
- Public –The Public use would be located in the southwestern section of the Newkom Ranch project area between the Medium High Density Residential and Park uses along the east side of SR 99.
- Roads and Circulation –This designation would include all public right-of-way, mainly roads, throughout the Newkom Ranch project area.

Newkom Ranch would accommodate a range of residential densities for a total of 643 dwelling units. In addition, approximately 340,000 square feet of employment-generating uses would be included.

Kells East Ranch

Kells East Ranch is an approximately 93.55-acre portion of the plan area, located in the western plan area along the west side of SR 99, extending to the west roughly to Gilsizer Slough (see **Figure 2-9**). Kells East Ranch would be anticipated to develop as a second phase of the BSMP. Currently, the Kells East Ranch project site is in agricultural use.

**TABLE 2-2
NEWKOM RANCH LAND USE SUMMARY**

Land Use Designation	Land Area (Gross Acres)	Average Density (du/acre)	Total Dwelling Units	Assumed Intensity (FAR)	Total Square Feet
Residential					
Low Density Residential	96.0	4.45	427		
Medium-High Density Residential	9.0	24	216		
Non-Residential					
Community Commercial	21.5			0.25	229,779
Office & Office Park	8.6			0.3	108,464
Civic Amenities					
Parks, Recreation & Open Space	16.5				
Roads and Circulation	9.54				
Total	161.2		643		338,243

NOTE:

This information is also accounted for in the BSMP table (Table 2-1)
du = dwelling units; FAR = floor area ratio

SOURCE: MHM, 2018

As proposed, Kells East Ranch would include the following land uses (see **Table 2-3**).

- Low Density Residential – The Low Density Residential uses would comprise two parcels, one in the center of the Kells East Ranch project area along SR 99 and the other at the northwest corner of the SR 99 and Stewart Road intersection.

- Medium High Density Residential – The Medium High Density Residential use would be located in the northern half of the Kells East Ranch project area along SR 99, and located immediately south of the planned Community Commercial use within the project area.
- Community Commercial – The Community Commercial use would be located within a single parcel on the west side of SR 99 and south of Bogue Road.
- Parks, Recreation & Open Space – The Park, Recreation & Open Space uses would be developed along the pathway paralleling Gilsizer Slough along the western edge of the Kells East Ranch project area.
- Roads and Circulation – This use would contain all public right of way, including mainly roads, and is located throughout the Newkom Ranch project area.

**TABLE 2-3
KELLS EAST RANCH LAND USE SUMMARY**

Land Use Designation	Land Area (Gross Acres)	Average Density (du/acre)	Total Dwelling Units	Assumed Intensity (FAR)	Total Square Feet
Residential					
Low Density Residential	29.1	5.05	147		
Medium High Density Residential	5.1	23.2	123		
Non-Residential					
Community Commercial	15.2			0.25	161,172
Civic Amenities					
Parks, Recreation & Open Space	36.8				
Roads and Circulation	7.2				
Total	93.5		270		161,172

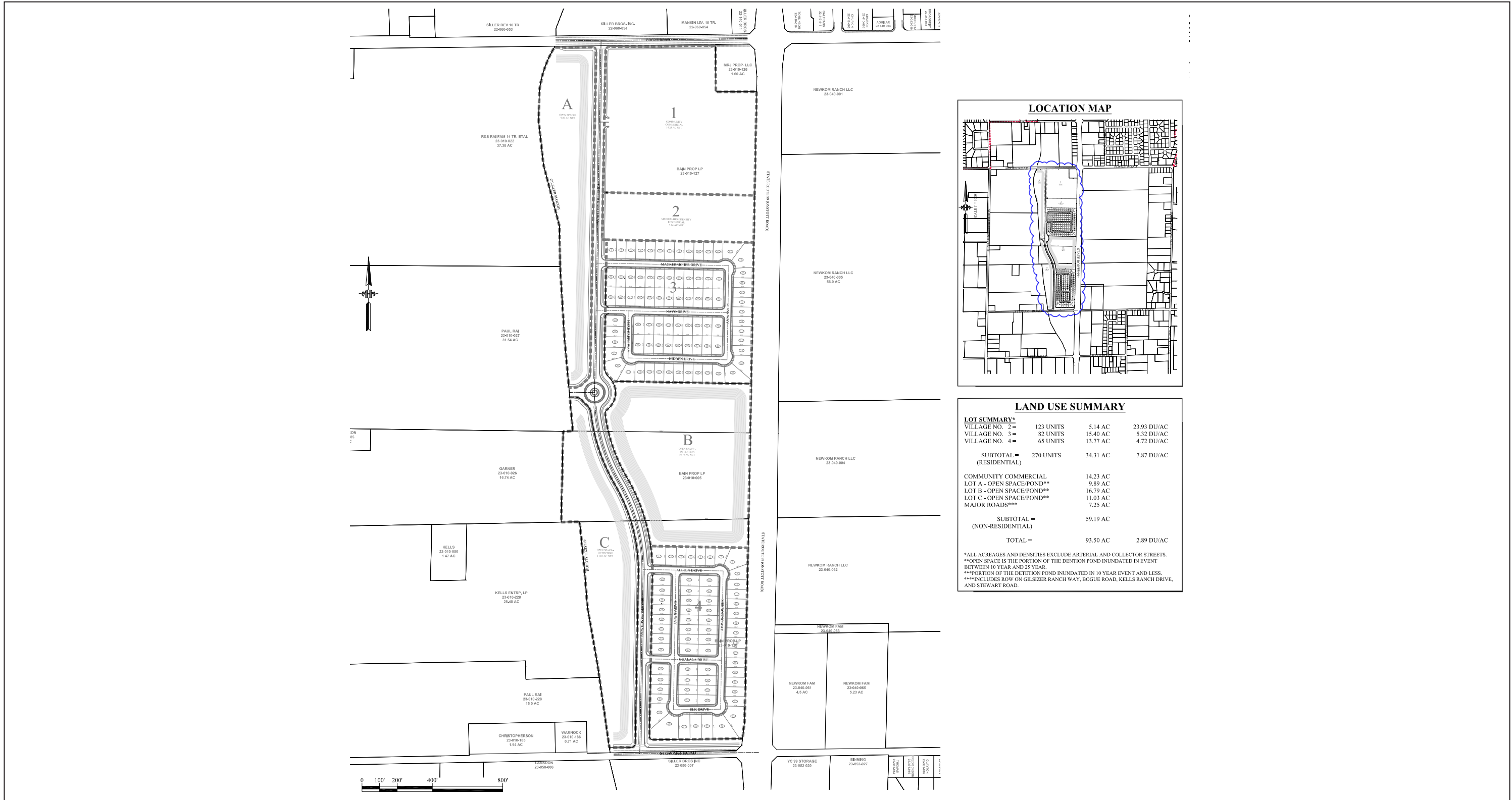
NOTE:
This information is also accounted for in the BSMP table (Table 2-1)
du = dwelling units; FAR = floor area ratio

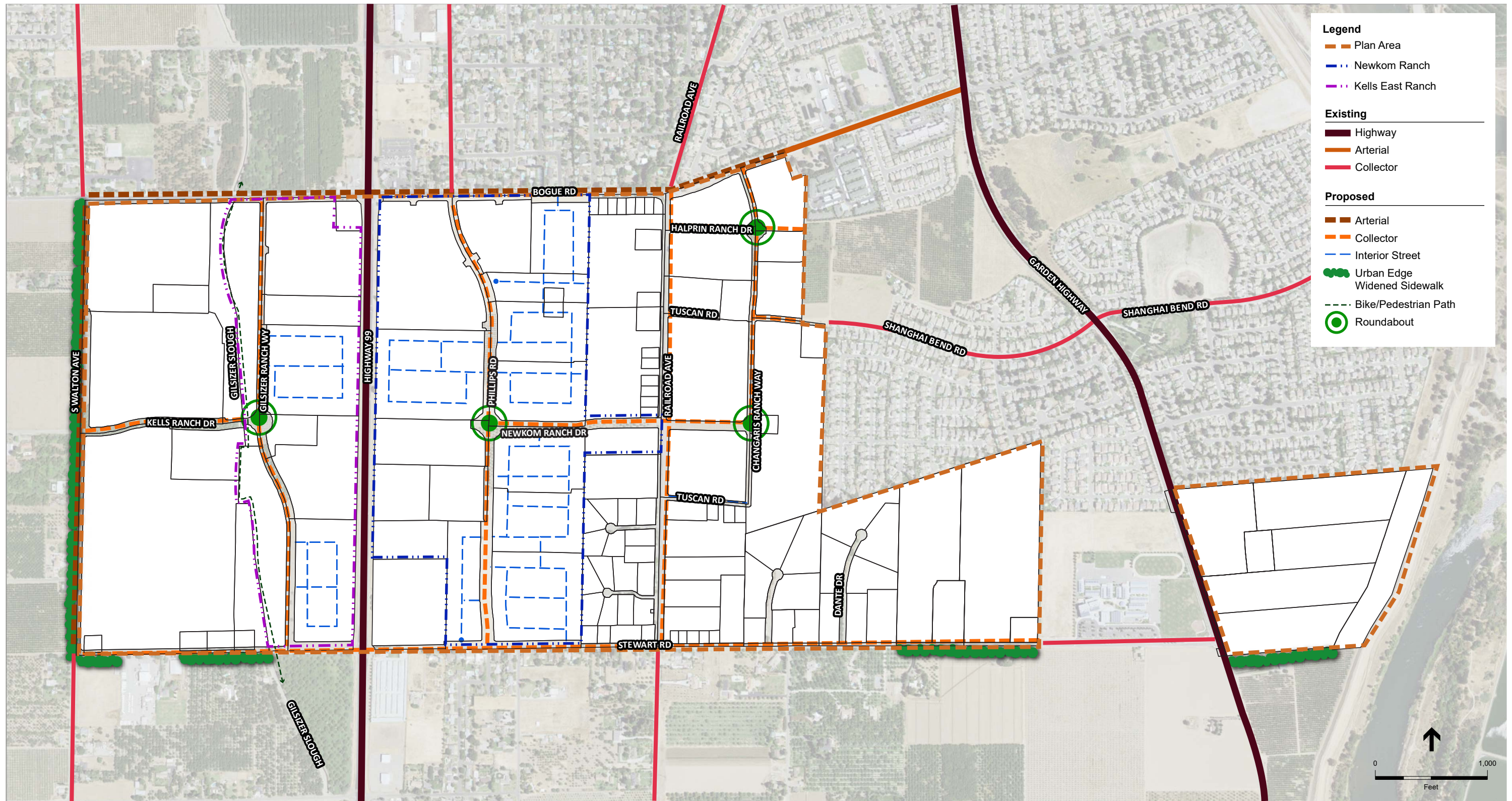
SOURCE: MHM, 2018

The Kells East Ranch project would include a range of residential densities for a total of 270 dwelling units, as well as 161,000 square feet of employment-generating uses.

Circulation and Mobility

The proposed BSMP would include an interconnected internal street system that connects and improves on the existing roadway infrastructure including SR 99, Garden Highway, and the surrounding roads (Bogue Road, Walton Avenue, Railroad Avenue, and Stewart Road) (see **Figure 2-10**). The proposed circulation system would be designed to integrate “Complete Streets” concepts, which entails the integration of multimodal transportation choices including a mix of pedestrians, bicycle, transit, and automobiles facilities.





SOURCE: USDA, 2014; City of Yuba City, 2016; MHM, 2016; ESA, 2016

Bogue-Stewart Master Plan . 140720

Figure 2-10
BSMP Circulation Plan

Roadways

The proposed BSMP would provide an internal network of roadways, such as future local and cul-de-sacs, connecting to existing roadways, shown as “Interior Streets” in Figure 2-10. These existing roadways in and around the BSMP area would be improved to accommodate buildout of the BSMP. To date, roadway networks have been planned only for Newkom Ranch and Kells East Ranch; no roadway plans have been established for the remainder of the BSMP area. Therefore, plans for existing roadways, as well as the development of Newkom Ranch and Kells East Ranch roadway networks, are discussed separately in more detail, below. In general, the internal roadway network in the remaining BSMP area would be sized to accommodate planned residential, commercial, and employment densities. Additionally, intersections within the BSMP area would include design features such as roundabouts at the intersections of two-lane collector streets to facilitate internal traffic flows.

Full Master Plan

South Walton Avenue

South Walton Avenue, from Stewart Road to Bogue Road, would be a two-lane urban edge road. Urban edge roads divide urbanized uses from undeveloped/agricultural uses. The improved roadway would include one northbound lane and a single southbound lane, separated by a turn lane or median. The roadway would also include Class II bike lanes⁴ on both sides of the roadway and a 10-foot-wide shared path/sidewalk along the east side of the roadway separated from the roadway by an 8-foot planter strip. Beyond the sidewalk, from the roadway, an additional 27.5-foot landscape area would be included along with a 6- to 8-foot-tall solid wall of masonry, concrete, or equivalent material.

Bogue Road

To provide access to and from the BSMP area and existing development to the north, Bogue Road would be converted into a four-lane arterial roadway separated by a turn lane between SR 99 and Garden Highway. The only exception would be between Railroad Avenue and Columbia Drive, due to a constrained existing right-of-way through an established residential area along this segment. Bogue Road would include Class II bike lanes and 5- to 10-foot-wide sidewalks on each side of the roadway, separated by 8-foot-wide planter strips.

Railroad Avenue

Railroad Avenue would remain a two-lane collector road within the BSMP area. Improvements to Railroad Avenue would include the addition of five feet wide sidewalks on both sides of the roadway. Sidewalk along the west side of Railroad Avenue would be separated from the roadway by 6-foot planter strips. This side of the road would feature an additional 12-foot landscaped buffer and an approximately 6- to 8-foot-tall solid wall of masonry, concrete, or equivalent material. Railroad Avenue would include Class II bike lanes.

⁴ A “Class II” bikeway, or bike lane, is a one-way, striped, and signed lane on a street.

Stewart Road

Between South Walton Avenue and SR 99, Stewart Road would be developed as a two-lane urban edge road, similar to South Walton Avenue. The segment of Stewart Road between SR 99 and Phillips Road (proposed in the BSMP, see below) would be converted to a two-lane major collector road, separated by a turn lane or median, to provide access to proposed uses along Phillips Road. This roadway segment would have a 10-foot-wide shared path/sidewalk separated from the roadway by an 8-foot-wide planter strip. Between Phillips Road and Garden Highway, Stewart Road would be improved to a two-lane collector road separated by a median or turn lane. Sidewalk would be added along the north side of Stewart Road in this section of the roadway and would be separated from the roadway by an 8-foot planter strip. Each of the roadway types for Stewart Road would feature Class II bike lanes on both sides of the roadway.

Gilsizer Ranch Way (Proposed)

Within the Kells East Ranch Development, Gilsizer Ranch Way would be a collector road that connects Stewart Road to Bogue Road. Gilsizer Ranch Way would have a single travel lane in each direction, separated by turn lane or median, and include Class II bike lanes and sidewalks separated from the roadway by 6- to 8-foot planter strips on both sides of the road, in each direction. Gilsizer Ranch Way would also serve as a frontage road, providing access to commercial development along SR 99, where access from SR 99 is not feasible. A solid wall constructed of masonry, concrete, or equivalent material would be erected along the east side of the road, separated from the sidewalks by a 12-foot-wide landscape buffer.

Kells Ranch Drive (Proposed)

Kells Ranch Drive would be a two-lane collector road that runs from South Walton Avenue to Gilsizer Ranch Way (proposed). Kells Ranch Drive would include two lanes, separated by a median or turn lane and would include Class II bike lanes and sidewalks on both sides of the road, separated from the roadway by 6-foot planter strips. The Kells Ranch Drive right-of-way would have 6- to 8-foot-tall solid block walls of masonry, concrete, or equivalent material on both sides, separated from sidewalks by 12-foot-wide landscape buffers.

Phillips Road (Proposed)

Within the Newkom Ranch development, Phillips Road would be a two-lane collector road that connects Stewart Road to Bogue Road. Phillips Road would be bisected by a median or turn lane and have Class II bikeways and sidewalks on both sides of the roadway. From Bogue Road to Newkom Ranch Drive (proposed), Phillips Road would be a four-lane major collector road that would be separated by a median and include Class II bikeways and sidewalks on both sides of the roadway, separated from the roadway by 6-foot planter strips. Phillips Road would have 6- to 8-foot-tall solid block walls of masonry, concrete, or equivalent material, separated from the sidewalks by 8-foot-wide landscaped buffers.

Newkom Ranch Drive (Proposed)

Newkom Ranch Drive would be a two-lane collector road that runs east/west between Changaris Ranch Way (proposed) and a cul-de-sac to the west of Phillips Road (proposed). Newkom Ranch

Drive would be bisected by a turn lane or median and have Class II bike lanes and sidewalks on both sides of the roadway, separated from the roadway by 6-foot planter strips. Newkom Ranch Drive would have 6 to 8-foot-tall solid walls of masonry, concrete, or equivalent material, separated from the sidewalks by 12-foot-wide landscaped buffers. The segments of the roadway between Railroad Avenue and Changaris Way and between Newkom Ranch Drive and Summy Drive would have walls on both sides of the roadway. Other segments would only have walls on one side.

Changaris Ranch Way (Proposed)

Changaris Ranch Way would be a two-lane collector road that extends south from Bogue Road to Newkom Ranch Drive (proposed). Changaris Ranch Way would be bisected by a median or turn lane and would include Class II bike lanes and sidewalks separated from the roadway by 6-foot planter strips on both sides.

Shanghai Bend Road

The existing segment of Shanghai Bend Road, that provides service to existing neighborhoods east of the BSMP area, would be extended west to Changaris Ranch Way (proposed). Shanghai Bend Road would be a two-lane collector road that would include Class II bike lanes, 8-foot-wide parking lanes along both sides of the extended roadway and sidewalks separated from the roadway by 6-foot planter strips.

Residential Roadways

Major and minor residential roadways within the BSMP area would be two-lane roadways, with no median, that would include 8-foot parking lanes and sidewalks separated from the roadway by 6-foot planter strips on both sides of the roads. Residential roadways would provide direct access from collector streets to proposed residential areas in the BSMP area. Minor residential roads would include 10-foot-wide travel lanes, where major residential roadways would include 12-foot-wide travel lanes.

Bikeway/Trail System

Within the Kells East Ranch development, a Class I bike path is proposed parallel to Gilsizer Slough from Bogue Road to Stewart Road. Another Class I bike path is proposed along the eastern perimeter of the plan area, adjacent to the Feather River levee. A series of Class II bicycle lanes would be included on both sides of the road along all proposed major and minor collector roads within, as discussed above (see **Figure 2-11**). The proposed BSMP includes shared bicycle/pedestrian pathways out of the roadway along the proposed Gilsizer Ranch Way, extending from Stewart Road to Bogue Road, and along urban edge roads on the southwestern perimeter of the plan area. A shared path is also proposed for the section of Stewart Road, proposed as a major collector road, extending east from SR 99 to the proposed intersection with Phillips Road.

Pedestrian System

The proposed BSMP would include sidewalks along both sides of roadways with widths of 4 to 6 feet separated from travel lanes by landscaped buffers. Proposed exceptions would be roadways

classified as urban edge and the segment of the proposed major collector roadway along Stewart Road from SR 99 to Phillips Road. Those roadways would feature 10-foot-wide shared bicycle/pedestrian pathways on the sides of the road nearest to the interior of the plan area. In addition, some segments of Bogue Road near Railroad Avenue would include sidewalks that would be directly adjacent to the roadway due to constrained right-of-way.

Transit Connections

The proposed BSMP would allow for the development of bus turnouts and transit shelters along SR 99, Garden Highway, and the prominent arterial roadways serving the community, such as Bogue Road, Walton Avenue, and Stewart Road, although the specific locations and design has not been determined. Currently, Yuba-Sutter Transit serves areas north of Bogue Road, with multiple transit stops for Route 5 along Bogue Road and a community Park and Ride facility located to the northeast of the intersection between Bogue Road and SR 99. The community design would allow for the extension of transit routes south of Bogue Road to better serve and access the residential and commercial areas within the BSMP. As part of the review process for individual development projects within the planned community, the City and project applicants would work with transit agencies on the need to provide or contribute towards transit-related improvements.

Public Services

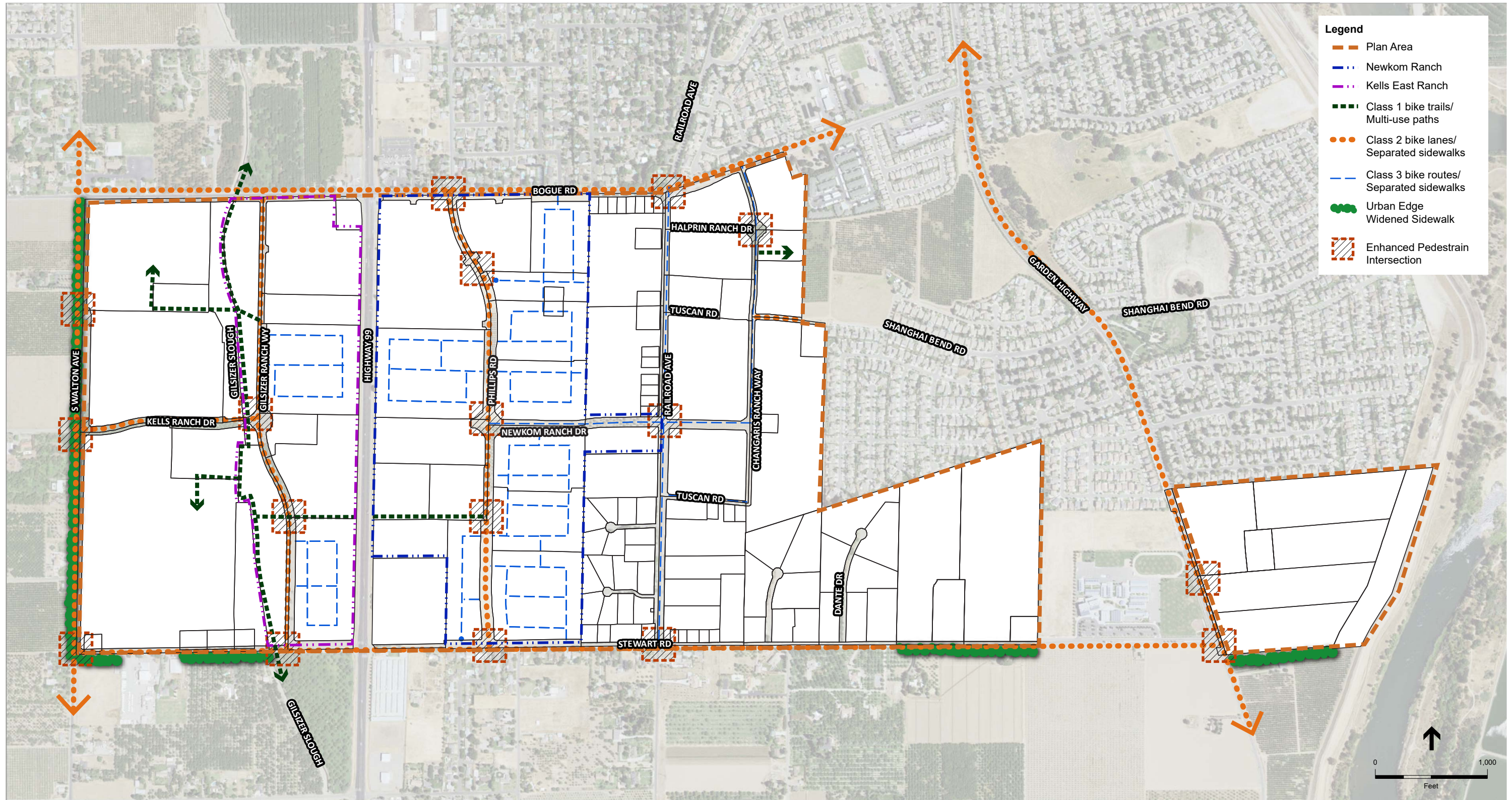
Parks and Open Space

The proposed BSMP would include approximately 84 acres of parks and open space, of which 18 acres is active parks. A key feature of the plan would be the enhanced open space system along Gilsizer Slough, in the western portion of the BSMP area. Water detention and open space areas, demarcated east and west of SR 99, would serve the BSMP area and connect to the Gilsizer Slough open space system. Another neighborhood park would be located in the residential areas on the northeastern portion of the site east of Railroad Avenue. The BSMP area east of Garden Highway would include a centrally located neighborhood park and an open space area along the Feather River levee.

Schools

The project site is located in the Yuba City Unified School District. The project site is currently served by Barry Elementary K-8 School, Riverbend Elementary K-8 School, and Yuba High School, which would be likely to provide continued service to future BSMP area residents.

The Public land use designation on the 20-acre school site on the southeast corner of South Walton Avenue and Bogue Road would allow for the development of a school. This land area is proposed to be set aside for a K-8 combined elementary and middle school with adjoining playgrounds.



SOURCE: USDA, 2014; City of Yuba City, 2016; MHM, 2016; ESA, 2016

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Figure 2-11
Bike and Pedestrian Map

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Police and Fire Protection

Existing fire and police services to the plan area are provided by Sutter County Fire and Sutter County Sheriff respectively. The plan area is within Sutter County Fire's County Service Area G.

The BSMP area would be annexed into the City of Yuba City and would be provided police and fire protection services by the Yuba City Police Department and the Yuba City Fire Department from existing facilities. There are no new police or fire protection facilities or improvements to existing facilities called for in the proposed BSMP.

Utilities

Water Supply Infrastructure

As shown in the BSMP's domestic water technical memorandum, a master planned potable water system serving all phases of the BSMP would be sized and constructed to serve the proposed development.⁵ Infrastructure requirements of the proposed BSMP would include a looped trunk line system, booster pumps, and water storage. Water wells for non-potable irrigation would be constructed for all parks and any school facilities over five acres in size. The source of water in Yuba City is primarily from the Feather River. The BSMP area would become part of the larger Yuba City system, with the water supply improvements becoming property of the City of Yuba City.

The BSMP water supply infrastructure would be appropriately sized and connected to existing City water mains in and around the BSMP area (see **Figure 2-12**). This existing infrastructure includes:

- a 16-main in Garden Highway;
- a 16-inch main in Bogue Road extending from Garden Highway to Railroad Avenue;
- 6- and 8-inch mains in Bogue Road from Railroad Avenue to SR 99;
- a 12-inch main in Bogue Road extending approximately 400 feet west of SR 99;
- a 14-inch main extending west from Garden Highway along the existing and proposed route of Shanghai Bend Road, then north in Railroad Avenue from the proposed intersection of [extended] Shanghai Bend Road and Railroad Avenue to the 16-inch main in Bogue Road (above); and,
- a 12-inch main within Stewart Road extending west approximately 800 feet from Garden Highway.

Consistent with existing Yuba City master-planned water supply infrastructure to the north, the proposed BSMP water supply infrastructure would include a backbone of 12- to 16-inch water mains constructed within major roadways in and around the BSMP area. Water supply

⁵ MHM Inc., 2016. *Technical Report, Domestic Water, Bogue Stewart Master Plan Area*. December 8, 2016.

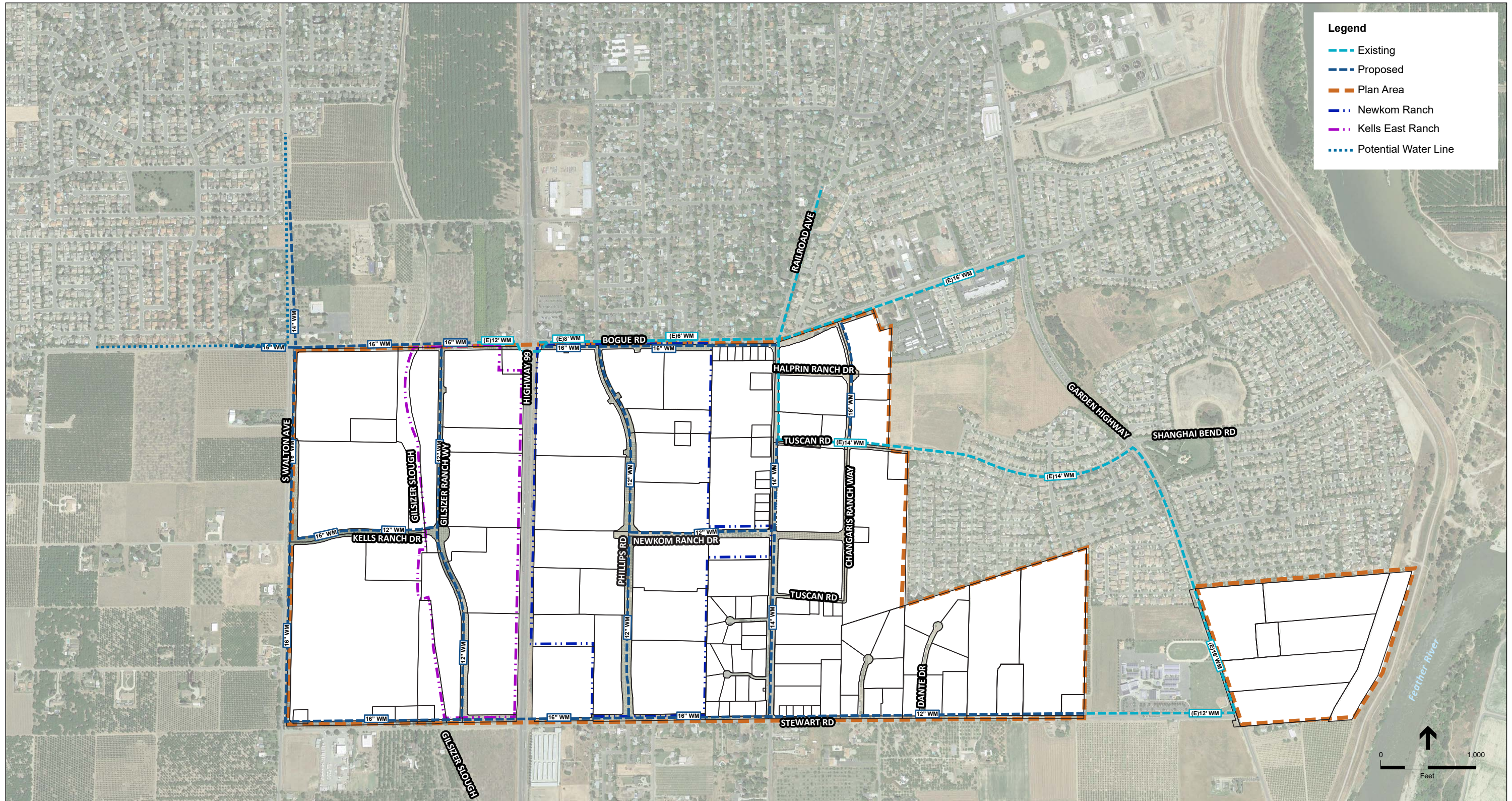
distribution infrastructure would link to this backbone of large water mains to provide service to BSMP development. This backbone infrastructure surrounding the area would include:

- a 16-inch main extending from the 12-inch main in Bogue Road west of SR 99 to a point approximately 0.4 mile west beyond South Walton Avenue to Falls Drive.
- a 16-inch main in South Walton Avenue from Bogue Road south to Stewart Road;
- a 14-inch main in South Walton Road extending north from the 16-inch main in Bogue Road to connect with existing Yuba City infrastructure approximately 0.4 mile to the north;
- a 16-inch main extending south in South Walton Avenue from Bogue Road to Stewart Road;
- a 16-inch main extending east in Stewart Road to Railroad Avenue; and,
- a 12-inch main extending further east in Stewart Road from Railroad Avenue to an existing 12-inch main [also in Stewart Road] near the Riverbend Elementary School.

The offsite components of this backbone system are the 16-inch main in Bogue Road from South Walton Avenue to Falls Drive and the 14-inch in South Walton Avenue from Bogue Road to the existing City infrastructure approximately 0.4 mile to the north, near Augusta Lane.

Within the BSMP area proposed primary water supply distribution infrastructure would include the following:

- 12-inch mains in Gilsizer Ranch Way (proposed) and Phillips Drive (proposed) connecting the 16-inch main in Bogue Road to the 16-inch main in Stewart Road;
- a 14-inch main extended from existing infrastructure in Railroad Avenue at its northern intersection with Tuscan Road to the 12- and 16-inch mains proposed in Stewart Road;
- a 16-main in Kells Ranch Drive (proposed) extending east from South Walton Avenue to a link to a proposed storage tank site, approximately midway between South Walton Avenue and Gilsizer Ranch Way (proposed);
- a 12-inch main would extend east in Kells Ranch Drive from the proposed tank site to Gilsizer Ranch Way.
- east of SR 99, a 12-inch main would extend east in Newkom Ranch Drive from the 12-inch main in Phillips Drive (proposed) to the 14-inch main at Railroad Avenue;
- a 16-inch main in Changaris Way extending approximately 0.25 mile south from the existing 16-main in Bogue Road to a proposed water storage tank site; and
- two water storage tanks. One would be located just south of Kells Ranch Drive and the other would be located east of Railroad Avenue. The capacity of the tanks would be determined in the future based on demand.



SOURCE: USDA, 2014; City of Yuba City, 2016; MHM, 2016; ESA, 2016

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Figure 2-12
 BSMP Proposed Water Infrastructure

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Wastewater Infrastructure

Buildout of the proposed BSMP (all phases) would include construction of a backbone sanitary sewer system to provide wastewater service to the BSMP area, as presented in the master plan's sanitary sewer technical report.⁶ As shown in **Figure 2-13**, the proposed sanitary sewer system would connect to the existing Yuba City sanitary sewer system. To provide adequate wastewater service to the BSMP area, off-site extensions and connections to the existing system and WWTP would be required. Two potential off-site sewer main alignments are shown in Figure 2-13.

One potential off-site alignment would direct a new sanitary sewer main east in Bogue Road approximately from the intersection of Bogue Road and South Park Drive to Garden Highway, then north in Garden Highway approximately 0.25 mile to an unmarked paved roadway, then east in this roadway approximately 0.35 mile entering the City's WWTP on its south side. In the alternate off-site alignment, a main would be directed east from the eastern terminus of Halprin Ranch Way (proposed in the northeastern corner of the BSMP area) approximately 0.85 mile to the west toe of the Feather River levee, then north approximately 0.4 mile to the unmarked paved roadway forming the southern boundary of the WWTP, then west approximately 0.1 mile to enter the WWTP.

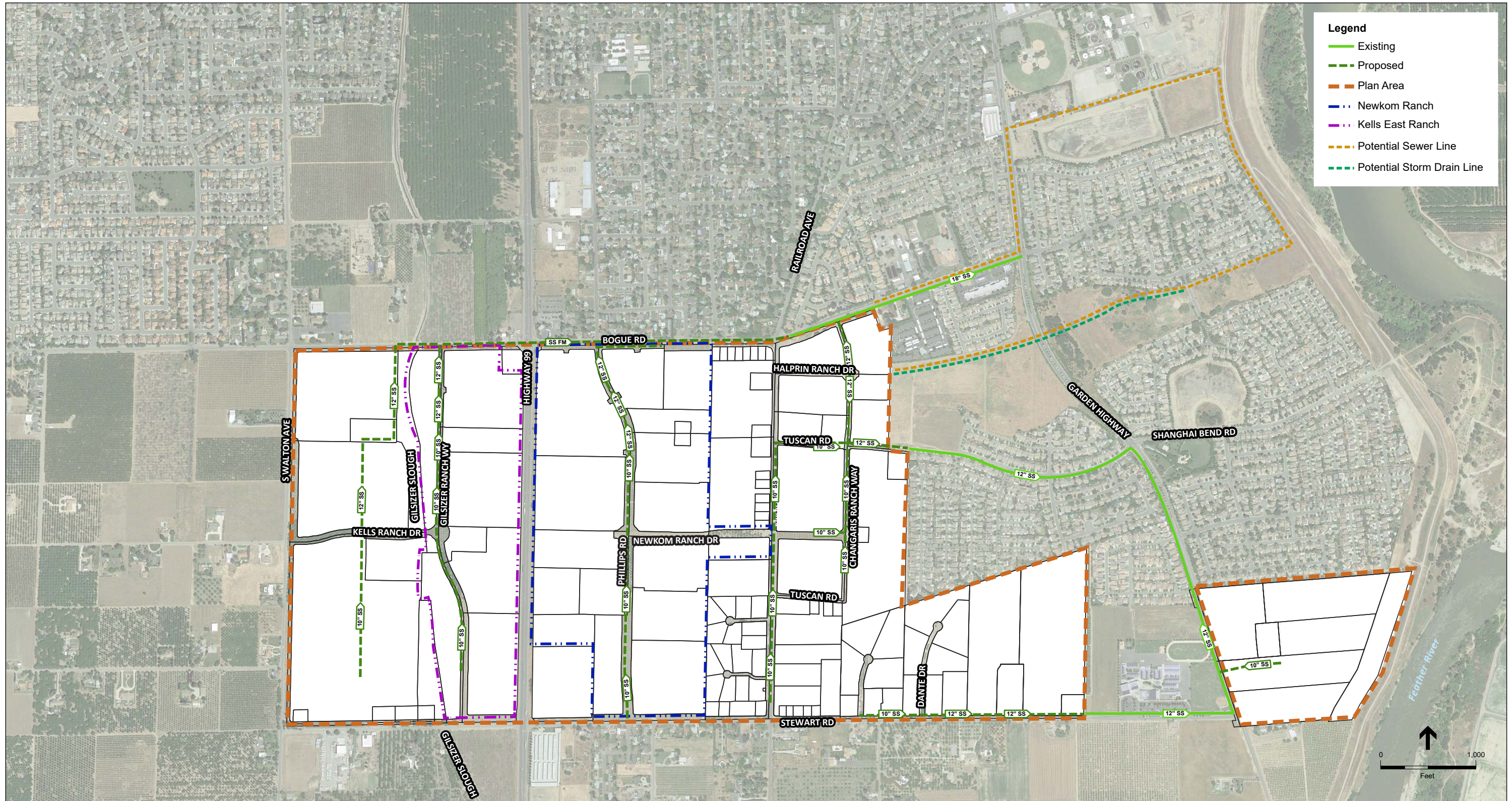
The existing sanitary sewer lines in the project vicinity direct effluent north through an 18-inch sewer main, or trunk line, within Garden Highway northeast of the project site. The trunk line within Garden Highway is reduced to a 15-inch main south of Bogue Road and further reduced to a 12-inch main from Shanghai Bend Road to Stewart Road. An existing 18-inch sewer main in Bogue Road runs from Railroad Avenue to the line in Garden Highway, flowing from west to east. A 12-inch main flows from west to east within Shanghai Bend Road, from the eastern edge of the BSMP area to the 15-inch main at Garden Highway, providing service to the existing residential development. Another 12-inch main extends approximately 800 feet to the west along Stewart Road from the 12-inch main at Garden Highway.

As shown in Figure 2-13, under the proposed BSMP wastewater within the BSMP area would flow generally from south to north in a northeasterly direction toward the 18-inch sanitary sewer main in Garden Highway. To support these flows, the existing 18-inch sanitary sewer main in Bogue Road would be extended west to just beyond Gilsizer Slough. Sanitary sewer mains providing service to all BSMP development west of Railroad Avenue would be connected to the extended 18-inch main at Bogue Road. This would include a 10- to 12-inch main running from the business/technical land uses in the southwest corner of the BSMP area, north to Bogue Road, a 10- to 12-inch main running the length of Gilsizer Ranch Way (proposed) to north to Bogue Road, and a 10- to 12-inch main running the length of Phillips Road (proposed) to Bogue Road. Along the Phillips Road main, three 8-inch mains would extend east to provide service to proposed residential areas in the eastern Newkom Ranch development. A 10- to 12-inch main would extend the length of Changaris Way and be connected to the proposed main within Shanghai Bend Drive and be connected to the proposed 10-inch main within Tuscan Road to

⁶ MHM Inc., 2016. *Technical Report, Sanitary Sewer, Bogue Stewart Master Plan Area*. December 8, 2016.

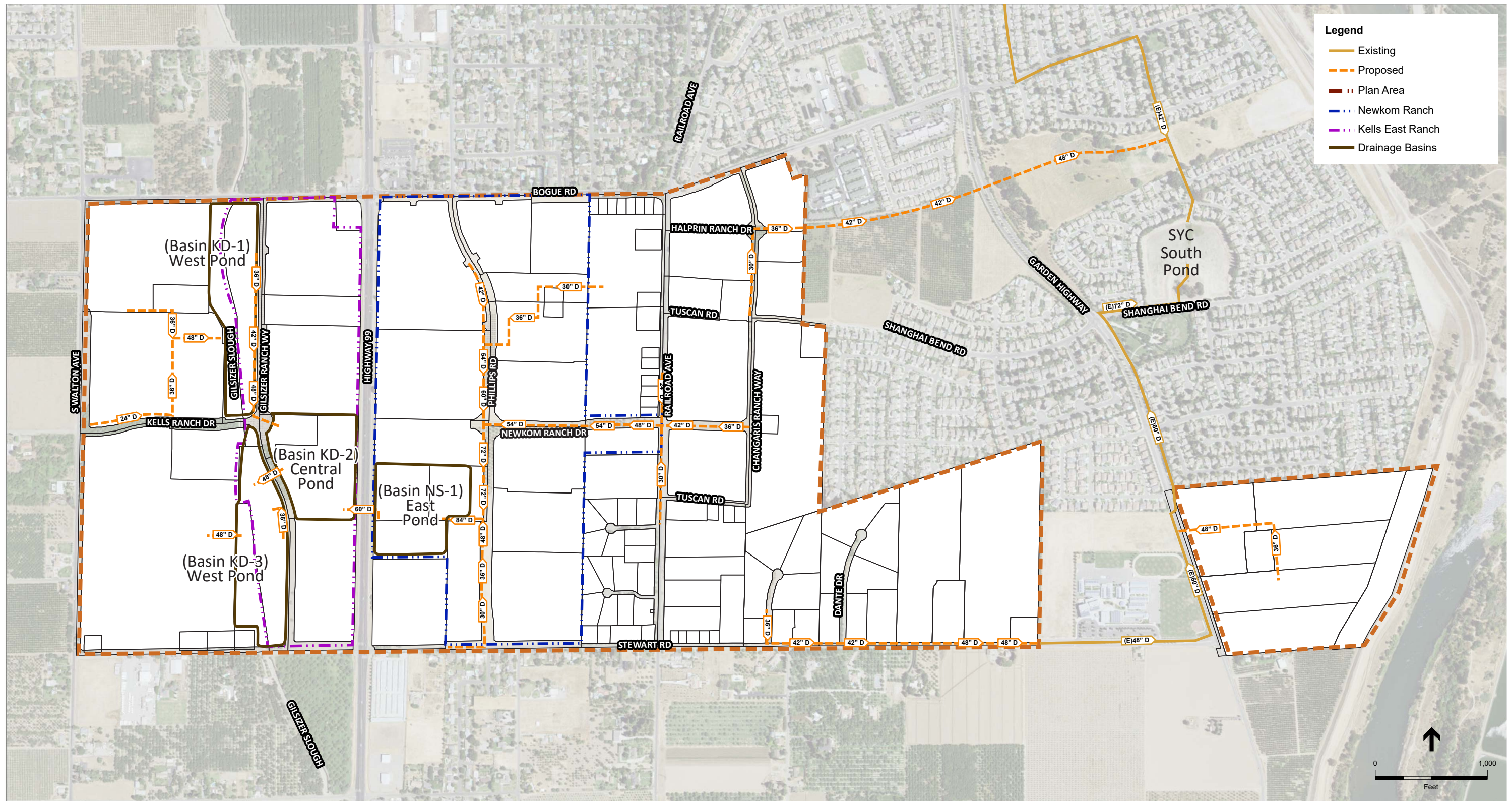
Railroad Avenue and a proposed 10-inch main within Railroad Avenue, south almost to the intersection with Stewart Road. Service would be provided to the southern part of the BSMP area via a 10- to 12-inch sewer main running along Stewart Road from the existing main from Garden Highway. The BSMP area to the east of Garden Highway would be serviced by a 10-inch sewer main extending into the development from the existing 12-inch main in Garden Highway. The type of pipe used for the closed conduit system would meet City standards. Any pump stations and force mains that would serve development in the BSMP area would implement these design considerations:

- Construction of two detention basins designated as KD-1 and KD-3 and referred to collectively in the basis of design report as the “West Ponds.” These ponds would be long, narrow, and positioned along the alignment of Gilsizer Slough. The portions of the plan area located to the west of SR 99 within the plan area would drain into these ponds. The preliminary design calls for excavating a bottom elevation of 42 feet for both ponds, a rim elevation of 53 feet for KD-1 to the north, and a rim elevation of 52 feet for KD-3 to the south, for a total volume of 190.0 acre-feet and a total surface area of 23.7 acres;
- Construction of two detention basins designated as KD-2 and ND-1 and referred to respectively in the basis of design report as the “Central Pond” and “East Pond.” These ponds would collect the drainage from the portions of the plan area east of SR 99. The Central Pond would be located just west of SR 99 and the East Pond just east of SR 99 (see **Figure 2-14**). A large interconnection between the two ponds would effectively create a single large detention facility. Based on preliminary design, the interconnection would include a 60-inch culvert with an invert of 38 feet at the outlet of the East Pond and 37 feet at the inlet of the Central Pond. The preliminary design of the East Pond calls for excavation to a bottom elevation of 38 feet, a surface area of 12.9 acres at the rim elevation of 52 feet. The total volume of the East Pond at the rim would be 112.6 acre-feet. The East Pond would have an upper bench at elevation 44 feet to be used as a Community Park. The volume of the pond at elevation 44 feet would be 21.7 acre-feet. The preliminary design of the Central Pond calls for excavating to a bottom elevation of 36 feet, a total surface area of 13.2 acres at the rim elevation of 52 feet, for a volume of 178.2 acre-feet. The volume of Central Pond at elevation 44 feet would be 81.0 acre-feet;
- Construction of a one-way interconnection between the Central Pond and the West Ponds, only allowing for flow to the West Ponds. The pipes would be at the invert of the Central Pond elevation 36 feet and utilize a low flow channel to direct flow to Gilsizer Slough. The connection would be 48-inches in diameter;
- Construction of scour protection at the south end of the West Ponds where it would transition back to Gilsizer Slough. The West Ponds would end approximately 230 feet from the existing culverts under Stewart Road and approximately 200 feet from the limits of the future right-of-way for Stewart Road; and
- Replacement and lengthening of culverts under Stewart Road and Bogue Road to accommodate the proposed widening of the roadway. In addition, new inlet and/or exit headwalls with wing walls for scour protection would be constructed.



SOURCE: USDA, 2014; City of Yuba City, 2016; MHM, 2016; ESA, 2016

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Figure 2-13
 BSMP Proposed Wastewater Infrastructure



SOURCE: USDA, 2014; City of Yuba City, 2016; MHM, 2016; ESA, 2016

Bogue-Stewart Master Plan . 140720
Figure 2-14
 BSMP Proposed Drainage Infrastructure

Electricity

Electrical service and infrastructure in the area is provided by Pacific Gas and Electric Company (PG&E). There is an existing substation, the Bogue substation, situated in the BSMP area. The Bogue substation contains two 12-kilovolt (kV) electric distribution circuits that serve the site with three-megawatt (MW) capability. If necessary, circuit capacity would be increased to serve buildout of the proposed BSMP. However, construction of new substations or other such infrastructure is not anticipated. All electrical distribution lines are anticipated to be buried in-street and would be constructed as the proposed BSMP is implemented over time.

Natural Gas

Natural gas is provided to the plan area by PG&E. It is anticipated that in the future PG&E would plan and construct the infrastructure to provide service to the plan area as it develops pursuant to the proposed BSMP. Gas infrastructure serving development in the BSMP area is assumed to be constructed along plan area roadways concurrently with those developments.

Telecommunications

Telecommunications and cable services are currently provided to the plan area by AT&T and Comcast, respectively. It is anticipated that this would continue to be the case through the BSMP implementation period, although the dynamic nature of the telecommunications industry may result in service being provided by different business entities. Telecommunications infrastructure that would serve developments in the BSMP area is assumed to be constructed along plan area roadways concurrently with those developments.

2.4 Regulatory Requirements and Approvals (Intended Uses of the EIR)

The proposed project would require the approval of a number of discretionary actions by the City, as well as Responsible and Trustee Agencies (discussed below). This EIR may be used for direct and indirect approvals and permits associated with adoption and implementation of the proposed plan including, but not limited to, those described below.

2.4.1 The City of Yuba City

Pursuant to Public Resources Code section 21165, and sections 15050 and 15367 of the State CEQA Guidelines, the City of Yuba City is the Lead Agency for the proposed BSMP. To implement the proposed plan, Yuba City must certify this EIR, adopt CEQA Findings, and a Statement of Overriding Considerations, if necessary, as well as approve or adopt the following discretionary entitlements:

- Bogue-Stewart Master Plan,
- General Plan Amendment, various elements
- Pre-Zoning, Tentative Subdivision Maps – Small and Large Lot,
- Public Facilities Financing Plan,

- Water Supply Assessment,
- Community Facilities District program, and
- Development Agreements.

2.4.2 Sutter County LAFCo

LAFCo is a Responsible Agency for approving the SOIA and the reorganization actions (annexation to Yuba City and detachment from Sutter County and detachment from Sutter Fire County Service Area G).

2.4.3 Known Responsible and Trustee Agencies

The City, project applicant, subsequent plan area developers, and/or builders/contractors would be required to obtain all permits, as required by law. This EIR may also be used by Responsible Agencies and Trustee Agencies having discretionary approval authority over implementation of elements of the proposed BSMP. Responsible Agencies are public agencies other than the Lead Agency that have discretionary approval authority over the proposed BSMP or an aspect of the proposed BSMP (State CEQA Guidelines section 15381). Under CEQA a Trustee Agency is a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of State of California.⁷ The following agencies are Responsible and/or Trustee Agencies with discretionary authority over approval of certain project elements:

- California Department of Fish and Wildlife: review and permitting of activities affecting natural resources pursuant to the California Fish and Game Code.
- Central Valley Regional Water Quality Control Board: authorizations pursuant to the Porter-Cologne Act, implementation of National Pollutant Discharge Elimination System (NPDES) water quality requirements, and certification of activities carried out under Sections 401 and 404 for the federal Clean Water Act, for effects related to water and wetland resources
- Feather River Air Quality Management District: regulation of construction activities and operation of facilities pursuant to the federal and state Clean Air Acts.
- Central Valley Flood Protection Board: oversight of potential work near the Feather River levee within open space lands listed as lot 50.
- California Department of Transportation (Caltrans): Encroachment permits and proposed work in SR 99.
- Levee District No. 1 of Sutter County: Potential work near the Feather River levee within open space lands listed as lot 50.
- Gilsizer County Drainage District: Potential Encroachment Permit for work within Gilsizer Slough within open space lands listed as 6, 7, 8, and 9a and SOIA and annexation of the areas

⁷ See Public Resources Code section 21070 and State CEQA Guidelines section 15386. Potential Trustee Agencies include the California Department of Fish and Wildlife, State Lands Commission, Department of Parks and Recreation, and the University of California Natural Reserve System.

which drain into Gilsizer Slough prior to recordation of the maps (**Figure 2-15**). Approximately 544 acres of land could be annexed to the District as maps are recorded.

- Yuba City Unified School District: Annexation of the plan area into Community Facilities District No. 1.
- County of Sutter: Encroachment permits for work on County roadways.

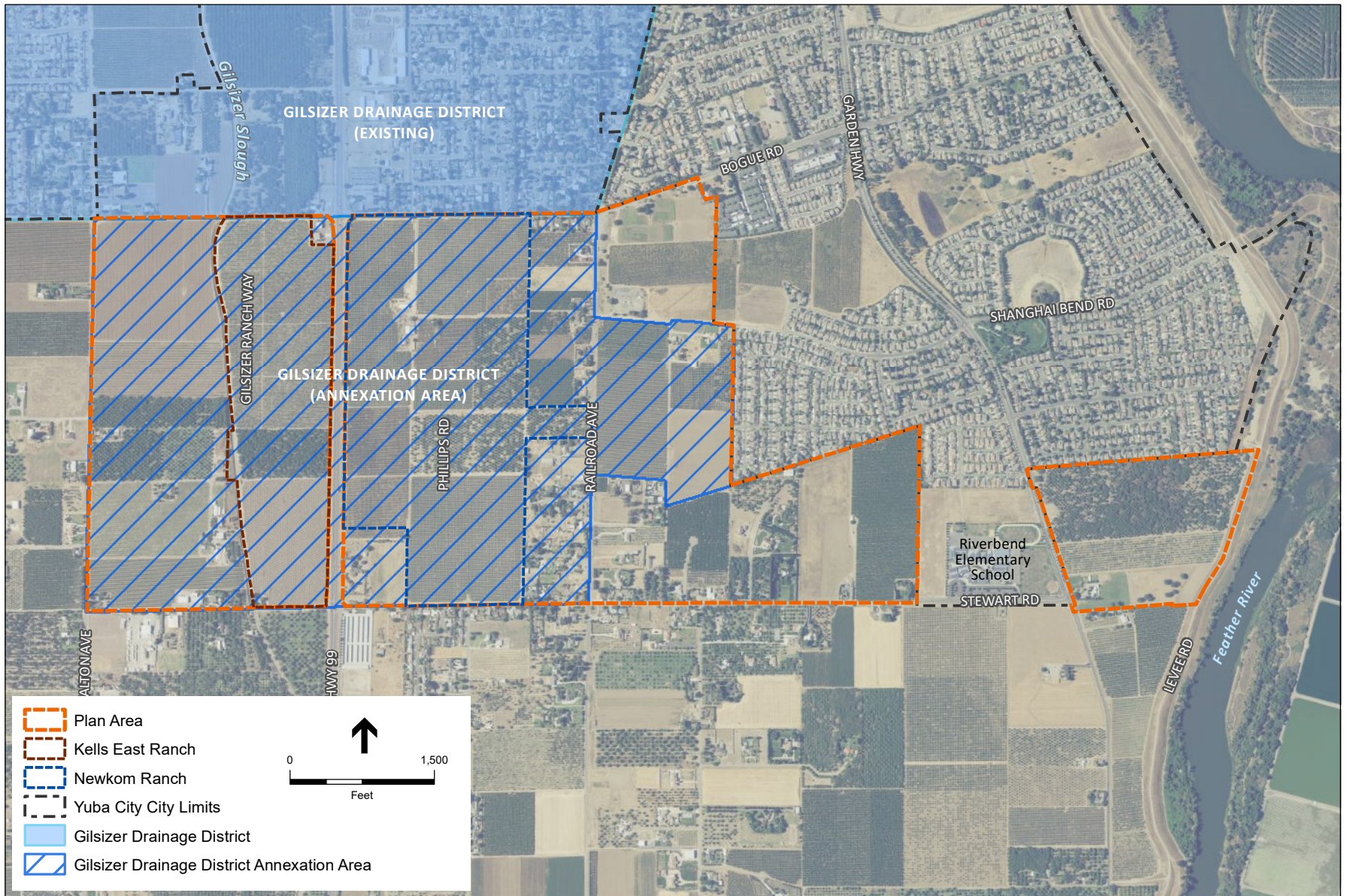
Other Agencies

The following are additional regulatory agencies that would have jurisdiction, by law, over resources affected by the project:

- United States Army Corp of Engineers: Section 404 of the Clean Water Act addressing effects to waters of the U.S., including wetlands
- United States Fish and Wildlife Service: authorizations pursuant to the federal Endangered Species Act, for effects related to federally-listed flora and fauna

Ministerial Approvals

The proposed project may require the following additional approvals from the City of Yuba City or other regional agencies: final maps, building permits, encroachment permits, improvement plan approvals, lot line adjustments, zoning clearances, and other actions related to the proposed development of individual projects within the proposed BSMP. However, these approvals are ministerial in nature and not subject to CEQA (CEQA Guidelines section 15268(a)).



SOURCE: USDA, 2016; City of Yuba City, 2016; ESA, 2019

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Figure 2-15
Gilsizer County Drainage District

CHAPTER 3

Environmental Impacts, Setting, and Mitigation Measures

3.0 Introduction to the Analysis

This Draft EIR evaluates the adverse physical environmental effects that would be potentially affected by the implementation of the proposed BSMP. Some environmental resources that are typically considered under CEQA would not be affected by the proposed plan and are not further analyzed in this Draft EIR. A discussion of those issues that were not further analyzed in the Draft EIR can be found in Section 3.0.4 of this chapter.

3.0.1 Definitions of Terms Used in the EIR

This Draft EIR uses a number of terms that have specific meaning under CEQA. Among the most important of the terms used in the EIR are those that refer to the significance of environmental impacts. The following are terms used to describe environmental effects of the proposed plan:

- **Significance Criteria:** A set of criteria used by the lead agency to determine at what level or threshold an impact would be considered significant. Significance criteria used in this Draft EIR include those standards typically used by the City of Yuba City in other EIRs and are informed by the Environmental Checklist included in Appendix G of the State CEQA Guidelines. In determining the level of significance, the analysis assumes that the proposed plan would comply with relevant federal, state, and local regulations and ordinances that are enforced through inspections or other steps that are part of the project approval process (e.g., plan check).
- **Significant Impact:** An impact is considered significant if implementation of the proposed plan would result in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of plan-related physical changes compared to specified significance criteria. A significant impact is defined as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the proposed plan including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.”
- **Potentially Significant Impact:** A potentially significant impact is identified where implementation of the proposed plan may cause a substantial adverse change in the environment, depending on certain unknown conditions related to the proposed plan or the affected environment. For CEQA purposes, a potentially significant impact is treated equal to a significant impact.

- **Less-than-Significant Impact:** An impact is considered less than significant when the physical change caused by implementation of the proposed plan would not exceed the applicable significance criterion.
- **Significant and Unavoidable Impact:** An impact is considered significant and unavoidable if it would result in a substantial adverse physical change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level through the application of specific mitigation measures.
- **Cumulative Impact:** Under CEQA, a cumulative impact refers to “two or more individual effects, which, when considered together, are considerable or which compound or increase other environmental impacts.” Like any other significant impact, a significant cumulative impact is one in which the cumulative adverse physical change would exceed the applicable significance criterion, but the impact is only considered significant if the proposed plan’s contribution to the impact is “cumulatively considerable.”
- **Mitigation Measure:** A mitigation measure is an action that could be taken that would avoid or reduce the magnitude of a significant impact. Section 15370 of the State CEQA Guidelines defines mitigation as:
 - a. Avoiding the impact altogether by not taking a certain action or parts of an action.
 - b. Minimizing impacts by limiting the degree of magnitude of the action and its implementation.
 - c. Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
 - d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
 - e. Compensating for the impact by replacing or providing substitute resources or environments.

3.0.2 Section Format

Chapter 3 is divided into technical sections (e.g., Section 3.1, Aesthetics) that present for each environmental resource issue area the physical environmental setting, regulatory setting, standards of significance, analytical methods, and impacts to the environment, and, where required, potentially feasible mitigation measures for significant impacts. Each section includes an analysis of plan-specific and cumulative impacts for each environmental issue area.

The technical environmental sections each begin with a description of the BSMP’s **environmental setting** and the **regulatory framework** as it pertains to a particular environmental issue. The environmental setting provides a point of reference for assessing the environmental impacts of the proposed plan and plan alternatives. The environmental setting discussion addresses the conditions that exist at the time of the issuance of the notice of preparation. This setting establishes the baseline by which the proposed plan and plan alternatives are measured for environmental impacts. The regulatory framework presents relevant information about federal, state, regional, and/or local laws, regulations, plans or policies that pertain to the environmental resources addressed in each section.

Each section presents **significance criteria**, which identify the standards used by the City of Yuba City to determine the significance of effects of the proposed plan. The significance criteria used for this plan were derived from significance standards typically used by the City of Yuba City in EIRs, including the General Plan EIR, which, in turn, reflect policies of the 2030 General Plan, as well as other criteria applicable under CEQA, including thresholds established by trustee and responsible agencies. The City of Yuba City has not formally adopted CEQA thresholds pursuant to CEQA Guidelines section 15064.7.

A **methodology and assumptions** description in each section presents the analytical methods and key assumptions used in the evaluation of effects of the proposed BSMP, and is followed by an impacts and mitigation discussion. The **impacts and mitigation measures** portion of each section includes impact statements, prefaced by a number in bold-faced type. An explanation of each impact is followed by an analysis of its significance. The subsection concludes with a statement that the impact, following implementation of the mitigation measure(s) and/or the continuation of existing policies and regulations, would be reduced to a less-than-significant level or would remain significant and unavoidable.

The **analysis of environmental impacts** considers both the construction and operational phases associated with implementation of the proposed plan, which includes implementation of the full specific plan and a separate analysis for Newkom Ranch and Kells East Ranch, where applicable. Discussion is organized consistent with the BSMP's proposed phasing: Full Master Plan, and then Newkom Ranch, and Kells East Ranch, unless certain resources or impacts would be similar across the entire BSMP plan area. Proposed development plans for Newkom Ranch and Kells East Ranch provide a greater level of detail for this environmental impact analysis and, where appropriate or applicable, this detail is provided under the headings "Newkom Ranch" or "Kells East Ranch". As required by section 15126.2(a) of the State CEQA Guidelines, direct, indirect, short-term, long-term, onsite, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed. Under CEQA, economic or social changes by themselves are not considered to be significant impacts, but may be considered in linking a project to a physical environmental change, or in determining whether an impact is significant.

Potentially feasible **mitigation measures** pertinent to each individual significant impact, if available, appear after the impact discussion section. The magnitude of reduction of an impact and the potential effect of that reduction in magnitude on the significance of the impact is described. Where BSMP phasing would not influence an impact analysis, no phasing distinction is made and any mitigation measures are assumed to apply to any and all BSMP-related activities.

3.0.3 Regulatory Framework

Each section provides a discussion of applicable federal, state, and local regulations. The project site is currently subject to the jurisdiction of Sutter County and its plans and ordinances, but will also be analyzed under City of Yuba City plans and ordinances in that the project includes a sphere of influence amendment and annexation of a Phase 1 and 2 to the City. A brief summary of each is provided, along with a finding regarding the project's consistency with those regulatory requirements. The consistency analysis is based on the project as proposed, without mitigation. Where the project, as proposed, would be consistent with the applicable regulatory requirement,

no further discussion of project consistency with that regulatory requirement is provided. Note that compliance with many of the regulations listed below is required as a condition of permit approval. Where the BSMP development, as proposed, would be potentially inconsistent with the applicable regulatory requirement, the reader is referred to the specific impact discussion in each section (i.e., Section 3.X.3, Analysis, Impacts, and Mitigation) where the potential inconsistency is addressed in more detail. Where applicable, that discussion identifies feasible mitigation that would resolve or minimize the potential inconsistency.

3.0.4 Social and Economic Impacts

Under CEQA, economic and social effects by themselves are not considered to be significant impacts, and are relevant only insofar as they may serve as a link in a chain of cause and effect that may connect the proposed action with a physical environmental effect, or they may be part of the factors considered in determining the significance of a physical environmental effect.¹ In addition, economic and social factors may be considered in the determination of feasibility of a mitigation measure or an alternative to the proposed project.² As an example, the physical environmental effects of increased population and employment in the BSMP area are addressed in the analysis of traffic congestion, increased water demand, or increased demand for energy; however, the effects of that increased employment on the City's tax revenues, the cost of police or fire services, or effects on changes in property values are not appropriately part of this EIR. That being said, this EIR is only one of many documents that the City may evaluate in its consideration of the merits of the BSMP. Other such documents include fiscal impact analysis and municipal services report that may address social, economic, or other issues of importance to the City.

¹ State CEQA Guidelines section 15131.

² State CEQA Guidelines section 15364.

3.1 Aesthetics

This section describes existing visual resources on and in the vicinity of the BSMP project site and describes the changes to those conditions that would result from implementation of the proposed BSMP.

There were no comments regarding aesthetics and visual quality received in response to the notice of preparation.

Information and analyses included in this section are based on review of the proposed BSMP, the proposed BSMP Development Standards and Guidelines, the Yuba City General Plan,¹ the City of Yuba City Design Guidelines,² the Yuba City Municipal Code and visual reconnaissance of the BSMP project site and surrounding region through site reconnaissance, photographs, and review of digital aerial imagery.


3.1.1 Environmental Setting

Regional Setting

Yuba City has historically been an agricultural community. Much of the land in surrounding unincorporated Sutter County is visually rural in character and dominated by various agricultural fields, agricultural buildings, trees and other windrows, roads, and the wider expanse of State Route (SR) 20 and SR 99. Land within the Yuba City limits and Sutter County is generally flat, with the notable exception of the Sutter Buttes, a small circular complex of eroded volcanic lava domes approximately 10 miles northwest of the BSMP project site that rises to 2,100 feet, is oriented in a rosette circle, is approximately 10 miles in diameter, and encompasses approximately 80,000 acres (see Figure 3.1-3, Viewpoint 4 and Figure 3.1-5, Viewpoint 7).

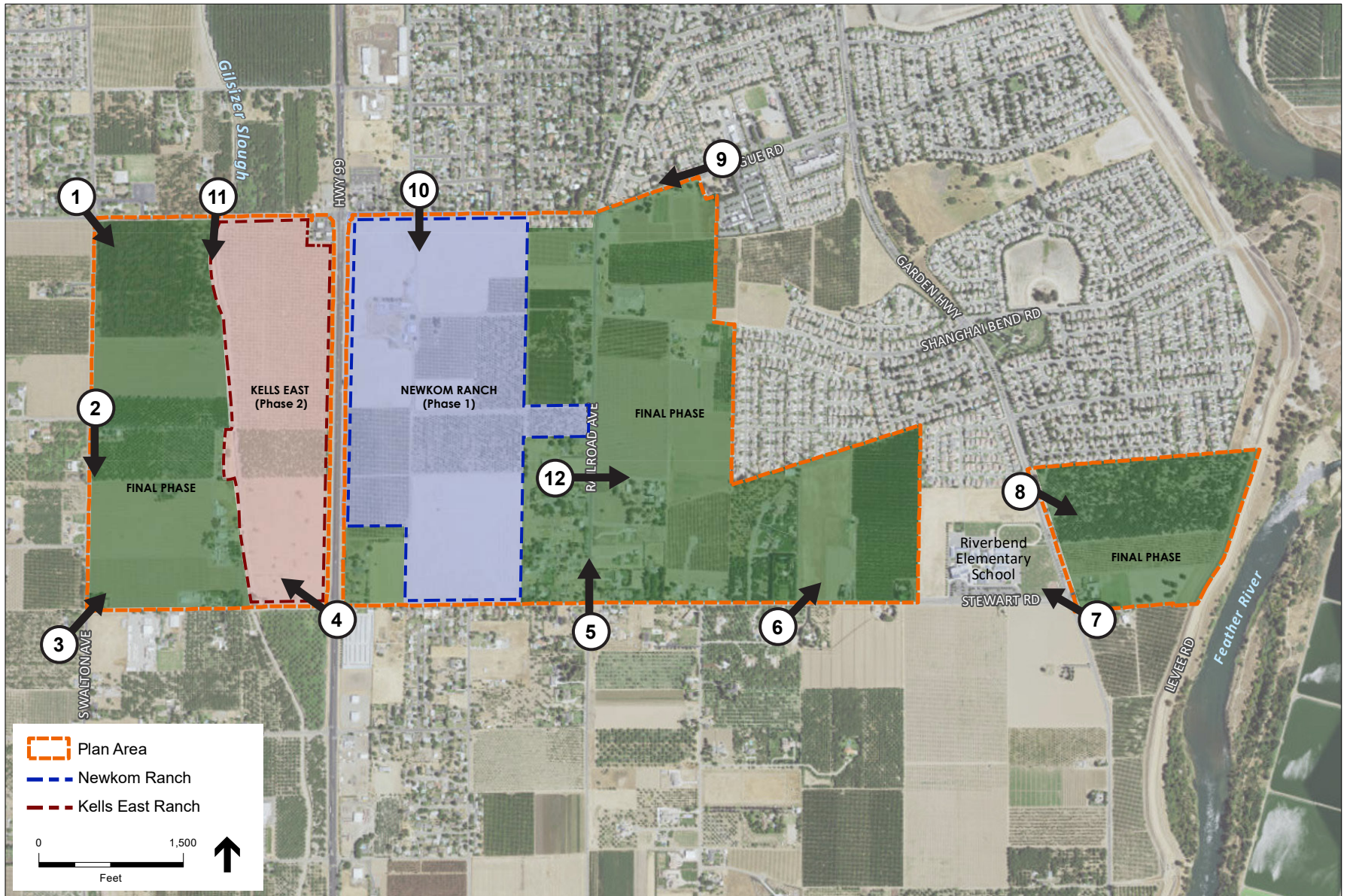
Views to and from the BSMP Project Site

The BSMP project site is generally level with topographic features that are limited to a small differential in elevation from the north to the south. The majority of the BSMP project site is in use for agricultural production, primarily consisting of fruit and nut orchards. The orchards contain ancillary uses for farm and irrigation activities, along with dirt access roads that connect to public roadways. A scattering of one- and two-story, wood frame residences are located near existing public roadways.

Several photos were taken from various areas of the project site (see **Figure 3.1-1**). Views onto the BSMP project site west of SR 99 from the northwest consist primarily of orchard trees, with mature ornamental trees (e.g., conifers, junipers, palm trees), scattered residences, agriculture-related buildings of various heights and colors, and overhead power lines in the distance (see **Figure 3.1-2**, Viewpoint 1). Views from the northwestern portion of the BSMP project site include various ornamental trees and flowering plants that screen views of large-lot residential properties, with rows of towering junipers in the distance. Views onto the  BSMP

¹ City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004.

² Mogavero Notestine Associates, 1994. *The City of Yuba City Design Guidelines*. Adopted November 15, 1994.



SOURCE: ESRI, 2015; City of Yuba City, 2016; ESA, 2017

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Figure 3.1-1
Plan Area Photo Viewpoints



Viewpoint 1: Corner of Bogue Road and South Walton Avenue. View facing southeast.



Viewpoint 2: South Walton Avenue. BSMP area on left. View facing south.

project site from the north and west are framed by Bogue Road and South Walton Avenue, both of which are two-lane roads with overhead power lines, ornamental trees, and assorted buildings and driveways comprising the most prominently visible features on the roadway peripheries (see Figure 3.1-2, Viewpoint 2).

Views onto the BSMP project site west of SR 99 from the southwest and south consist primarily of a single-story residence at the corner of Stewart Road and South Walton Avenue that is flanked and shaded by large conifers and other ornamental trees. From the portion of Stewart Road south of the BSMP project site, close to SR 99, views of orchard trees on the Kells East Ranch property are set against a backdrop of agriculture-related buildings of various colors and materials (e.g., wood, corrugated metal) on the west side of Gilsizer Slough, mature ornamental trees (e.g., conifers, junipers), and the Sutter Buttes in the distant background to the northwest (see **Figure 3.1-3**, Viewpoints 3 and 4). Views from the southern edge of the BSMP project site west of SR 99 include the Yuba City School District bus transportation center at 1512 Stewart Road, with a light-colored, corrugated-metal storage or maintenance building and school bus parking area. From the portion of Stewart Road south of the BSMP project site, close to SR 99, views include Gilsizer Slough (an earthen drainage channel) extending southward and flanked by orchard trees and partial views of associated agriculture-related buildings and residential buildings of various colors and materials.

SR 99 runs in a north-south direction as a four-lane highway through the BSMP project site directly between the Kells East property on the west and the Newkom Ranch property on the east. Traveling northbound on SR 99, views to the east onto the Newkom Ranch property include various mature trees, rows of orchard trees, and views of the Sierra Nevada mountains in the far distance on clear days. Views to the west onto the Kells East Ranch property primarily include orchards, large trees of varying species (e.g., palm trees, conifers, and towering rows of junipers) within residential subdivisions to the northeast, and the distinctive volcanic peaks of the Sutter Buttes in the far distance.

Views onto the BSMP project site east of SR 99 from the south on along Stewart Road include agricultural fields, ranch-style homes, associated outbuildings and structures, and mature trees fronting Stewart Road and extending to the eastern edge of the BSMP area west of Garden Highway (see **Figure 3.1-4**, Viewpoints 5 and 6).

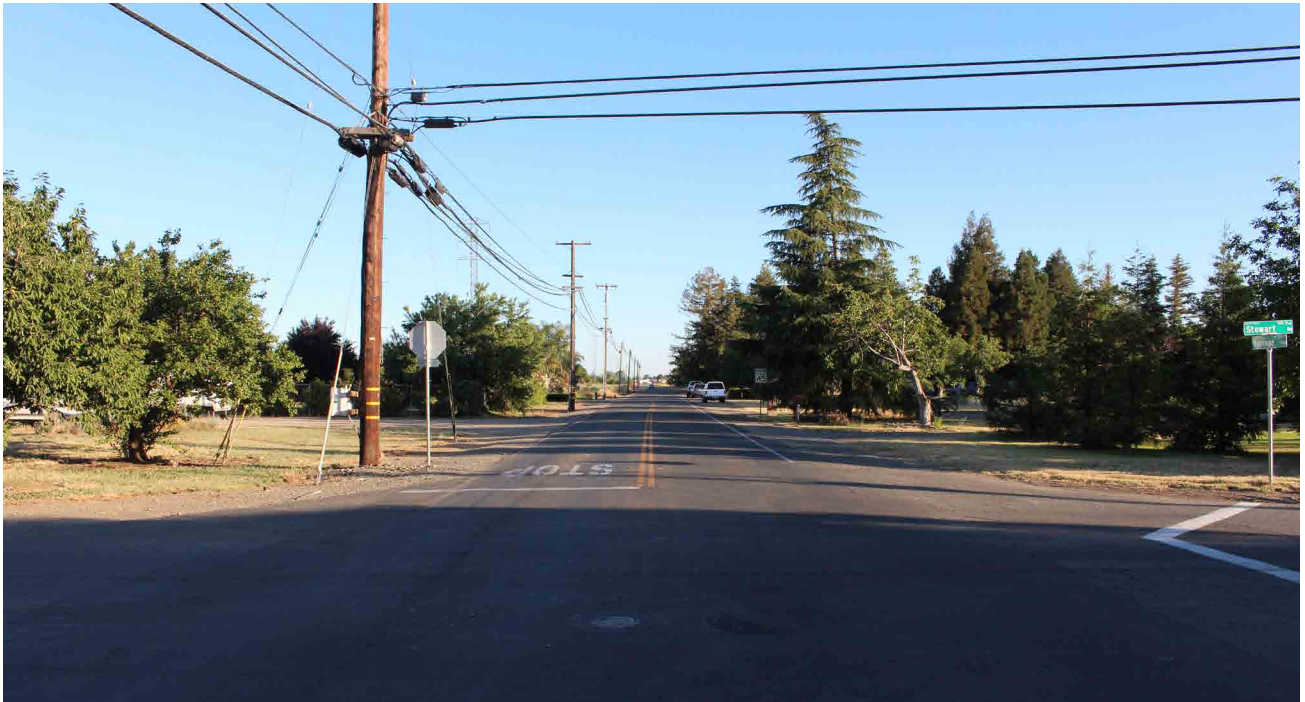
Riverbend Elementary School is located at 301 Stewart Road and is visible from the eastern edge of the BSMP area west of Garden Highway and from the western portion of the BSMP area east of Garden Highway. Riverbend Elementary School opened in 2007 and comprises a complex of postmodern classroom, administrative, and gym buildings with concrete, wood, and glass elements; a parking lot and drop-off area with ornamental trees and other landscaped elements that fronts Stewart Road; athletic fields, including a track facility on the northeastern portion of the campus and a baseball diamond (see **Figure 3.1-5**, Viewpoint 7).



Viewpoint 3: Corner of Stewart Road and South Walton Avenue. View facing northeast.



Viewpoint 4: Stewart Road and Highway 99. View facing northwest onto Kells East Ranch property. Sutter Buttes in background



Viewpoint 5: Stewart Road and Railroad Avenue. View facing north.



Viewpoint 6: View onto BSMP area from Stewart Road. View facing northeast.



Viewpoint 7: View from BSMP area east of Garden Highway onto Riverbend Elementary School. View facing northwest.



Viewpoint 8: View onto BSMP area east of Garden Highway. View facing southeast.

Views onto the BSMP area east of Garden Highway from the roadway and from the residential subdivision immediately north primarily consist of rows of orchard trees and mature trees that occupy the majority of the area (see Figure 3.1-5, Viewpoint 8). Views from the BSMP area east of Garden Highway to the Feather River are blocked by the elevated grade of the Feather River West Levee.

Views of the BSMP area west of Garden Highway from residential subdivisions that border the eastern edge of the BSMP area consist of expansive views of agricultural fields with orchard trees, mature trees, and overhead utility lines within the BSMP area farther to the west. Views to the east from within the eastern portion of the BSMP area consist mainly of the rear portions of modern residences located on Shelby Court, Claremont Way and Blue Oak Road within the modern residential subdivision to the east of the BSMP area.

Views onto the BSMP area from the north along Bogue Road vary by location but generally consist of expansive views of flat agricultural fields; rows of orchard trees; and mature trees, overhead utility lines, and residential and agricultural-related structures farther to south within the BSMP area (see **Figure 3.1-6**, Viewpoint 9 and 10). From Railroad Avenue, west of SR 99, the earthen channel of Gilsizer Slough can be viewed extending south into the BSMP area (see **Figure 3.1-7**, Viewpoint 11). Views from the northern portions of the BSMP area also vary by location but generally consist of modern and ranch-style residences and associated mature trees fronting Bogue Road from South Park Drive on the east to Ramona Avenue on the west; the Quik Stop gas station at 1285 Bogue Road immediately east of SR 99; and rows of orchard trees and associated ranch-style residences that extend from SR 99 on the east to the ranch-style buildings, parking lot, mature trees, and turf areas that comprise the Grace Baptist Church at 1980 South Walton Avenue.

Background Views

Background views are generally considered to be long range views in excess of 3 to 5 miles from a vantage point. Background views surrounding the BSMP project site are limited due to the flat nature of the site and the surrounding landscape. Most of Sutter County is very flat, with the Sutter Buttes being the exception. The Sutter Buttes, located approximately 10 miles northwest of the BSMP project site, are visibly prominent throughout Yuba City and Sutter County. The Sutter Buttes comprise the long range views to the northwest and are visible on a clear day from the majority of the BSMP project site, except in areas where trees or intervening structures block views of the mountain range.



Viewpoint 9: View onto northeastern BSMP area fronting Bogue Road. View facing southwest.



Viewpoint 10: View onto Newkom Ranch property fronting Bogue Road. View facing south.



Viewpoint 11: View onto BSMP area and Gilsizer Slough from Bogue Road. View facing south.



Viewpoint 12: Railroad Avenue and Tuscan Road. View facing east.

3.1.2 Regulatory Framework

Federal

There are no regulations that pertain to aesthetics or visual resources that are applicable to the proposed project.

State

California State Scenic Highway Program

The California State Scenic Highway Program was created by the California Legislature in 1963 to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 *et seq.* The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. A scenic corridor is the land generally adjacent to and visible from the highway. A scenic corridor is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. The corridor protection program does not preclude development, but seeks to encourage quality development that does not degrade the scenic value of the corridor. Jurisdictional boundaries of the nominating agency are also considered. The agency must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program. County roads can also become part of the Scenic Highway System. To receive official designation, the county must follow the same process required for official designation of state scenic highways. There are no designated state scenic highways in or in the vicinity of the BSMP project site.³

Local

The BSMP area is currently in unincorporated Sutter County and under jurisdiction of its General Plan goals, policies, and ordinances. As a result of the implementation of the BSMP, this area would be annexed into the City of Yuba City and development resulting from plan implementation must be found to be substantially compliant with its General Plan goals, policies, and ordinances.

³ California Department of Transportation, 2017. Scenic Highway Routes. Sutter County. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed April 12, 2017.

Yuba City General Plan

The Community Design Element of the City of Yuba City General Plan (2004) “establishes policies to ensure the creation of public and private improvements that will maintain and enhance the image, livability, and aesthetics of Yuba City in the years to come.”⁴ The following principles and policies are applicable to the proposed BSMP.

Guiding Principles

- Maintain the identity of Yuba City as a small town community, commercial hub, and residential community, surrounded by agricultural land and convey, through land uses and design amenities, Yuba City’s character and place in the Sacramento Valley.
- Recognizing the livability and beauty of peer communities with highly designed visual landscapes, commit to a focus on the visual landscape of Yuba City.
- Maintain, develop, and enhance connections between existing and planned neighborhoods.
- Create and build upon a structured open space and parks network, centered on two large urban parks and the Feather River Corridor.
- Strive for lush, landscaped public areas marked by extensive tree plantings.
- Design commercial and industrial centers to be visually appealing, to serve both pedestrians and automobiles, and to integrate into the adjacent urban fabric.

Urban/Rural Edge

Policies

- 4.2-I-1 Establish a distinct design character for new development along Bogue Road Township Road and Pease Road in order to clearly demarcate the urban edge. This will be accomplished by:
- Enforcing a 60-foot minimum rear setback requirement on new development along these roads;
 - Creating a 40-50-foot wide landscaped buffer within the public right-of-way;
 - Planting multiple layers of trees closely for visual impermeability; and
 - Limiting local access (but allowing collector and arterial access and only a minimal number of residential streets) from these roads in order to maintain continuous street edges.
- 4.2-I-2 Create a “soft” transition at the urban/agricultural edge by appropriate landscape, with large canopy trees that are visually compatible with schools.
- 4.2-I-3 Maintain views into the agricultural lands on the rural side of the roadways by:
- Not planting within the right-of-way, trees spaced farther, and

⁴ City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004. Pp. 4-1.

- Designating a minimum of 6 feet of space in the right of way for a curb and gutter on the rural side of the road.

4.2-I-3 Differentiate the landscape treatment of urban edges near key intersections.

Gateways and Entries

Policies

4.3-I-1 Designate Route 99 near Pease Road, Route 99 near Bogue Road, Route 20 near Township Road, Garden Highway near Drummond Drive, George Washington near Bogue Road, and the Feather River bridges as entry gateways into Yuba City, and create distinctive features at these locations, as follows:

- George Washington near Bogue Road. Along George Washington, signs directing traffic to different neighborhoods and major amenities in the western portion of the city such as the two major parks, the panhandle, new neighborhood commercial centers, and the parkways can be introduced, coupled with differentiated landscaping, at the intersection.

Connections and Corridors

Policies

4.4-G-1 Create a well-connected hierarchy of streets that serve existing and planned neighborhoods, and strengthen the visual and aesthetic character of each major corridor.

Neighborhoods

Policies

4.7-I-1 Require new neighborhoods to include components such as a mix of housing types, open spaces, and community facilities, oriented to a neighborhood center.

4.7-I-2 Continue to use the City's Design Guidelines in development review and prepare a design standards "checklist" for new requirements established by the General Plan.

4.7-I-3 Provide a variety of lot sizes within a neighborhood to foster diverse housing types.

4.7-I-4 Continue to require on-site common open spaces in multi-family residential development.

4.7-I-5 Require new housing to provide transitions between the street and building, with variable front setbacks, building articulation and massing.

4.7-I-9 Place design elements that signify neighborhood identities at the neighborhood entrances and at neighborhood focal points.

4.7-I-10 Create a sense of a neighborhood identity by gradually decreasing densities away from neighborhood focal points.

- 4.7-I-11 Avoid using walls as a neighborhood boundary. Solid edges prevent fluid access in and out of neighborhoods.
- 4.7-I-13 Require new developments to underground all utilities needed to serve future buildings and their occupants and work with PG&E to establish undergrounding of utilities in existing residential neighborhoods, where financially feasible.

As described in Chapter 2, Project Description, the proposed BSMP would develop a planned community with a mix of residential, commercial, office/business, park and recreational sites, and public facilities on a 741-acre site that is currently occupied primarily by agricultural and rural residential uses. The proposed BSMP would design residential, commercial, office/business, park and recreational sites, and public facilities to be visually appealing and include landscaped public areas marked by extensive tree plantings. The proposed BSMP would include soft transitions at the urban/agricultural edge by appropriate landscape, setbacks, and buffers in accordance with the requirement of the Yuba City General Plan. For these reasons the proposed BSMP would be consistent with the applicable visual resource goals and policies of the Yuba City General Plan.

City of Yuba City Design Guidelines

The goal of the City's design guidelines is to ensure the highest quality of building design: designs that are aesthetically pleasing; designs that are compatible with the surroundings in terms of scale, mass, detailing, and building patterns; designs that accommodate the pedestrian, automobile, bicycle, and transit circulation; and designs that consider public safety, public interaction, and historic resources. The design guidelines apply to all commercial and industrial new construction and renovation projects, new multifamily projects, and new single-family subdivisions. The following objective applies to the proposed BSMP:

Objective 3. Establish and enhance aesthetic and architectural compatibility within neighborhoods and commercial areas.

There are additional objectives and guidelines specifically for commercial, single-family housing, and multifamily housing developments. The associated guidelines are not listed because the BSMP Design Guidelines would supersede this document for the purposes of the proposed project. The applicable objectives of the City's Design Guidelines are provided to demonstrate general consistency with the proposed BSMP.

Commercial Guidelines

The following objectives apply to the proposed project:

- To promote compatibility between neighboring properties from site and building design as well as circulation perspective.
- To insure that parking lots support the aesthetic, place-making, and access goals of these guidelines.
- To insure that "transitional" sites relate to their surroundings; transitional sites are those that stand at the threshold between two distinctly different districts (e.g.: a corner site at the crossing of a commercial strip and a residential street or the general edge of a commercial district where it borders a differing use).

- Project shall fit as an integral part of their surroundings. They should complete and complement the existing surroundings, including site and building improvements. This can be achieved by incorporating design elements including, but not limited to: building massing; alignment of building elements; similar hierarchical groupings such as pairing of windows; use of similar colors or materials; use of similar shadow casting or other articulating elements; use of similar building form.

Multifamily Housing Guidelines

The following objective applies to the proposed project:

- To insure that new development is compatible with neighboring uses.

Single Family Housing Guidelines

The following objective applies to the proposed project:

- To insure that new development is consistent with the small town, neighborhood-oriented character of Yuba City.

Proposed BSMP Development Standards and Guidelines

The proposed BSMP Development Standards and Guidelines would provide direction for the planning, design, and review of development within the BSMP project site. The stated intent of the Development Standards and Guidelines is to contribute towards the creation of a unified community that is characterized by high quality, diverse, attractive, and functional development. The Development Standards and Guidelines would influence the proposed Project's visual character by establishing mandatory standards and recommended guidelines for site planning, architecture, screening, lighting, roadways, streetscapes, and landscaping. The Development Standards and Guidelines would serve to guide property owners, developers, builders, and design professionals on project design. They would also be used by public officials in the review, conditioning, and approval of discretionary development applications within the BSMP project site. Each individual development would be required to demonstrate how it meets the intent of the Development Standards and Guidelines.

The Yuba City General Plan, Zoning Code, and Citywide Design Guidelines apply to all projects and improvements subject to discretionary approval by the City of Yuba City. The proposed BSMP Development Standards and Guidelines would provide added direction for development within the BSMP project site. Where the provisions of the proposed BSMP Development Standards and Guidelines conflict with other City plans or requirements, the provisions of the Development Standards and Guidelines would prevail. Where the proposed BSMP Development Standards and Guidelines are silent, the applicable provisions of the other City plans or requirements would be applicable.

3.1.3 Analysis, Impacts, and Mitigation

Significance Criteria

The significance criteria for this analysis were developed from questions presented in Appendix G of the State CEQA Guidelines and based on the professional judgment of the City of Yuba City and its consultants. The proposed BSMP would result in a significant impact if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings;
or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Methodology and Assumptions

In June 2016, an ESA staff member visited the project site and took photographs, including views to and from the surrounding area (see Figures 3.1-2 to 3.1-7). Digital aerial imagery was also consulted in the process of preparing this section. Impacts on aesthetics and visual resources are evaluated using the criteria listed above. Impacts are evaluated assuming full buildout of the project site and in compliance with the applicable policies of the Yuba City General Plan, the Yuba City Code of Ordinances, the Yuba City Design Guidelines, and the proposed BSMP Development Standards and Guidelines provided below.

Issues Not Discussed in Impacts

The BSMP area and surrounding environs do not include any designated state scenic highways. Therefore, implementation of the proposed BSMP would not adversely affect scenic resources within a state scenic highway and this issue is not evaluated further in this EIR.

Impacts and Mitigation Measures

Impact 3.1-1: Development pursuant to the proposed BSMP could result in a substantial adverse effect on a scenic vista.

Full Master Plan, Newkom Ranch, Kells East Ranch

A scenic vista can be defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. As discussed above, background views surrounding the BSMP project site are limited due to the flat topography of the BSMP site and the surrounding landscape, with the Sutter Buttes being the exception. The Sutter Buttes, a mountain range that rises to 2,100 feet, is located approximately 10 miles northwest of the BSMP project site and is visible in views from all over Yuba City and northern Sutter County. The Sutter Buttes are visible to the northwest on a clear day from many locations around the BSMP project site, and comprise a unique regional landmark and scenic resource.

The proposed BSMP would develop a planned community with a mix of residential, commercial, office/business, park and recreational sites, and public facilities on a 741-acre site that is currently occupied primarily by agricultural and rural residential uses. Implementation of the proposed BSMP would result in the development of new buildings and structures in the BSMP area, including buildings up to two stories at a maximum height of 35 feet in areas designated as Single-Family Residential (R-1/SP-BSMP), up to three stories at a maximum height 35 feet in areas designated as Low-Medium Density Residential (R-2/SP-BSMP), up to four stories at a maximum height 48 feet in areas designated as Multi-Family Residential (R-3/SP-BSMP), up to four stories at a maximum height 52 feet in areas designated as Neighborhood Commercial (C-1/SP-BSMP) and Community Commercial (C-2/SP-BSMP), and up to four stories at a maximum height of 52 feet in areas designated as Office Commercial (C-0/SP-BSMP). While the Yuba City General Plan, Yuba City Design Guidelines, and the proposed BSMP Development Standards include policies and guidance aimed to reduce obstruction of views, such as the use of step-down and height-transition techniques, development of the BSMP project site with buildings two to four stories in height where none currently exist would alter or obstruct existing unobstructed views of the Sutter Buttes within some areas of the BSMP project site.

Because implementation of the proposed project could result in a substantial adverse effect on a scenic vista, this impact would be **potentially significant**. Further, because there is no feasible mitigation to reduce this impact, the project impact to scenic vistas would be considered **significant and unavoidable**.

Mitigation Measure

None available.

Impact 3.1-2: Development pursuant to the proposed BSMP could substantially degrade the existing visual character or quality of the site and its surroundings.

Full Master Plan, Newkom Ranch, Kells East Ranch

The visual character of the BSMP project site is dominated by open agricultural fields and orchards, scattered one and two-story houses, and agricultural buildings and structures of various sizes and materials (e.g., metal, wood, concrete). All of the buildings within the BSMP area are low-rise, primarily one-story buildings. Implementation of the BSMP would gradually replace agricultural fields and related buildings and structures with modern residential and commercial structures, parks and open space areas, and associated internal roadways and streets. From a visual perspective, new development would substantially change the existing visual character of the BSMP area.

If the proposed project is approved, the BSMP project site would be annexed to the City of Yuba City, and development would be required to comply with the requirements of the BSMP Development Standards and Guidelines, the Yuba City General Plan, the Yuba City Design Guidelines, and the Yuba City Code of Ordinances. The BSMP Development Standards and Guidelines provide objectives and standards for each type of development proposed in the BSMP.

Direction on architectural elements, setbacks, lighting, signage, and landscaping included in the Design Guidelines are aimed to ensure that new development is of a high quality, is visually appealing, and is compatible with surrounding uses. The Yuba City Design Guidelines reinforce General Plan objectives to ensure that residential, commercial, and public facilities are designed to be visually appealing and include landscaped public areas marked by extensive tree plantings. The BSMP Development Standards and Guidelines, the Yuba City General Plan, the Yuba City Design Guidelines all include guidance for ensuring soft transitions at the urban/agricultural edge through the use of appropriate landscape, setbacks, and buffers.

Project Vicinity

Development of a mixed-use project in an area that is predominantly agricultural constitutes a change in the existing visual character of the site that has the potential to also affect the surrounding area.

Areas to the west and south of the proposed BSMP project site, which are primarily rural in character and contain low-rise single-family homes surrounded by orchards and other associated agricultural operations, would be most affected by this change. Much of the land east of the portion of the BSMP project site that is west of Garden Highway is dominated by residential subdivisions, with Riverbend Elementary School located immediately to the south of the residential subdivisions. Proposed development along the eastern boundary of the BSMP project site west of Garden Highway would be visually compatible with this existing residential development and with Riverbend Elementary School, as both areas would be dominated by single-family homes that are of similar scale, massing, and level of artificial lighting. Land east of the portion of the BSMP project site east of Garden Highway is physically and visually set off from the BSMP area by the Feather River and the elevated grade of the Feather River West Levee, and would be largely unaffected by visual changes associated with development of the BSMP project site. Land north of the portion of the BSMP area east of Garden Highway area is dominated by residential subdivisions, and development of this portion of the BSMP project site would be visually compatible with the existing residential development, as both areas would be dominated by single-family homes that are of similar scale, massing, and level of artificial lighting.

Therefore, the areas of concern with regards to impacting the surrounding areas would be areas to the west and south of the BSMP area. Buffers and landscaping required by BSMP Development Standards and Guidelines, the Yuba City General Plan, and the Yuba City Design Guidelines would help to preserve rural views and maintain visual compatibility with these surrounding areas. For example, where commercial and employment uses are across from existing rural residential and agricultural uses, the BSMP Development Standards and Guidelines require the use of appropriate landscaping and building setbacks that are compatible with adjacent rural and agricultural uses and provide visual impermeability.

Summary

Implementation of the proposed BSMP would alter the visual character of the site by developing a variety of residential, commercial, office/business, park and recreational sites, and public facilities on formerly agricultural land. Implementation of the proposed BSMP would

substantially change the existing visual character of the site and its surroundings. The BSMP Development Standards and Guidelines are intended to guide future development in the BSMP area. In addition, development within the BSMP area would be required adhere to the City's General Plan policies and Design Guidelines that are designed to address new development and the interface between existing and new development. However, from a visual perspective new development would substantially change the existing visual character of the BSMP area, which would result in a **significant** impact. In absence of other feasible mitigation measures, the only option to avoid this impact would be not to implement the BSMP, which would not meet the City's objectives.

Because there are no mitigation measures available that could ensure the project would not substantially change the existing visual character or quality of the BSMP area and its surroundings, the impact would remain **significant and unavoidable**.

Mitigation Measure

None available.

Impact 3.1-3: The proposed project could create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Full Master Plan, Newkom Ranch, Kells East Ranch

Under existing nighttime conditions, the BSMP project site is generally dark and does not generate any significant sources of light or glare. Existing sources of light include the rural residences within the BSMP project site and from the headlights of vehicles on SR 99 and local roads. Because existing residential development is sparse, nighttime lighting is generally limited to within individual properties. Outside of the BSMP project site, existing light sources within Yuba City includes streetlights, landscape lighting, interior light spilling through windows of structures, and exterior signage. The nighttime lighting of streets, commercial centers, and other developed areas combine to create a skyglow effect over the developed portions of the Yuba City.

Nighttime Lighting

Implementation of the proposed BSMP would introduce urban light sources to an area that is currently largely dark. The primary sources of new nighttime lighting in the BSMP area would be exterior building lighting, new street lighting, parking lot lights, and headlights of vehicular traffic.

Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare, and if designed incorrectly. Although nighttime light is a common feature of urban areas, spillover light can adversely affect light-sensitive uses, such as residential units at nighttime. Spillover light can disturb neighbors or other sensitive uses, diminish views of the nighttime sky, and potentially create hazards for drivers on SR 99.

Pursuant to Section 8-5.5803, *Light Shielding*, of the Yuba City Code of Ordinances, “in all districts, lighting erected to provide illumination of private property for security purposes shall be shielded so as not to produce obtrusive glare onto the public right-of-way or adjoining properties.” In addition, development in the BSMP area would be required to comply with Title 24 of the California Code of Regulations, which includes standards that regulate lighting characteristics such as maximum power, brightness, shielding. Finally, the proposed BSMP Development Standards and Guidelines include a number of measures designed to prevent excessive or misdirected nighttime lighting, including the requirement for commercial and employment uses to use lighting sources with shields located to avoid light spillage and glare onto adjacent residential properties; the requirement for commercial and employment uses to locate exterior lighting to minimize ambient light levels while meeting public safety standards; the requirement for commercial and employment uses to use full-cutoff lighting fixtures, diffusers and other dark-sky and low-glare technologies to reduce light pollution. In addition, the proposed BSMP Development Standards and Guidelines include a requirement that street lighting constructed pursuant to the proposed BSMP would be designed to minimize glare and excess spillage onto neighboring properties and into the sky, and that the lighting should be appropriately shielded and should incorporate dark-sky technology to reduce overspill. Adherence to the light-shielding requirements of the Yuba City Code of Ordinances, Title 24 of the California Code of Regulations, and the measures in the proposed BSMP Development Standards and Guidelines designed to prevent excessive or misdirected nighttime lighting would reduce impacts related to excessive or misdirected light. However, because implementation of the BSMP would permanently increase nighttime lighting, and no feasible mitigation measures are available to fully preserve nighttime views while at the same time allowing for urban development, this impact would be **significant and unavoidable**.

Glare

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying or it may diminish the ability to see other objects in the darkened environment. Reflective glare, such as the reflected view of the sun from a window or mirrored surface, can be distracting during the day.

As specified in the BSMP Development Standards and Guidelines, residential and commercial development within the BSMP area shall be prohibited from (1) using reflective glass that exceeds 50 percent of any building surface, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, and (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building. In addition, the proposed BSMP Development Standards and Guidelines include a requirement that street lighting constructed pursuant to the proposed BSMP would be designed to minimize glare and excess spillage onto neighboring properties. Required compliance with the glare-reduction requirements of the BSMP Development Standards and Guidelines would reduce the impact. However, because implementation of the BSMP would result in increased nighttime lighting and could include construction of buildings with reflective surfaces that inadvertently cast light and glare in an existing rural area, this impact would be **significant and unavoidable**.

Mitigation Measure

None available.

Cumulative Impacts

The geographic context for the analysis of cumulative aesthetic and visual resources impacts varies by threshold. The cumulative context for each threshold is presented in the impact discussions below.

Impact 3.1-4: Implementation of the proposed project, in conjunction with development of other projects in the Yuba City sphere of influence and within nearby Sutter County, could contribute to cumulative impacts on scenic vistas.

The cumulative context for impacts on scenic vistas is development of the BSMP area in combination with implementation of other projects in the Yuba City sphere of influence (SOI) and within adjacent Sutter County.

As discussed in Impact 3.1-1, a scenic vista can be defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. As discussed above, background views surrounding the BSMP project site are limited due to its flat topography and surrounding landscape, with the visually-prominent Sutter Buttes being the exception. The Sutter Buttes are notable features of the background views to the northwest of the BSMP project site, are visible on a clear day from the majority of the BSMP project site and the surrounding region.

While much of Yuba City to the north of the BSMP project site is developed, development of the BSMP combined with additional development proposed on lands within the Yuba City SOI and within adjacent Sutter County that are currently used for a variety of rural residential, agricultural, and open space uses would cumulatively reduce the availability of views of the Sutter Buttes. Alteration and obstruction of views would be caused by the introduction of new buildings and structures where none previously existed or where buildings are of a lesser height than the new buildings and structures. This cumulative impact is considered significant.

Notwithstanding Yuba City General Plan, Yuba City Design Guidelines, and the BSMP Development Standards aimed to reduce obstruction of views, such as the use of step-down and height-transition techniques, development of the BSMP area with buildings two to four stories in height where none currently exist would alter or obstruct existing unobstructed views of the Sutter Buttes within some areas of the proposed BSMP area. Because implementation of BSMP would result in 741 acres of new urban development that would substantially alter scenic vistas, the proposed project's contribution would be cumulatively considerable, and the impact would be **cumulatively significant**.

Because there is no feasible mitigation to reduce this impact, the project's contribution to cumulative impacts on scenic vistas would be considered **cumulatively significant and unavoidable**.

Mitigation Measure

None available.

Impact 3.1-5: Implementation of the proposed BSMP, in combination with other projects in the Yuba City sphere of influence and within adjacent Sutter County, could contribute to cumulative degradation of visual character and quality.

While much of Yuba City to the north of the BSMP area is already developed, additional development proposed on lands within the Yuba City SOI and within adjacent Sutter County that are currently used for a variety of rural residential, agricultural, and open space uses would substantially change the existing visual character of these areas. This cumulative impact is considered significant.

As discussed in Impact 3.1-2, implementation of the proposed BSMP would alter the visual character of the proposed BSMP project site by developing a variety of residential, commercial, office/business, park and recreational sites, and public facilities on formerly agricultural land. Implementation of the proposed BSMP would substantially change the existing visual character of the site and its surroundings.

Notwithstanding Yuba City General Plan, Yuba City Design Guidelines, and the BSMP Development Standards aimed to address new development and the interface between existing and new development, the proposed project's contribution to cumulative changes in the visual character of areas surrounding the BSMP project site would be cumulatively considerable, and the impact would be **potentially cumulatively significant**.

Because there is no feasible mitigation to reduce this impact, the project's contribution to cumulative impacts on visual character would be considered **cumulatively significant and unavoidable**.

Mitigation Measure

None available.

Impact 3.1-6: Implementation of the proposed BSMP would contribute to a cumulative increase in light and glare in the vicinity of the BSMP project site.

Nighttime Lighting

Spillover lighting and glare are localized effects that are not cumulative in nature. Accordingly, this analysis addresses cumulative effects related to reduced visibility of the nighttime sky.

Increased urbanization contributes new sources of light and glare that would contribute to the substantial amount of new nuisance light or glare into the surrounding area. Increased urban

lighting throughout the BSMP project site, the Yuba City SOI, and within adjacent Sutter County would contribute to a sky-glow effect and reduce the visibility of the nighttime sky. This is considered a significant cumulative impact.

As discussed in Impact 3.1-3, pursuant to Section 8-5.5803, *Light Shielding*, of the Yuba City Code of Ordinances, “in all districts, lighting erected to provide illumination of private property for security purposes shall be shielded so as not to produce obtrusive glare onto the public right-of-way or adjoining properties.” In addition, development in the BSMP area would be required to comply with Title 24 of the California Code of Regulations, which includes standards that regulate lighting characteristics such as maximum power, brightness, shielding. Finally, the proposed BSMP Development Standards and Guidelines include a number of measures designed of prevent excessive or misdirected nighttime lighting, including the requirement for commercial and employment uses to use lighting sources with shields located to avoid light spillage and glare onto adjacent residential properties; the requirement for commercial and employment uses to locate exterior lighting to minimize ambient light levels while meeting public safety standards; the requirement for commercial and employment uses use full-cutoff lighting fixtures, diffusers and other dark-sky and low-glare technologies to reduce light pollution. In addition, the proposed BSMP Development Standards and Guidelines include a requirement that street lighting constructed pursuant to the proposed BSMP would be designed to minimize glare and excess spillage onto neighboring properties and into the sky, and that the lighting should be appropriately shielded and should incorporate dark-sky technology to reduce overspill.

Adherence to the light-shielding requirements of the Yuba City Code of Ordinances, Title 24 of the California Code of Regulations, and the measures in the proposed BSMP Development Standards and Guidelines designed of prevent excessive or misdirected nighttime lighting would reduce the proposed BSMP’s contribution to cumulative increase in excessive or misdirected light in the vicinity of the BSMP area. However, because implementation of the BSMP would permanently increase nighttime lighting in the vicinity of the BSMP area, and no feasible mitigation measures are available to fully preserve nighttime views while at the same time allowing for urban development, this impact would be **cumulatively significant and unavoidable**.

Mitigation Measure

None available.

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3.2 Agriculture and Forestry Resources

This section of the Draft EIR describes the existing agricultural uses in the BSMP area and surrounding area, and evaluates the potential for loss of farmland and other effects on agricultural productivity. This section also evaluates potential effects to forestry resources.

Comment letters received in response to the notice of preparation address the conversion of farmland to nonagricultural uses and the need to mitigate such an impact. Impacts to farmland from conversion to nonagricultural uses are discussed in this section along with applicable mitigation for potentially significant impacts to farmlands.

The analysis included in this section is based on project-specific construction and operational features, and data provided by the City of Yuba City General Plan,¹ Sutter County General Plan,² the U.S. Department of Agriculture (USDA), the California Department of Conservation (DOC), the Natural Resource Conservation Service (NRCS), and Sutter County LAFCo.

3.2.1 Environmental Setting

Agricultural Setting

Existing Agriculture in Sutter County

Sutter County (County) has a long history of agricultural uses, being suited for the production of rice, dried plums and a fast growing segment of English walnuts, almonds, sunflower seeds, rice seed and apiary products.³ According to the Sutter County Agricultural Commissioner, the gross value for Sutter County agricultural production for 2016 was \$514,408,000, a decrease of \$23,739,000 or 4.4 percent from the total 2015 value.⁴ Notable trends in 2016 include:

- Rice remained the top ranking crop in 2016 with acreage rising 27 percent due to increased water allocations with a total value of \$127,469,000.
- The total value of walnuts increased 53 percent in 2016 due to higher acreage and yields, rising to \$118,750,000 from \$77,454,000 in 2015.
- Processing peaches had a slight increase in acreage and price to a total of \$56,801,000.
- Nursery products decreased in value by 10 percent to \$35,651,000.
- Tomatoes also decreased by 23 percent to a total value of \$34,889,000.
- Almonds increased in acreage and yields despite a dip in price to a total value of \$31,435,000.

Overall, Sutter County agricultural production appears to have steadied, following a substantial decline in production value in 2015, which included a 60 percent decline in walnut production

¹ City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004.

² Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

³ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February, 2008. Pp. 2.2-16.

⁴ Sutter County Agricultural Commissioner, 2017. *Sutter County Crop and Livestock Report 2016*. September 2017.

value, as a factor.⁵ The value of agricultural production in Sutter County has been impacted both positively and negatively by a number of external factors, including seasonal weather fluctuations, annual precipitation, groundwater usage, industry trends, market values, national and global demand for specific crops, competing global supplies of specific crops, and changes in methods and efficiency. These elements have contributed to boons in production or value in some years and substantial declines others. Nonetheless, 20 years of crop data, from 1997 to 2016, reflects an average agricultural production value that has increased by \$12,486,226, or 4 percent, annually.⁶ During that period, production value has ranged from \$264,673,000 in 2001 to \$726,066,000 in 2014.⁷

According to USDA 2016 data, approximately 30 percent of County land area was in rice production; 16 percent fallow/idle cropland; 10 percent in walnut production; 7 percent grass/pasture; 5 percent in almond production; and 19 percent in production of a variety of other crops.⁸ Compared to USDA 2010 data, and consistent with Sutter County Agricultural Commissioner data, the County has undergone a substantial transition in types of crops produced.

Existing Agriculture Activities in and Adjacent to the Plan Area

The plan area is bordered to the north and east by urbanized areas of the City of Yuba City. To the south and west, the plan area borders a mix of uses, much of which consists of agricultural land uses. Within the plan area the majority of agricultural uses are dedicated to orchard crops, including walnuts, plums, almonds, sorghum, pistachios, peaches, nectarines, and olives, as shown in **Figure 3.2-1**.⁹ The USDA list of crops and acreage is shown in **Table 3.2-1**.¹⁰

Farmland Classification

The DOC's Farmland Mapping and Monitoring Program (FMMP) identifies agricultural land that is lost, as well as gained, during two-year periods. The FMMP reports changes in the amounts of different types of farmland based on farmland classifications, which take into consideration soil suitability, availability of water, past and current agricultural practices, and other factors. Agricultural land is quantified based upon acreage and classified as Prime, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. Under CEQA, Important Farmland is comprised of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. For comparison, the FMMP also quantifies the amount of urban land and other lands within the County. The farmland classifications within and adjacent to the plan area are shown in **Figure 3.2-2**. The farmland acreage within the plan area is presented in **Table 3.2-2**.

⁵ Sutter County Agricultural Commissioner, 2016. *Sutter County Crop and Livestock Report 2015*. September 2016.

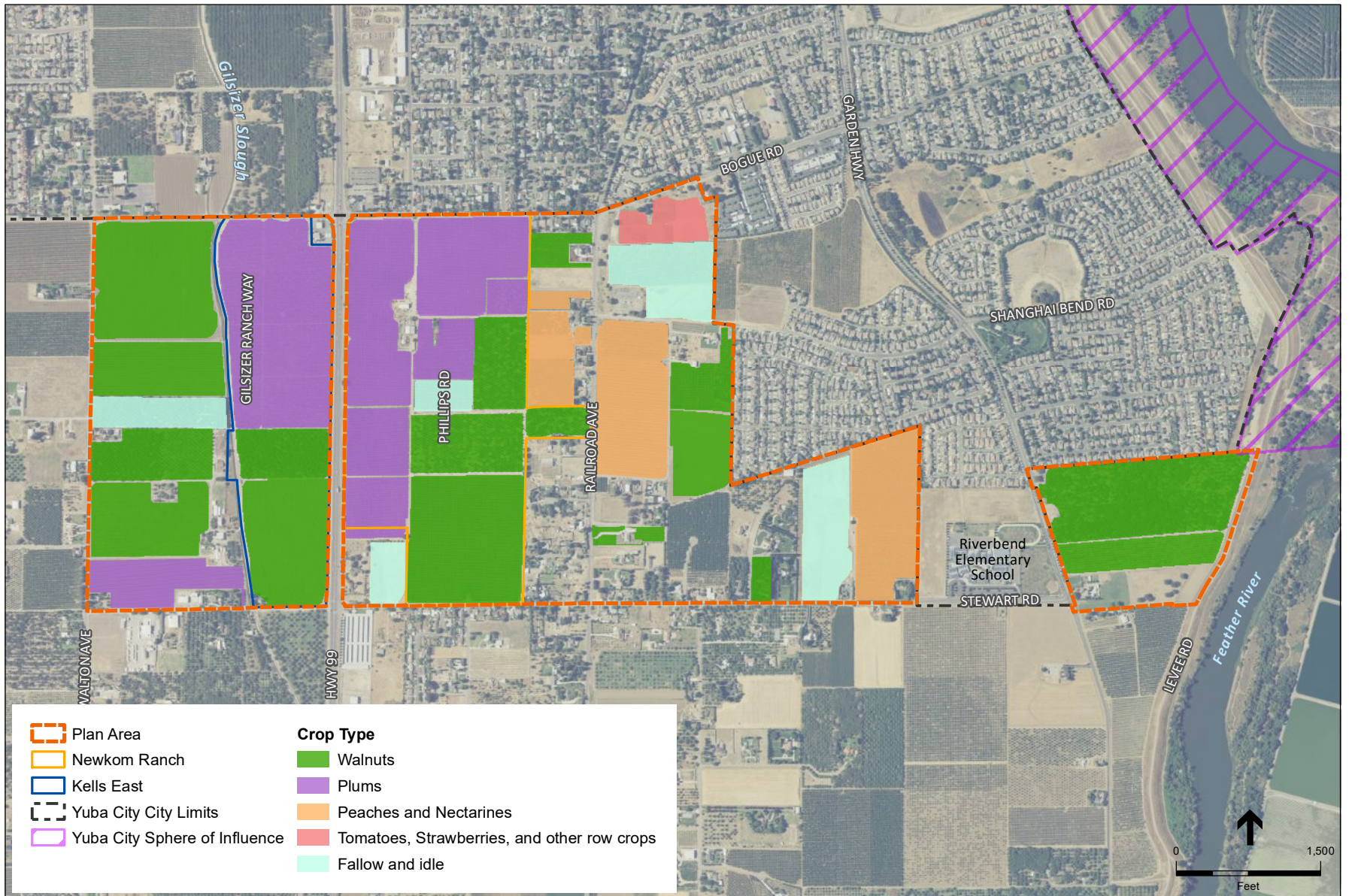
⁶ Sutter County Agricultural Commissioner & ESA, 2017. Analysis of data from Sutter County crop and livestock reports for crop years 1997 through 2016.

⁷ Sutter County Agricultural Commissioner & ESA, 2017. Analysis of data from Sutter County crop and livestock reports for crop years 1997 through 2016.

⁸ U.S. Department of Agriculture, National Agricultural Statistics Service, 2016. 2016 Cropland Data Layer Statistics for Sutter, California. Available: <https://nassgeodata.gmu.edu/CropScape/>. Accessed March 21, 2017.

⁹ List of crops are based on 2016 USDA data and may have changed at the time of publication of this document.

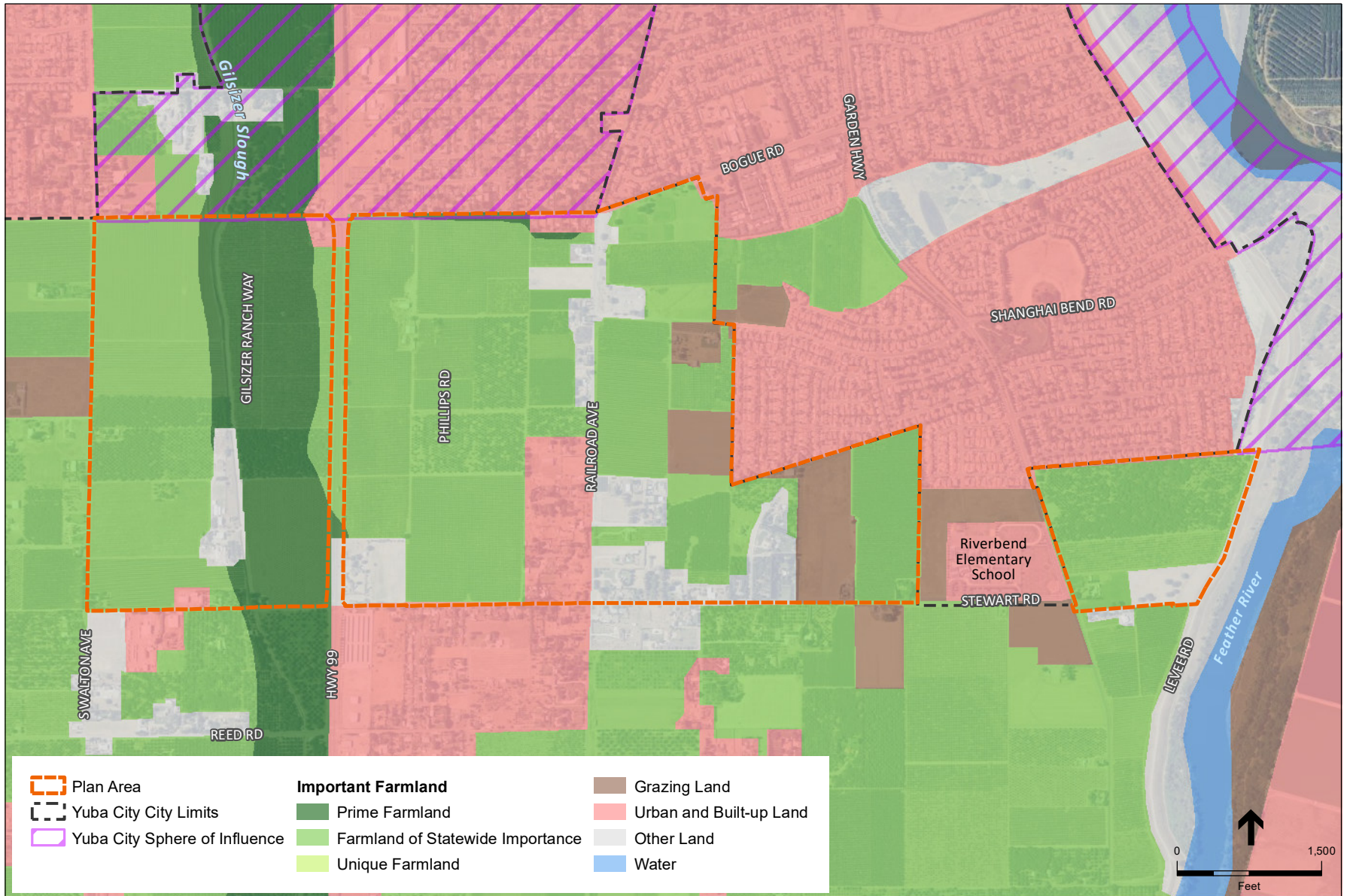
¹⁰ U.S. Department of Agriculture, National Agricultural Statistics Service, 2016. 2016 Cropland Data Layer Statistics for Sutter, California. Available: <https://nassgeodata.gmu.edu/CropScape/>. Accessed March 21, 2017.



SOURCE: USDA, 2016; City of Yuba City, 2016; LandIQ adapted by ESA, 2018

Bogue-Stewart Master Plan and EIR . 140720

Figure 3.2-1
Crop Types



SOURCE: USDA, 2016; City of Yuba City, 2016; California Department of Conservation, 2016; ESA, 2019

Bogue-Stewart Master Plan and EIR . 140720

Figure 3.2-2
Farmland Classification

**TABLE 3.2-1
 USDA CROP DATA (IN ACRES)**

Type	Acres
Almonds	37.8
Fallow and idle	138.9
Olives	2.7
Peaches & Nectarines	12.4
Pistachios	15.7
Plums	99.7
Sorghum	29.3
Walnuts	261.9

SOURCE: USDA, 2016

**TABLE 3.2-2
 FARMLAND ACREAGE – SUTTER COUNTY AND PLAN AREA**

Farmland Type	Sutter County	Plan Area
Prime Farmland	161,019	97.5
Farmland of Statewide Importance	104,003	483.5
Unique Farmland	16,087	0
Total Important Farmland	281,109	581
Farmland of Local Importance	0	0
Total Farmland	281,109	581
Grazing Land	54,327	36.4
Total Agricultural Land	335,436	617.4
Urban and Built-Up Land	13,607	39.4
Other Land	38,386	84.8
Water Land	1,883	0
Total Area Inventoried	389,312	741.6

SOURCE: California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Land Use Conversion Table 2012-2014 (Table A-42). Available: www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2012-2014/conversion_tables/sutcon14.xls.

The farmland classifications in the County are defined as follows:

Prime Farmland

Prime farmland denotes the best combination of physical, climatic, and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. Prime

Farmland is present in and to the north and south of the plan area along the pathway of Gilsizer Slough (see Figure 3.2-2).

Farmland of Statewide Importance

Farmland of Statewide Importance is farmland similar to Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. Farmland of Statewide Importance is present throughout the plan area and bordering agricultural land uses immediately south and west of the plan area.

Unique Farmland

Unique Farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date. There is no Unique Farmland within or adjacent to the plan area.

Farmland of Local Importance

Farmland of Local Importance is land that does not otherwise meet the criteria as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, but is nevertheless understood to be important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. There is no Farmland of Local Importance within or adjacent to the plan area.

Grazing Land

Grazing land does not meet the categories described above, but is land on which the existing vegetation is suited to the grazing of livestock. Grazing Land is present within the plan area and to the east along the Feather River.

Urban and Built-Up Land

Urban and built-up land is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes. Urban and Built-Up Land is present within the plan area primarily along Railroad Avenue and Stewart Road, within the Yuba City limits to the north and east, and to the south along State Route 99 and Railroad Avenue in the unincorporated county.

Other Land

Land designated as Other Land is not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines,

borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land. Within the plan area, this classification is found primarily along Railroad Avenue and Stewart Road.

Water

Land designated as Water includes perennial water bodies of at least 40 acres in surface area. The Feather River, immediately east of the plan area is designated as Water. There is no portion of the project site designated as Water.

Summary

As of 2014, the DOC reported that Sutter County included 335,436 acres of agricultural land, which includes 281,109 acres of Important Farmland (all types), as well as 54,327 acres of grazing land.¹¹ Agricultural land represents 86 percent of all land inventoried (389,312 acres total) in Sutter County.¹²

As part of its biannual land inventory, the FMMP inventories the amount of farmland lost and gained. Between 2012 and 2014, the FMMP reported that Sutter County lost 1,003 acres of Important Farmland (Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance). However, with the addition of 1,095 acres of grazing land during that time period, the overall net conversion of agricultural land in Sutter County was a gain of 92 acres.¹³

Of the 741-acre BSMP area, a total of 581 acres are classified as Important Farmland. Compared to the County total (281,109 acres), the plan area contains 0.2 percent of the total Important Farmland within the County. Of the site total, 97.5 acres are Prime Farmland, 483.5 acres are Farmland of Statewide Importance, and 36.4 acres are grazing land. There is no Unique Farmland or Farmland of Local Importance within the plan area. The site also includes 84.8 acres of Other Land and 39.4 acres of Urban and Built-up Land.

Land Capability Classification Ratings

One method for evaluating soil quality for agricultural purposes is the land capability rating provided by the NRCS. Capability classes provide insight into the suitability of a soil for field crop uses based on factors that include texture, erosion, wetness, permeability, and fertility. Land capability classification generally shows the suitability of soils for most kinds of field crops. Land

¹¹ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Table A-42, Sutter County, 2012-2014 Land Use Conversion Table. Available: http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2012-2014/conversion_tables/sutcon14.xls. Accessed March 22, 2017.

¹² California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Table A-42, Sutter County, 2012-2014 Land Use Conversion Table. Available: http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2012-2014/conversion_tables/sutcon14.xls. Accessed March 22, 2017.

¹³ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Table A-42, Sutter County, 2012-2014 Land Use Conversion Table. Available: http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2012-2014/conversion_tables/sutcon14.xls. Accessed March 22, 2017.

capability classes are designated by the numerically 1 through 8. These designations indicate progressively greater limitations and narrower options for practical use. Class 1 and 2 soils may only have slight to moderate limitations that restrict their use, while Class 7 and 8 soils have severe limitations that make them unsuitable for cultivation. Class 1 and 2 soils generally support Prime Farmland.

As defined by the NRCS, the plan area includes three surface and near-surface soil units.¹⁴

Conejo-Tisdale Complex (126)

This map unit consists of approximately 45 percent Conejo loam and similar soils; 40 percent Tisdale clay, loam, and similar soils; and 15 percent minor components. The Conejo-Tisdale soil is well drained loam at a moderate depth over a hardpan. Conejo loam has a land capability of 4c when non-irrigated, the limiting factor being climate. When irrigated Conejo loam has a land capability classification of “1” and supports Prime Farmland. Without irrigation, Tisdale clay loam has a land capability classification of “4s,” with shallow depth, drought, or stony composition as general limiting factors. When irrigated, Tisdale clay loam has a land capability classification of “3s,” with similar limiting factors.

Conejo-Urban Land Complex (127)

This map unit consists of approximately 45 percent Conejo loam, and similar soils; 45 percent urban land; and 10 percent minor components. The Conejo-Urban Land complex is a well-drained loam at a moderate depth over a hardpan. As described above, Conejo loam has a land capability classification of “4c” when not irrigated and “1” when irrigated, and supports Prime Farmland. Urban land has a land capability classification of “8s” and does not have an alternate classification for irrigation.

Garretson Variant Loam (131)

This map unit consists of approximately 85 percent Garretson variant loam and similar soils, and 15 percent minor components. The Garretson variant loam is a well-drained loam soil at a moderate depth in floodplains. Garretson variant loam has a land capability classification of “4c” when not irrigated, with shallow depth, drought, or stony composition serving as limiting factors. When irrigated, the soil type has a land capability classification of “1” which supports Prime Farmland.

Williamson Act Contract Lands

The California Land Conservation Act of 1965, also known as the Williamson Act, recognizes the importance of agricultural land and includes provisions to protect and ensure the orderly conversion of agricultural land. The Act allows property owners to enter into contracts with the County through which they commit to not developing the subject property in exchange for a guarantee that the property will be taxed at agricultural values. Requirements for qualification and

¹⁴ Natural Resource Conservation Service, 2016. Web Soil Survey; Land Capability Classification – Sutter County, California; Version 13, Survey Area Data. September 12, 2016. Available: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed March 22, 2017.

participation in the Williamson Act program are discussed in greater detail below in Section 3.2.2, Regulatory Setting.

There are no parcels subject to a Williamson Act contract within the BSMP plan area.

Forestry Setting

The BSMP area and surrounding areas are a mix of developed and rural agricultural land uses. There are no forested lands or lands being used for the harvest, production, or processing of timber or related products within, or in the vicinity of the plan area.

Appendix G of the State CEQA Guidelines defines forestland as land that can support 10 percent native tree cover and woodland vegetation of any species – including hardwoods – under natural conditions, and that allows for management of one or more forest resource – including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation – other public benefits (California Public Resources Code 12220[g]). In addition, the BSMP and off-site improvement areas are not zoned as forestland, timberland, or a Timberland Production Zone. Implementing the BSMP and off-site improvements would not conflict with existing zoning for, or cause rezoning of, forestry resources or result in conversion of forest land to non-forest use. Because there are no forestry resources present in the plan area, this issue is not addressed further in this EIR.

3.2.2 Regulatory Framework

Federal

There are no federal regulations that pertain to agricultural and forestry resources that are applicable to the proposed project.

State

Williamson Act

The California Land Conservation Act of 1965 (Government Code Section 51200), also known as the Williamson Act, recognizes the importance of agricultural land as an economic resource. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive reduced property tax assessments because they are based upon farming and open space uses as opposed to full market value.

Williamson Act contracts remain in effect for 10 years. Contracts are automatically renewed every 10 years, unless the property owner files for a notice of nonrenewal with the County. The contracts may not be cancelled, except for a limited number of public purposes and a cancellation fee could be assessed. The filing of a notice of nonrenewal triggers a nine-year dissolution period on the contract. When Williamson Act contract lands are annexed to a city, that city assumes the administration of the contract, which typically remains in force until it is cancelled or expires.

Within the BSMP plan area there are no parcels currently subject to a Williamson Act contract. However, it is possible that an agricultural property owner within the plan area could enter into a Williamson Act contract with the County prior to proposed annexation of the plan area to the City of Yuba City.

Right to Farm

California law provides that an agricultural activity which has been in operation for three years or more cannot become a nuisance due to changed circumstances, including new residential development, which occurs near the farming operation provided that the farm was not a nuisance when it began. This provision is codified in Section 3482.5 of the Civil Code, and supersedes contrary local ordinances and regulations. Also under state law, any homes that are sold within one mile of land designated on the County's "Important Farmland Map" must contain a deed disclosure notifying the purchaser of the limitations on nuisance claims provided by the right to farm law (Civil Code Sec 1103.4).

Public Resources Code (CEQA) Section 21060.1

Under CEQA agricultural land is defined as follows:

- a. "Agricultural land" means prime farmland, farmland of statewide importance, or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California.
- b. In those areas of the state where lands have not been surveyed for the classifications specified by subdivision (a), "agricultural land" means land that meets the requirements of "prime agricultural land" as defined in paragraph (1), (2), (3), or (4) of subdivision (c) of Section 51201 of the Government Code. (Public Resources Code (PRC) Section 21060.1.)

The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California using USDA inventory and monitoring criteria.

Local

The BSMP area is currently in unincorporated Sutter County and under jurisdiction of its General Plan goals, policies, and ordinances. As a result of the implementation of the BSMP, this area would be annexed into the City of Yuba City and development resulting from plan implementation must be found to be substantially compliant with its General Plan goals, policies, and ordinances. Although within the City, adjacent areas to the west and south would remain unincorporated; therefore, BSMP development would still need to consider the County's goals, policies, and ordinances at those adjacent areas. The following presents those goals, policies, and ordinances of both the Yuba City General Plan and the Sutter County General Plan that address a project's effect to agricultural and forestry resources.

Sutter County LAFCo

Sutter County LAFCo is responsible for consideration of the proposed sphere of influence amendment (SOIA) and annexation for the BSMP area and will use this EIR during its review of the proposed action. Sutter County LAFCo has adopted a comprehensive list of guidelines and policies to implement its stated objectives; some policies are intended to provide guidance to the Commission and are not directly applicable to actions by local jurisdictions.

As required by Government Code 56668, one of the factors Sutter LAFCo must consider when reviewing petitions for a change in governmental boundary or status is the effect of the proposal on maintaining the physical and economic integrity of agricultural lands.¹⁵ While there are no specific LAFCo policies relating to agricultural and/or forestry resources, LAFCo consideration will include the above-referenced considerations for maintaining the integrity of agricultural lands and all other impacts disclosed in this EIR.

City of Yuba City General Plan

The following guiding and implementing policies from the Yuba City General Plan are relevant to agricultural resources or forestry:

Guiding Policy 3.4-G-1 Maintain a well-defined compact urban form, with a defined urban growth boundary and urban development intensities on land designated for urban uses.

Implementing Policy

3.4-I-4 Support the County's efforts to maintain viable agricultural uses surrounding the City in areas outside the proposed Urban Growth Boundary.

Guiding Policy 4.2-G-1 Establish a clear distinction between the urban growth area and the surrounding rural and agricultural land.

Implementing Policies

4.2-I-2 Create a "soft" transition at the urban/agricultural edge by appropriate landscape, with large canopy trees that are visually compatible with schools.

4.2-I-3 Maintain views into the agricultural land on the rural side of the roadways by:

- Not planting within the right-of-way, trees spaced farther, and
- Designating a minimum of 6 feet of space in the right-of-way for a curb and gutter on the rural side of the road.

Guiding Policy 8.2-G-1 Promote preservation of agriculture outside of the urban growth area.

¹⁵ Sutter County Local Agency Formation Commission, 2016. *Rules of Procedures Manual; Pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000*. As amended August 25, 2016.

Implementing Policies

- 8.2-I-1 Work with the County to preserve agricultural uses in areas outside the Urban Growth Boundary (UGB) and within greenbelts established around the exterior of the UGB.
- The City should work with Sutter County to encourage the continuation of farming activities outside the City's and Urban Growth Boundary. Programs such as conservation easements and Williamson Act contracts should be pursued.*
- 8.2-I-2 Facilitate the continuance of agricultural activities within the City's urban growth area until the land is needed to accommodate population and employment growth. During this interim, minimize conflicts between agricultural uses and urban/suburban uses through site design techniques (not necessarily structural barriers).
- 8.2-I-3 Require property developers adjacent to sites where agricultural uses are being conducted to inform subsequent buyers of potential continued agricultural production and the lawful use of agricultural chemicals, including pesticides and fertilizers.
- 8.2-I-6 Work with government agencies and non-profit land trusts to assist owners of undeveloped lands (sufficient in size to allow continued agricultural uses) to remain in agricultural open space on the perimeter of the urban growth area.
- Potential programs may include purchase of conservation easements or creation of agricultural land trusts.*

The BSMP would support the County's efforts to maintain viable agricultural uses surrounding the City in areas outside the proposed Urban Growth Boundary, through the establishment of urban edge roadways along areas where the plan area borders agricultural uses. A clear distinction between the urban growth area and the surrounding rural and agricultural land would be provided through extended landscape buffering, sound walls, and other buffering elements that would create a "soft" transition at the urban/agricultural edge. Urban edge roadways would maintain views into the agricultural land on the rural side of the roadways by both planting within the right-of-way and designating space in the right-of-way for a curb and gutter on the rural side of the road. For the above reasons, BSMP borders with neighboring agricultural uses would be consistent with City of Yuba City General Plan Policy.

As discussed later in Section 3.2.3 Analysis, Impacts, and Mitigation, the City would need to work with the County to preserve agricultural uses in areas outside the City's SOI. The City would need to work with Sutter County to encourage the continuation of farming activities outside the City's SOI. The City would facilitate the continuance of agricultural activities within the City's urban growth area until the land is needed to accommodate population and employment growth. During this interim, the City would make efforts to minimize conflicts between agricultural uses and urban/suburban uses through site design techniques and right-to-farm notification. More specifically, the City would require property developers adjacent to sites where agricultural uses are being conducted to inform subsequent buyers of potential continued agricultural production and the lawful use of agricultural chemicals, including pesticides and

fertilizers. Finally, the City would work with government agencies and non-profit land trusts to assist owners of undeveloped lands (sufficient in size to allow continued agricultural uses) to remain in agricultural open space on the perimeter of the urban growth area. Potential programs may include purchase of conservation easements or creation of agricultural land trusts. If the above measures were successfully implemented, the BSMP would be consistent with City of Yuba City General Plan policies, as they pertain to agricultural resources.

Sutter County General Plan

The following guiding policies and policies from the Sutter County General Plan are relevant to agricultural resources or forestry:

Goal AG 1 Preserve and protect high-quality agricultural lands for long-term agricultural production.

Policies

AG 1.13 **Cooperation with Other Agencies.** Coordinate with the cities, the Local Agency Formation Commission (LAFCo), local service providers, and the relevant agencies on joint mechanisms to preserve agricultural lands and limit urban encroachment and the extension of urban services and infrastructure into agricultural areas. (AG 1-C)

AG 2.4 **Coordination with Cities.** Coordinate with the cities to encourage that new development in the cities mitigates impacts upon unincorporated agricultural uses and operations including the provision of right to farm notifications and buffering on city development projects. (AG 1-C)

Sutter County Zoning Code

Article 19 of the County’s zoning code requires the inclusion of permanent agricultural buffers “to provide for the long-term viability of agricultural operations and to minimize potential conflicts between adjacent agricultural and new, non-agricultural development and uses.” A 168-foot buffer must be located on non-agricultural land where it is adjacent to agricultural properties.

3.2.3 Analysis, Impacts, and Mitigation

Significance Criteria

The significance criteria for this analysis were developed from questions presented in Appendix G of the State CEQA Guidelines and based on the professional judgement of the City of Yuba City and its consultants. The proposed plan would result in a significant impact if it would:

- Result in conversion of Important Farmland to non-agricultural use;
- Conflict with a Williamson Act contract;
- Convert forest land to non-forest use;
- Conflict with zoning for forest land or timber land; or
- Indirectly result in the conversion of farmland to non-agricultural use.

Methodology and Assumptions

As noted above, Important Farmland is defined under CEQA as “prime farmland, farmland of statewide importance, or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California” (PRC Section 21060.1). Therefore, loss or conversion of these lands would be a loss of Important Farmland and result in a significant impact under CEQA. The FMMP was compared with project maps to determine the types of farmland that could be affected by the proposed project. Figure 3.2-2 shows the existing FMMP classifications for the BSMP area.

Issues Not Discussed in Impacts

- **Convert forest land to non-forest use.** The plan area does not include any land, and is not adjacent to any land, that is active forest land or timberland used for timber harvest or production, processing, or support of harvested timber. Therefore, project implementation would not conflict with zoning for forest land or timberland; this issue is not evaluated further in this EIR.
- **Conflict with zoning for forest land or timberland.** The plan area does not include any land, and is not adjacent to any land, that is zoned as forest land or timberland. Therefore, project implementation would not conflict with zoning for forest land or timberland; this issue is not evaluated further in this EIR.
- **Conflict with zoning for agricultural land or with Williamson Act contracts.** Within the plan area, there are no parcels currently under Williamson Act contract. The project includes a change to the zoning as part of the actions, ensuring that the future proposed uses are consistent with the underlying zoning. Therefore, there would be no conflict; this issue is not evaluated further in this EIR.

Impacts and Mitigation Measures

Impact 3.2-1: The proposed BSMP would result in conversion of Important Farmland to non-agricultural use.

As described above, the plan area includes 97.5 acres of Prime Farmland and 483.5 acres of Farmland of Statewide Importance. Together, these two categories comprise 581 acres of Important Farmland. Implementation of the proposed plan would convert all 581 acres of Important Farmland to non-agricultural use. Bordering Sutter County land uses also include Prime Farmland and Farmland of Statewide Importance, immediately south and west of the plan area.

Development of the proposed project would result in the loss of Prime Farmland and Farmland of Statewide Importance. As noted above, implementation of the BSMP would result in the permanent loss of approximately 581 acres of land designated as Prime Farmland and Farmland of Statewide Importance. Adoption of the BSMP would not directly and immediately convert this land to non-agricultural use, but it would facilitate future development of the project site and cause the eventual loss of this farmland as the project is built out.

During the City's 2004 General Plan update, the City determined that there was no feasible mitigation for the conversion of agricultural land to non-agricultural uses outside of those outlined in the General Plan. At the time, the City evaluated the loss of farmland within the City's Sphere of Influence and determined the loss of agricultural land was a significant and unavoidable impact.

While it is acknowledged that the BSMP area was not considered given that it is located outside of the City's SOI, the loss of farmland was discussed as part of the 2004 General Plan process that resulted in numerous policies designed to reduce the impact of converting agricultural lands to non-agricultural uses. Given their underlying goal of protecting productive agricultural land, they provide a foundation the BSMP and for protecting agricultural land proximate to the BSMP while also attempting to minimize the premature conversion or disinvestment of farmland where future growth is anticipated but development may not occur for several years.

As noted above, while the BSMP was not discussed during the 2004 General Plan process, it was contemplated for possible Yuba City SOI expansion as part of Sutter County's 2030 General Plan process in 2011. Through discussions between the City and the County, it was acknowledged that the BSMP area was appropriate for urban type development. This was memorialized on Figure 1-3 of the Sutter County General Plan (SCGP), which identifies the area as "Yuba City Possible Future SOI." Even more so, the SCGP anticipated the BSMP developing with urban uses per the following:

South of Yuba City's SOI, the proposed General Plan proposes estate residential, low density residential, commercial, and some industrial, and agriculture uses near Highway 99. These low density uses would provide a transition from the single family development within the city limits to the north to the proposed commercial and industrial uses to the south.¹⁶

Thus, should the area not develop in accordance with the land use designations per the BSMP, the SCGP contemplates the area being developed with rural estate type developments at densities significantly lower than prescribed by the BSMP. Rural estate residences consume large quantities of land and do not provide housing for the masses. Rather, they are typically too small for efficient agricultural production or urban development. In addition, rural residences interrupt efficient urban development patterns given that development often leapfrogs rural parcel creating rural enclaves. Moreover, the rural residencies would not reduce the likelihood or the premature conversion of agricultural land to urban uses, rather it would result in inefficient land use patterns given that the area is not, nor would it be, served by urban services including community sewer and/or water systems. Based on rural development patterns and to accommodate private water wells and septic systems, parcels would likely range between 1-2.5 acres in area and would undoubtedly result in a greater number of acres being converted to non-agricultural uses while resulting in less residential units.

¹⁶ Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011. pp. 4-17.

The City has determined that there are no feasible mitigation measures to address the conversion of agricultural land to developed uses other than to prevent development from occurring altogether. While the BSMP is located outside of the City's SOI, it is contemplated for conversion as part of the SCGP, albeit to densities less than what is envisioned as part of the BSMP.

With that said, the City is committed to policies designed to support the County's efforts to maintain viable agricultural areas. For example, Implementing Policy 8.1-I-1 requires the City to coordinate with Sutter County to create a greenway or open space buffer around the City's urban growth area to preserve open space. Implementing Policy 8.2-I-1 requires the City to work with the County to preserve agricultural uses in areas outside of the SOI and Implementing Policy 8.2-I-2 requires the City to facilitate the continuance of agricultural activities within the City's SOI until the land is needed to accommodate population and employment growth. Implementing Policy 8.2-I-6 requires the City to work with other Government agencies or non-profit groups to assist landowners to keep their land in agriculture. As noted above, approval of this project would not immediately convert agricultural land to non-agricultural uses. It is anticipated that as the land is sold to developers it would be converted. However, due to the current economic environment it is anticipated that development may proceed slower than originally anticipated. The Yuba City General Plan includes policies that encourage the continuation of existing farming operations as discussed below.

- Policy 8.2-I-2 requires the City to facilitate the continuance of agricultural activities within the City's urban growth area until the land is needed to accommodate population and employment growth. Under this policy, at the discretion of existing land owners, agricultural activity could continue for the foreseeable future for parcels that are not proposed for development.
- Policy 8.2-I-3 requires property developers adjacent to sites where agricultural uses are being conducted to inform subsequent buyers of ongoing agricultural operations including the lawful use of agricultural chemicals, including pesticides and fertilizers. Developers within and adjacent to the BSMP would be required to adhere to this policy, which would lessen potential land use conflicts where development occurs adjacent to existing agriculture. Policy 8.2-I-3 would apply to development adjacent to ongoing agricultural operations within the plan area as well as to development along South Walton Avenue and Stewart Road, which would border agricultural land uses.
- Policies 8.2-I-1 and 8.2-I-6 require the City to work with Sutter County and other government agencies to preserve agricultural uses in areas outside of the City's SOI.
- The Sutter County General Plan has a complementary policy (LU 5-A) requiring the County to enter into a memorandum of understanding (MOU) with the City of Yuba City prior to supporting the City's expanded SOI/annexation areas. The MOU would address the mitigation of environmental impacts, including impacts to adjacent agricultural operations in the County.

The mitigating effect of these policies on potential impacts to Important Farmland would be the easing of development pressure for land owners who wish to continue agricultural activities in perpetuity. However, these policies would not prevent the conversion of farmland to the urban uses consistent with the proposed BSMP.

While some parcels within the plan area may not be converted non-agricultural uses, the City assumes that all parcels would be developed for non-agricultural uses, consistent with the proposed BSMP. Therefore, implementation of the BSMP would convert 581 acres of Important Farmland to non-agricultural uses, thus the impact to Important Farmland would be **significant**.

The City has determined that there are no feasible mitigation measures beyond compliance with the policies contained in the General Plan available to help reduce the significance of the impact of converting Important Farmland to non-agricultural use. Development of the BSMP provides economic, legal, social, technological, and other considerations which make infeasible other potential mitigation measures.

No feasible mitigation available. Therefore, the impact to Important Farmland would remain **significant and unavoidable**.

Mitigation Measure

None feasible.

Impact 3.2-2: The proposed BSMP would involve other changes in the existing environment which, due to their location or nature, could result in indirect conversion of Farmland to non-agricultural use.

The proposed plan would not indirectly result in the conversion of agricultural land. While implementation of the proposed plan would place new residents near existing farmlands and agricultural uses, the proposed plan would allow for continued agricultural operations within the plan area, as well as along the borders of the plan area. Further, while new growth in the area could lead to increased property values within the plan area, these increased property values would not substantially increase values for nearby land, which would require changes to entitlements and other such obstacles to development. In addition, some properties may continue to be or can become subject to a Williamson Act contract, further limiting potential development of such sites. While proximity to development may create an incentive to develop additional land adjacent to or in the vicinity of the plan area, any area outside the boundary of the plan area would have to be fully rezoned, annexed, and entitled to have similarly higher property values, based on market demand for development potential.

Following build out of the proposed BSMP, parcels that lie at the perimeter of the plan area would generally be uses that would provide transitions between urban uses within the plan area and agricultural lands adjacent to the plan area to the south and east. Development pursuant to the proposed BSMP along the south and eastern perimeters of the plan area would be required to comply with the Yuba City General Plan policies that foster cooperation with Sutter County for the preservation of agricultural uses outside the urban growth area (Policy 8.2-I-1). BSMP development along the perimeter would be required to inform subsequent buyers of potential continued agricultural production, as described in Policy 8.2-I-3. Development would be required

to create a “soft” transition at the urban/agricultural edge by appropriate landscape (Policy 4.2-I-2). The agricultural buffer required by Sutter County of 168 feet would provide a buffer which would reduce the potential for conflicts between the new urban development and the existing agricultural uses.

The proposed BSMP would direct development in such a way as to not extend infrastructure to areas beyond the identified growth boundary, other than to connect with existing utilities. As further discussed in Section 3.15, Utilities and Service Systems, utilities infrastructure would not be sized to accommodate development outside of the plan area. Therefore, buildout of the BSMP would not facilitate the indirect loss of additional farmland outside of the plan area. This impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

Cumulative Context

The cumulative context for agricultural impacts is Sutter County and Yuba County, which is referred to as the “Region” for the remainder of Section 3.2. The Feather River forms the common boundary between Sutter and Yuba counties. The location of the BSMP area adjacent to the Feather River puts it in the central portion of the Region. Combined, the two counties encompass approximately 558,782 acres of agricultural land, of which 200,089 acres are designated as Prime Farmland, 114,772 acres are designated as Farmland of Statewide Importance, and 49,086 acres are designated as Unique Farmland.¹⁷⁻¹⁸⁻¹⁹⁻²⁰ Between 2012 and 2014, the Region incurred a net loss of 1,359 acres of Important Farmland.²¹⁻²² **Tables 3.2-3, 3.2-4, 3.2-5, 3.2-6**, and subsequent discussion provides a summary of cumulative changes to Important Farmland within the Region and relative comparison of BSMP impacts within the project cumulative context.

¹⁷ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Sutter County Important Farmland 2014 Map. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.

¹⁸ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Sutter County Important Farmland 2014 Map. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.

¹⁹ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Land Use Conversion Table 2012-2014 (A-47); Yuba County. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.

²⁰ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Yuba County Important Farmland 2014 Map. Available: <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx>. Accessed April 4, 2017.

²¹ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Sutter County Important Farmland 2014 Map. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.

²² California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Land Use Conversion Table 2012-2014 (A-47); Yuba County. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.

**TABLE 3.2-3
CUMULATIVE IMPORTANT FARMLAND CONTEXT FOR SUTTER AND YUBA COUNTIES (REGION)**

	Sutter County 2012	Sutter County 2014	Sutter County Net Change	Yuba County 2012	Yuba County 2014	Yuba County Net Change	Combined Total 2012	Combined Total 2014	Combined Net Change
Prime Farmland	161,500	161,019	-481	39,948	39,070	-878	201,448	200,089	-1,359
Farmland of Statewide Importance	104,576	104,003	-573	10,853	10,769	-84	115,429	114,772	-657
Unique Farmland	16,036	16,087	51	32,396	32,999	603	48,432	49,086	654
Farmland of Local Importance	0	0	0	0	0	0	0	0	0
Important Farmland Subtotal	282,112	281,109	-1,003	83,197	82,838	-359	365,309	363,947	-1,362
Total Area	389,312	389,312	n/a	412,018	412,018	n/a	801,330	801,330	n/a

SOURCES: California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program (DOC), 2014. Sutter County Important Farmland 2014 Map. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.; DOC, 2014. Land Use Conversion Table 2012-2014 (A-47); Yuba County. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017; ESA 2017.

**TABLE 3.2-4
SUTTER COUNTY 2030 GENERAL PLAN IMPORTANT FARMLAND CUMULATIVE CONTEXT**

	GP Baseline at Year 2006 ¹	Baseline at Year 2014	Net Change at Year 2014	Projected Change from GP Baseline at Year 2030	Unfulfilled Projected Change at Year 2014
Prime Farmland	165,165	161,019	-4,146	2,960	-1,186
Farmland of Statewide Importance	105,979	104,003	-1,976	6,666	4,690
Unique Farmland	19,049	16,087	-2,962	0	-2,962
Farmland of Local Importance	0	0	0	0	0
Important Farmland Subtotal	290,193	281,109	-9,084	9,626	542

NOTES:

1 GP Baseline = General Plan Baseline

SOURCES: California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program (DOC), 2014. Sutter County Important Farmland 2014 Map. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.; DOC, 2014. Land Use Conversion Table 2012-2014 (A-47); Yuba County. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017; ESA 2017; Sutter County, 2010. *Sutter County General Plan Draft Environmental Impact Report*. Certified February 2011.

**TABLE 3.2-5
 YUBA COUNTY 2030 GENERAL PLAN IMPORTANT FARMLAND CUMULATIVE CONTEXT**

	GP Baseline at Year 2008	Baseline at Year 2014	Net Change at Year 2014	Projected Change from GP Baseline at Year 2030	Unfulfilled Projected Change at Year 2014
Prime Farmland	41,369	39,070	-2,299	3,900	1,601
Farmland of Statewide Importance	10,975	10,769	-206	170	-36
Unique Farmland	32,605	32,999	394	0	394
Farmland of Local Importance	0	0	0	0	0
Important Farmland Subtotal	84,949	82,838	-2,111	4,070	1,959

NOTES:

1 GP Baseline = General Plan Baseline

SOURCES: California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program (DOC), 2014. Sutter County Important Farmland 2014 Map. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.; DOC, 2014. Land Use Conversion Table 2012-2014 (A-47); Yuba County. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017; ESA 2017. Yuba County, 2011.

**TABLE 3.2-6
 CUMULATIVE REGION COMPARISON TO BSMP IMPACTS
 (IN ACRES)**

	Cumulative Base	Projected Future Loss of Important Farmland	BSMP Conversion of Important Farmland	% of Projected Loss of Important Farmland	Cumulative Projects¹	% of Projected Loss of Farmland for Region
Prime Farmland	200,089	415	97.5	23%	51	12%
Farmland of Statewide Importance	114,772	4,654	483.5	10%	1,301	28%
Unique Farmland ²	49,086	-2,568	0	0%	914	-36%
Farmland of Local Importance	0	0	0	n/a	0	n/a
Important Farmland Subtotal	363,947	0	581	n/a	2,266	
Total Area Inventoried	801,330		741.6			

NOTES:

1 Cumulative Projects include the Lincoln East Specific Plan, El Margarita Master Plan, and Magnolia Ranch Specific Plan.

2 Negative numbers represent a gain in Unique Farmland.

SOURCES: California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program (DOC), 2014. Sutter County Important Farmland 2014 Map. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.; DOC, 2014. Land Use Conversion Table 2012-2014 (A-47); Yuba County. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017; ESA 2017; Sutter County, 2010. *Sutter County General Plan Draft Environmental Impact Report*. Certified February 2011.; Yuba County, 2011.

Sutter County

The Sutter County 2030 General Plan EIR (SCH No. 2010032074) analyzed impacts to agricultural resources under a 2030 full buildout scenario. Impacts to Important Farmland were evaluated against 2006 DOC data, which designated 290,193 acres of Sutter County as Important Farmland, including 165,165 acres of Prime Farmland and 105,979 acres of Farmland of Statewide Importance.²³ The Sutter County 2030 General Plan EIR determined that full buildout of the 2030 General Plan could result in conversion of 2,960 acres of Prime Farmland and 6,666 acres of Farmland of Statewide Importance to non-agricultural uses. As described in Table 3.2-4, relative to 2014 FMMP data, Sutter County has incurred the loss of 1,186 acres of Prime Farmland in addition to the 2,960 acres forecasted in the 2030 General Plan EIR. Further, the County has lost 1,976 acres of the anticipated 6,666-acre decline in Farmland of Statewide Importance within the same 8-year period.

City of Yuba City

The following specific plans are included in the Yuba City SOI or are within City limits, but have not been developed. Thus, conversion to non-agricultural uses is planned but has not occurred, and, therefore, has not been recorded as lost in the most recent DOC data for Sutter County.

Lincoln East Specific Plan

The Lincoln East Specific Plan (LESP) proposed development of approximately 1,160 acres of mixed-use community, within the City of Yuba City SOI. The LESP area is approximately 0.6 mile west of the BSMP area. The site consists of fruit and nut orchards and low density residential development. Buildout of the LESP would eliminate approximately 911 acres of Farmland of Statewide Importance, which was included in future development assumptions for the Sutter County 2030 General Plan. As of publication of this EIR, the planned conversion of Farmland of Statewide Importance to non-agricultural uses in the LESP has not occurred. These areas remain designated as Farmland of Statewide Importance by DOC FMMP data.²⁴ Thus, conversion of LESP area Important Farmland is included in the cumulative context.

Administrative Draft El Margarita Master Plan

The Administrative Draft El Margarita Master Plan (EMMP) provides guidance for the development of approximately 650 acres, largely within City limits. The EMMP is north-adjacent to the LESP area, approximately 2.1 miles northwest of the BSMP area. Approximately 60 percent of the EMMP area is being used for agricultural uses, approximately 390 acres of which are designated as Farmland of Statewide Importance.²⁵ Development of the EMMP was also included in the future development assumptions for the Sutter County 2030 General Plan.

²³ Sutter County, 2010. *Sutter County General Plan Draft Environmental Impact Report*. Certified February 2011.

²⁴ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Sutter County Important Farmland 2014 Map. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.

²⁵ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Sutter County Important Farmland 2014 Map. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.

Yuba County

The Yuba County 2030 General Plan EIR (SCH No. 2010062054) analysis used 2008 FMMP data as a baseline for impacts to Important Farmland. In 2008, there were 84,949 acres of Important Farmland in Yuba County, including 41,369 acres of Prime Farmland and 10,975 acres of Farmland of Statewide Importance. Under the 2030 General Plan, more than 50,000 acres of agricultural land could be converted to non-agricultural uses, including approximately 3,900 acres of Prime Farmland, 170 acres of Farmland of Statewide Importance, 1,600 acres of Unique Farmland, and 45,000 acres of grazing land. Between 2008 and 2014, Yuba County has incurred a loss of 2,299 acres of Prime Farmland out of the 3,900-acre loss projected in the 2030 General Plan EIR. For the same period of time, Yuba County lost 36 more acres of Farmland of Statewide Importance than were projected for the 2030 planning horizon, for a total loss of 206 acres.

Impact 3.2-3: Implementation of the proposed project would contribute to cumulative conversion of Important Farmland to non-agricultural use.

As described in Section 3.2.1, Environmental Setting, agriculture has long been a part of Sutter County's economy. Agricultural land makes up approximately 86 percent of Sutter County's Land Area.²⁶ Up to 72 percent of the of the County's land area is designated as Important Farmland. Neighboring Yuba County, to the east, is comprised of 54 percent agricultural land, with 20 percent of its total land area designated as Important Farmland.²⁷ All of the agricultural land and land designated as Important Farmland is concentrated on the western side of Yuba County, which borders Sutter County.

The Impact 3.2-1 analysis, above, describes that the proposed plan would convert approximately 581 acres of Important Farmland to non-agricultural uses, of which 97.5 acres are Prime Farmland and 483.5 acres are Farmland of Statewide Importance. Adjusting for baseline versus existing (2014) acreage of Prime Farmland, the Region is projected to incur the loss of an additional 415 acres of Prime Farmland (see Table 3.2-6). Buildout of the BSMP would account for approximately 23 percent of that projected future impact. Pertaining to Farmland of Statewide Importance, the BSMP would account for 10 percent of projected future conversion to non-agricultural uses within the Region. Together, the loss of Prime Farmland and Farmland of Statewide Importance from implementation of the BSMP would represent a substantial portion of the projected losses to Important Farmland in the Region. Therefore, the BSMP's contributions to the loss of Important Farmland in the region would be **cumulatively considerable**.

As described in the cumulative context above, both counties are experiencing, and have projected, an overall loss of Important Farmland in their respective General Plans, which is also documented by ongoing DOC data reporting. Because the relative magnitude of the proposed plan's

²⁶ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Table A-42, Sutter County, 2012-2014 Land Use Conversion Table. Available: www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2012-2014/conversion_tables/sutcon14.xls. Accessed March 22, 2017.

²⁷ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Land Use Conversion Table 2012-2014 (A-47); Yuba County. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/Yuba.aspx. Accessed April 4, 2017.

contributions would be cumulatively considerable, the proposed plan's impact would be **cumulatively potentially significant**.

The City has determined that there are no feasible mitigation measures beyond compliance with the policies contained in the General Plan available to help reduce the significance of the impact of converting Important Farmland to non-agricultural use. Development of the BSMP provides economic, legal, social, technological, and other considerations which make infeasible other potential mitigation measures.

No feasible mitigation is available. Therefore, the contribution of the project to a cumulatively considerable impact to Important Farmland would remain **significant and unavoidable**.

Therefore, the cumulative impact to Important Farmland would be **cumulatively significant and unavoidable**.

Mitigation Measure

None feasible.

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3.3 Air Quality

This section addresses the potential impacts of the proposed BSMP project on ambient air quality and its potential to expose people to unhealthful pollutant concentrations. Where appropriate, this section also identifies potentially feasible mitigation measures to reduce the severity of identified air quality impacts of the proposed BSMP.

No comments were received on the notice of preparation related to air quality. The analysis included in this section was developed based on project-specific construction and operational features, and data provided in the City of Yuba City General Plan,¹ Yuba City General Plan Final Environmental Impact Report (SCH No. 2001072105),² Sutter County General Plan,³ traffic information provided by the EIR traffic consultant and reported in section 3.14,⁴ and Feather River Air Quality Management District's (FRAQMD) *CEQA Planning Guidelines*.⁵

3.3.1 Environmental Setting

General Climate and Meteorology

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions (for example, wind speed, wind direction, and air temperature) in combination with local surface topography (for example, geographic features such as mountains and valleys), determine how air pollutant emissions affect local air quality.

The BSMP site is located in Sutter County, within the Sacramento Valley Air Basin (SVAB) and within the jurisdictional boundaries of the FRAQMD. Data from the closest climate monitoring station—Western Regional Climate Center's Marysville Weather Station Office (COOPID 045385)—was used to characterize climate conditions in the BSMP area. Over the period of record (1897-2007), in the BSMP area the average annual temperatures range from a low of 37.73 to a high of 96.3 degrees Fahrenheit (F). Summer (July) high and low temperatures were 96.3°F and 61.3°F, respectively. The average winter (January) high and low temperatures were 54.1°F and 37.7°F, respectively. Rainfall varies widely from year to year, with an annual average of 20.96 inches.⁶ Wind patterns in the BSMP area arise primarily from the south-southeast.⁷

¹ City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004.

² City of Yuba City, 2004. *Yuba City General Plan Final Environmental Impact Report (SCH No. 2001072105)*. February 2004.

³ Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

⁴ Fehr & Peers, 2016. BSMP Traffic Report. July 2017.

⁵ Feather River Air Quality Management District, CEQA Planning. Available: <https://www.fraqmd.org/ceqa-planning>. Accessed May 23, 2017.

⁶ Western Regional Climate Center, 2017. Marysville WST, California (045385). Available: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5385>. Accessed August 1, 2017.

⁷ Western Regional Climate Center, 2017. Average Wind Direction. <https://wrcc.dri.edu/climatedata/climtables/westwinddir/>. Accessed August 1, 2017.

Existing Air Quality and Sensitive Receptors

Criteria Air Pollutants

As required by the federal Clean Air Act (FCAA) passed in 1970, and later in the California Clean Air Act (CCAA) passed in 1988, the U.S. Environmental Protection Agency (USEPA) has identified six criteria air pollutants that are pervasive in urban environments, and for which state and national health-based ambient air quality standards have been established. The USEPA calls these pollutants “criteria air pollutants” because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels.

Ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM), and lead are the six criteria air pollutants. Notably, particulate matter is measured in two size ranges: PM₁₀ for particles less than 10 microns in diameter, and PM_{2.5} for particles less than 2.5 microns in diameter.

Currently, the monitoring station that collects data representative of the BSMP site is located in the City of Yuba on Almond Street approximately 3 miles north of the project site. **Table 3.3-1** presents a three-year summary of air pollutant concentration data collected at these monitoring stations for ozone, NO₂, PM₁₀, PM_{2.5} and CO, as well as the number of days the applicable standards were exceeded during the given year.

Ozone

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG)⁸ and nitrogen oxides (NO_x). The main sources of ROG and NO_x, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.

⁸ ROG is also referred to as volatile organic compounds (VOC) by some regulating agencies.

**TABLE 3.3-1
AIR QUALITY DATA SUMMARY (2014-2016) FOR THE BSMP AREA**

Pollutant	Monitoring Data by Year		
	2014	2015	2016
Ozone – Yuba City-Almond Street			
Highest 1 Hour Average (ppm) ^b	0.103	0.080	0.075
Days over State Standard (0.09 ppm) ^a	1	0	0
Highest 8 Hour Average (ppm) ^b	0.088	0.074	0.065
Days over National Standard (0.075 ppm) ^a	1	1	0
Days over State Standard (0.075 ppm) ^a	1	1	0
Nitrogen Dioxide (NO₂) – Yuba City-Almond Street			
Highest 1 Hour Concentration (µg/m ³) ^b	49	43	40
Days over National Standard (188 µg/m ³) ^a	0	0	0
Days over State Standard (399 µg/m ³) ^a	0	0	0
Annual Average Concentration (µg/m ³) ^b	8	7	NA
Particulate Matter (PM₁₀) – Yuba City-Almond Street			
Highest 24 Hour Average – State/National (µg/m ³) ^b	77.6/45.1	67.2/68.2	51.7/51.4
Measured Days over National Standard (150 µg/m ³) ^{a,c}	0	0	0
Measured Days over State Standard (50 µg/m ³) ^{a,c}	8	6	0
Particulate Matter (PM_{2.5}) – Yuba City-Almond Street			
Highest 24 Hour Average (µg/m ³) ^b – National Measurement	41.8	36.1	40.1
Measured Days over National Standard (35 µg/m ³) ^{a,c}	2	1	1
State Annual Average (12 µg/m ³) ^b	NA	10.3	11.4

NOTES:

- a Generally, state standards and national standards are not to be exceeded more than once per year.
 - b ppm = parts per million; µg/m³ = micrograms per cubic meter.
 - c PM₁₀ and PM_{2.5} is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.
- Values in **bold** exceed the respective air quality standard. "NA" indicates that data is not available.

SOURCE: California Air Resources Board, 2017. Summaries of Air Quality Data, 2014-2016.
<http://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed May 23, 2017.

Respirable Particulate Matter

PM₁₀ and PM_{2.5} consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively (a micron is one-millionth of a meter). PM₁₀ and PM_{2.5} represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed

gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility.

Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than a health hazard. The remaining fraction, PM₁₀ and PM_{2.5}, are a health concern particularly at levels above the federal and state ambient air quality standards. PM_{2.5} (including diesel exhaust particles) is thought to have greater effects on health, because these particles are so small and are able to penetrate to the deepest parts of the lungs. Scientific studies have suggested links between fine particulate matter and numerous health problems including asthma, bronchitis, and acute and chronic respiratory symptoms, such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. Children are more susceptible to the health risks of PM₁₀ and PM_{2.5} because their immune and respiratory systems are still developing.

Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health.⁹

Nitrogen Dioxide

NO₂ is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO₂. Aside from its contribution to ozone formation, NO₂ can increase the risk of acute and chronic respiratory disease and reduce visibility. NO₂ may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels.

Sulfur Dioxide

SO₂ is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO₂ is also a precursor to the formation of atmospheric sulfate and particulate matter and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Lead

Leaded gasoline (phased out in the United States beginning in 1973), lead based paint (on older houses and cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects, which puts children at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was

⁹ Dockery, D. W. and C.A. Pope, III, 2006. *Health Effects of Fine Particulate Air Pollution: Lines that Connect*. Journal Air & Waste Management Association. Pp. 709–742.

eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California, focusing on general aviation airports.

Non-Criteria Air Pollutants

Toxic Air Contaminants

In addition to the criteria pollutants presented above, toxic air contaminants (TACs) are a category of environmental concern. Non-criteria air pollutants or TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different TACs.

In terms of health risks, the most volatile contaminants are diesel particulate matter, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. According to The California Almanac of Emissions and Air Quality,¹⁰ the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines. The California Air Resources Board (CARB) identified diesel particulate matter (DPM) as a toxic air contaminant in 1998, primarily based on evidence demonstrating cancer effects in humans. Public exposure to TACs can result from emissions from normal operations as well as from accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways and rail lines with diesel locomotive operations. The risk from diesel particulate matter as determined by the CARB declined from 750 in one million in 1990 to 570 in one million in 1995; by 2000, the CARB estimated the average statewide cancer risk from DPM at 540 in one million. This calculated cancer risk values from ambient air exposure can be compared against the lifetime probability of being diagnosed with cancer in the United States, from all causes, which is more than 40 percent (based on a sampling of 17 regions nationwide), or greater than 400,000 in one million, according to the National Cancer Institute.

Asbestos is a fibrous mineral, which is both naturally occurring in ultramafic rock (a rock type commonly found in California) and used as a processed component of building materials. Naturally-occurring asbestos (NOA) is often found in serpentine rock formations. Because asbestos has been proven to cause serious adverse health effects, including asbestosis and lung cancer, it is strictly regulated based on its natural widespread occurrence and its use as a building material.

¹⁰ California Air Resources Board, 2009. *California Almanac of Emissions and Air Quality - 2009 Edition*, Table 5-44 and Figure 5-12, <http://www.arb.ca.gov/aqd/almanac/almanac09/chap509.htm>.

Odorous Emissions

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Odor impacts should be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Generally, increasing the distance between the receptor and the odor source will mitigate odor impacts.

Sensitive Receptors

Air quality does not affect every individual or group in the population in the same way, and some groups are more sensitive to adverse health effects caused by exposure to air pollutants than others. Population subgroups most sensitive to the health effects of air pollutants include the elderly and the young, those with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases.

Land uses that concentrate sensitive population subgroups, such as schools, children's day care centers, hospitals, and nursing and convalescent homes, are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times are generally far shorter in parks and playgrounds than in residential locations and schools, which typically reduces overall exposure to pollutants. Residential areas are considered more sensitive to air quality conditions compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions.¹¹

Workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration (OSHA) to ensure the health and well-being of their employees. The proposed BSMP project would be built on land that currently includes rural residential land uses that would be considered sensitive receptors with respect to air

¹¹ The factors responsible for variation in exposure are also often similar to factors associated with greater susceptibility to air quality health effects. For example, poorer residents may be more likely to live in crowded substandard housing and be more likely to live near industrial or roadway sources of air pollution.

quality. These residential land uses consist of widely dispersed rural residential dwellings mostly located along Railroad Avenue, South Walton Avenue, and Stewart Road.

3.3.2 Regulatory Framework

Federal Regulations

Clean Air Act

The 1970 Federal Clean Air Act (FCAA) (last amended in 1990) required that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled in order to achieve all national ambient standards by the deadlines specified in the FCAA. These ambient air quality standards are intended to protect public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed.

Table 3.3-2 presents current national and state ambient air quality standards and provides a brief discussion of the related health effects and principal sources for each pollutant. Pursuant to the 1990 FCAA Amendments, the USEPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutant, based on whether or not the National Ambient Air Quality Standards (NAAQS) had been achieved. “Unclassified” is defined by the FCAA as any area that cannot be classified, on the basis of available information, as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant. **Table 3.3-3** shows the current attainment status of the plan area. In summary the BSMP area is nonattainment for the 8-hour ozone (Severe) and PM_{2.5} (Moderate) NAAQS and is either attainment or unclassified for the remaining criteria pollutants.

The FCAA required each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The FCAA added requirements for states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA has responsibility to review all state SIPs to determine if they conform to the mandates of the FCAA and will achieve air quality goals when implemented. If the USEPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan for the nonattainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated timeframes can result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

**TABLE 3.3-2
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES**

Pollutant	Averaging Time	State Standard	National Standard		Pollutant Health and Atmospheric Effects	Major Pollutant Sources
			Primary	Secondary		
Ozone	1 hour	0.09 ppm	---	Same as primary standard	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases (ROG) and nitrogen oxides (NO _x) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/ industrial mobile equipment.
	8 hours	0.070 ppm	0.070 ppm ³			
Carbon Monoxide	1 hour	20 ppm	35 ppm	---	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	---		
Nitrogen Dioxide	1 hour	0.18 ppm	100 ppb	---	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030 ppm	0.053 ppm	Same as primary standard		
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	---	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm	---		
	Annual Avg.	---	0.030 ppm	---		
Respirable Particulate Matter (PM ₁₀)	24 hours	50 ug/m ³	150 ug/m ³	Same as primary standard	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 ug/m ³	---			
Fine Particulate Matter (PM _{2.5})	24 hours	---	35 ug/m ³	Same as primary standard	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
	Annual Avg.	12 ug/m ³	12 ug/m ³	15 ug/m ³		
Lead	Monthly Ave.	1.5 ug/m ³	---	---	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Rolling 3-Month Ave.	---	0.15 ug/m ³	Same as primary standard		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard		Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)	Geothermal Power Plants, Petroleum Production and refining

**TABLE 3.3-2
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES**

Pollutant	Averaging Time	State Standard	National Standard		Pollutant Health and Atmospheric Effects	Major Pollutant Sources
			Primary	Secondary		
Sulfates	24 hour	25 ug/m ³	No National Standard		Breathing difficulties, aggravates asthma, reduced visibility	Produced by the reaction in the air of SO ₂ .
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard		Reduces visibility, reduced airport safety, lower real estate value, discourages tourism.	See PM _{2.5} .

NOTES:

ppm = parts per million; ug/m³ = micrograms per cubic meter.

SOURCE: California Air Resources Board, 2016. *Ambient Air Quality Standards*. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Standards last updated May 4, 2016; California Air Resources Board, 2009. *ARB Fact Sheet: Air Pollution Sources, Effects and Control*. <http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm>. Page last reviewed by CARB December 2009.

**TABLE 3.3-3
 PLAN AREA ATTAINMENT STATUS**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – one hour	No Federal Standard ¹	Nonattainment
Ozone – eight hour	Nonattainment/Severe	Nonattainment
PM ₁₀	Unclassified	Nonattainment
PM _{2.5}	Nonattainment/Moderate	Attainment
CO	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

NOTES:

1 Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications.

SOURCE: California Air Resources Board, 2017. *Area Designation Maps*. <http://www.arb.ca.gov/degis/adm/adm.htm>. page last reviewed May 23, 2017; U.S. Environmental Protection Agency, 2017. *Green Book - Current Nonattainment Counties for All Criteria Pollutants*.

Toxic Air Contaminants

TACs are regulated under both State and federal laws. Federal laws use the term “Hazardous Air Pollutants” (HAPs) to refer to the same types of compounds that are referred to as TACs under State law. Both terms encompass essentially the same compounds. The 1977 FCAA Amendments required the USEPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. These substances include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 FCAA Amendments, 189 substances are regulated as HAPs.

State Regulations

California Clean Air Act

Although the FCAA established the NAAQS, individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already adopted its own air quality standards when federal standards were established, and because of the unique meteorology in California, there is considerable diversity between the State standards and NAAQS, as shown in Table 3.3-2. California ambient standards tend to be at least as protective as NAAQS and are often more stringent.

In 1988, California passed the CCAA (California Health and Safety Code Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment, but based on state ambient air quality standards rather than the federal standards. As indicated in Table 3.3-3, the plan area in Sutter County is nonattainment for the 1-hour ozone (serious), 8-hour ozone, and PM₁₀ California ambient air quality standards and is either attainment or unclassified for the remaining criteria pollutants. The CCAA requires each air district in which state air quality standards are exceeded to prepare a plan that documents reasonable progress towards attainment.

Toxic Air Contaminants

The California Health and Safety Code defines TACs as air pollutants which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). A total of 243 substances have been designated TACs under California law; they include the 189 (federal) HAPs adopted in accordance with AB 2728. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings.

In 2000, the CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. The regulation is anticipated to result in an 80 percent decrease in statewide diesel health risk in 2020 as compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel. Subsequent regulations of diesel emission by the CARB include the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Offroad Diesel Vehicle Regulation, and the New Offroad Compression Ignition Diesel Engines and Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel powered equipment.

Despite these reduction efforts, the CARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses. In April 2005, the CARB published *Air Quality and Land Use Handbook: A Community Health Perspective*. This handbook is intended to give guidance to local governments in the siting of sensitive land uses near sources of air pollution. Recent studies have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities such as ports, rail yards and distribution centers. Specifically, the document focuses on risks from emissions of DPM, a known carcinogen, and establishes recommended siting distances of sensitive receptors. With respect to freeways, the recommendations of the report are: “Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with more than 100,000 vehicles per day or rural roads

with 50,000 vehicles/day.”¹² The CARB notes that these recommendations are advisory and should not be interpreted as defined “buffer zones,” and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary the CARB’s position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.

Local

Feather River Air Quality Management District

The FRAQMD is a bi-county District that was formed in 1991 to administer local, State, and federal air quality management programs for Yuba and Sutter counties. The mission of FRAQMD is to promote and improve the air quality of Sutter and Yuba counties through monitoring, evaluation, education, implementing control measures to reduce emissions from stationary sources, permitting and inspecting pollution sources, enforcing air quality regulations, and supporting and implementing measures to reduce emissions from motor vehicles.

FRAQMD sets forth rules and regulations aimed at improving basin-wide air quality. The following rules are applicable to the proposed BSMP project.

Rule 3.0—Visible Emissions

As provided by Section 41701 of the California Health and Safety Code, a person shall not discharge into the atmosphere from any single source of emissions whatsoever, any air contaminants for a period or periods aggregating more than three minutes in any one hour which is:

- As dark or darker in shade as that designated as No. 2 on the Ringlemen Chart, as published by the United States Bureau of Mines; or
- Of such opacity as to obscure an observers view to a degree equal to or greater than does smoke described above.

Rule 3.2—Particulate Matter Concentration.

The purpose of this rule is to limit particulate matter emissions generated by stationary sources. According to the rule, no person can discharge into the atmosphere from any source, except as allowed by Rule 3.1, particulate matter in excess of 0.3 grains per cubic foot of gas at standard conditions. If the source involves a combustion process, the concentration must be calculated to 12 percent CO_e (carbon monoxide equivalent).

Rule 3.3—Dust and Fumes.

The purpose of this rule is to limit the emissions of dust and fumes.

¹² California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005. pp. 4.

Rule 3.9—Storage and Transfer of Gasoline.

The purpose of this rule is to limit emissions of volatile organic compounds from the storage and transfer of organic liquids. This rule applies to any storage tank with a capacity of 250 gallons or greater that stores or transfers an organic liquid with a true vapor pressure of 1.5 psia (pounds per square inch absolute) or greater.

Rule 3.12—Benzene ATCM – Retail Service Stations.

According to Rule 3.12, no other person can transfer gasoline from a delivery tank equipped with a vapor recovery system into a stationary storage tank at a retail service station unless an ARB Certified Phase I or II vapor recovery system is installed on the stationary storage tank and used during the transfer.

Rule 3.15—Architectural Coatings

The purpose of this rule is to limit the quantity of VOCs in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use.

Rule 3.16—Fugitive Dust Emissions

The purpose of this rule is to reasonably regulate operations which may periodically cause fugitive dust emissions into the atmosphere. A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line, from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to:

- Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, construction of roadways, or the clearing of land;
- Application of asphalt, oil, water, or suitable chemical on dirt roads, material stockpiles, and other surfaces which can give rise to airborne dusts; and
- Other means approved by the air pollution control officer (APCO).

Rule 3.17—Wood Stove Heating

All wood-heating devices used for the first time in existing buildings and those used in all new residential and commercial building projects constructed after the effective date of this rule within the boundaries of the FRAQMD shall meet emission and performance requirements equivalent to USEPA Phase II devices as set forth in Part 60, Title 40, Subpart AAA Code of Federal Regulations, February 26, 1988.

No person shall cause or allow materials to be burned in a fireplace or wood-heating device such that the discharge of air contaminants would cause a public nuisance, pursuant to Section 41700 of the California Health and Safety Code.

No person shall sell, offer for sale, supply, install, or transfer a used wood heating device unless it meets one of the following criteria:

- It is certified by EPA as meeting the performance and emission standards as set forth in Part 60, Title 40, Subpart AAA Code of Federal Regulations, February 26, 1988.
- It is exempted from certification by the EPA.
- It is a pellet-fueled wood heater.
- It has been rendered permanently inoperable as determined by the APCD.

The APCO may issue an advisory through local communications media to voluntarily curtail the use of uncertified solid fuel appliances whenever conditions within the FRAQMD are projected to cause ambient air quality concentrations of PM₁₀ that exceed 60 micrograms per cubic meter (µg/m³). The purpose of this rule is to reasonably regulate operations which periodically may cause fugitive dust emissions into the atmosphere. A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust.

Rule 3.19—Vehicle and Mobile Equipment Coating Operations.

The purpose of this rule is to limit the emission of VOCs into the atmosphere from coatings and coating components associated with the coating of motor vehicles, mobile equipment and associated parts and components.

Rule 3.21—Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters.

This rule applies to boilers, steam generators, and process heaters having the heat input capacities greater than or equal to 1 million BTU per hour (MMBTU/hr), used in all industrial, institutional, and commercial operations.

Rule 4.1—Permit Requirements.

The following permits are required under Rule 4.1:

Authorization to Construct: Any person building, erecting, altering or replacing any article, machine, equipment or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants, shall first obtain written authorization for such construction from the APCO. An Authorization to Construct shall remain in effect for two years or until the Permit to Operate the equipment for which the application was filed is granted or denied or the application is canceled, but must be renewed annually.

Permit to Operate: Before any article, machine, equipment or other contrivance for which an Authorization to Construct has been issued, may be operated or used, a Permit to Operate shall first be obtained from the APCO. Whenever necessary and appropriate to ensure compliance with all applicable permit conditions, the APCO may issue a temporary permit to operate. The temporary permit to operate shall specify a reasonable period of time during which the equipment so permitted may be operated in order for the District to determine whether it will operate in accordance with the conditions specified in the Authority to Construct.

Federal Operating Permit: A source subject to Rule 10.3 shall obtain a Federal Operating Permit from the District under Title V of the Federal Clean Air Act as amended in 1990. The District will issue a Federal Operating Permit separately from, and in addition to, the permits required pursuant to Regulation IV. The requirements of Rule 10.3 shall augment and take precedence over conflicting administrative requirements of other provisions of the District's Rules and Regulations.

Rule 4.6—Standards for Authority to Construct and Permit to Operate.

The purpose of this rule is to establish preconstruction review requirements including offsets, Best Available Control Technology, all other applicable District Rules and Regulations, and analysis of air quality impacts for new and modified stationary sources, and to insure that the operation of such sources does not interfere with the attainment or maintenance of ambient air quality standards. The rule also provides for no net increase in emissions pursuant to Section 40918 and 40920 of the California Health and Safety Code. This rule applies to all new and modified stationary sources which are subject to District permit requirements and which, after construction, emit or may emit any affected pollutants.

Rule 11.1—State Airborne Toxic Control Measures.

The purpose of this Rule is to incorporate California State Airborne Toxic Control Measures adopted by the California Air Resources Board (ATCM) into the Rules and Regulations of the Feather River Air Quality Management District, pursuant to the authority of Health and Safety Code Section 39666. The provisions of this Rule shall apply to the all sources of airborne toxics within FRAQMD.

According to the FRAQMD CEQA guidance, Sources of odor are subject to the Prohibited Discharges regulations in HSC 41700. Based on aerial photos of the proposed project site, the primary sources of existing odors in and around the proposed project site consist of agricultural activities. However, agricultural operations and some composting operations are exempt from these regulations.

Northern Sacramento Valley Planning Area 2015 Air Quality Attainment Plan

As specified in the CCAA of 1988, Chapters 1568-1588, it is the responsibility of each air district in California to attain and maintain the state's ambient air quality standards. The CCAA requires that an Attainment Plan be developed by all nonattainment districts for O₃, CO, SO_x, and NO_x that are either receptors or contributors of transported air pollutants. The purpose of the Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan (TAQAP) is to comply with the requirements of the CCAA as implemented through the California Health and Safety Code. Districts in the NSVPA are required to update the Plan every three years. The TAQAP is formatted to reflect the 1990 baseline emissions year with a planning horizon of 2020. The Health and Safety Code, sections 40910 and 40913, require the Districts to achieve state standards by the earliest practicable date to protect the public health, particularly that of children, the elderly, and people with respiratory illness.

Health and Safety Code Section 41503(b), requires that control measures for the same emission sources are uniform throughout the planning area to the extent that is feasible. To meet this requirement, the NSVPA has coordinated the development of an Attainment Plan and has set up a specific rule adoption protocol. The protocol was established by the Technical Advisory Committee of the Sacramento Valley Basin-wide Air Pollution Control Council and the Sacramento Valley Air Quality Engineering and Enforcement Professionals, which allow the Districts in the Basin to act and work as a united group with the CARB as well as with industry in the rule adoption process. Section 40912 of the Health and Safety Code states that each District responsible for, or affected by, air pollutant transport shall provide for attainment and maintenance of the state and federal standards in both upwind and downwind Districts. This section also states that each downwind District's Plan shall contain sufficient measures to reduce emissions originating in each District to below levels which violate state ambient air quality standards, assuming the absence of transport contribution.

City of Yuba City General Plan

The City of Yuba City General Plan presents the vision for the future of Yuba City, and outlines several guiding policies and policies relevant to air quality. Because the BSMP site would be annexed into the City of Yuba City, it must be found to be substantially compliant with the policies of the General Plan. The following goals and policies from the *City of Yuba General Plan*¹³ are relevant to air quality.

Guiding Policy 8.6-G-1 Protect Yuba City's air quality.

Guiding Policy 8.6-G-2 Make air quality a priority in land use planning by introducing concepts that reduce vehicle trips.

Implementing Policies

- 8.6-I-1 Cooperate with other local, regional, state agencies to achieve and maintain air quality standards.
- 8.6-I-2 Work with the Feather River Air Quality Management District to implement the regional Air Quality Management Plan.
- 8.6-I-3 Require the use of trees and plants in urban and street designs to reduce air pollutant levels.
- 8.6-I-4 Provide information to encourage the use of transportation modes that minimize motor vehicle use and resulting contaminant emissions.
- 8.6-I-5 Evaluate new commercial and industrial development for potential handling, storage, and transport of hazardous materials to minimize public exposure to toxic air contaminants.

¹³ City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004.

- 8.6-I-6 Require applicants whose development would result in construction-related fugitive dust emissions to control such emissions as follows:
- During clearing, grading, earth-moving, or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures.
 - All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering, with complete coverage, shall occur at least twice daily preferably in the late morning and after work is done for the day.
 - All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 20 mph averaged over 1 hour.
 - All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
 - The area disturbed by demolition, clearing, grading, earth-moving, or excavation operations shall be minimized at all times.
 - Portions of the construction site to remain inactive longer than a period of 3 months shall be seeded and watered until grass cover is grown.
 - All on-site roads shall be paved as soon as feasible or watered periodically or chemically stabilized.
- 8.6-I-7 Require applicants whose development would result in construction-related exhaust emissions to minimize such emissions by maintaining equipment engines in good condition and in proper tune according to manufacturer's specifications and during smog season (May through October) by not allowing construction equipment to be left idling for long periods.
- 8.6-I-8 Require applicants whose development would result in potential carbon monoxide (CO) "hot spot" impacts to consult with the City to ensure that schools, hospitals, or day care facilities are not located near such "hot spots".
- 8.6-I-9 Require all new wood-burning stoves and fireplaces to comply with EPA standards and prepare homeowner information handouts outlining low-emission alternatives to woodburning fireplaces.

Consistent with Policies 8.6-G-1, 8.6-G-2, 8.6-I-1 through 8.6-I-4 and 8.6-I-9, the BSMP would implement mitigation measures found in the FRAQMD's Best Available Mitigation Measures (BAMM) that would achieve the air district's recommended 15 percent reduction in operational criteria pollutant emissions as discussed in Impact 3.3-2. Consistent with Policy 8.6-I-5, construction and operational TAC emissions were analyzed in Impact 3.3-5 where it was found the BSMP would result in a less-than-significant impact after the implementation of Mitigation Measure 3.3-5. Consistent with Policies 8.6-I-6 and 8.6-I-7, the construction emissions of criteria pollutant and fugitive dust emissions were analyzed in Impact 3.3-1 where it was found that the BSMP would result in a less-than-significant impact after the implementation of Mitigation Measure 3.3-1.

Sutter County General Plan

The Sutter County General Plan presents the vision for the future of the unincorporated areas of the County. The BSMP site would be annexed into the City of Yuba City and would no longer be under jurisdiction of the County. Since none of the County General Plan policies would have any bearing on the proposed BSMP project, Sutter County General Plan policies related to air quality are not discussed further.

3.3.3 Analysis, Impacts, and Mitigation

Significance Criteria

According to Appendix G of the CEQA *Guidelines*, a project would have a significant effect on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Expose sensitive receptors to substantial pollutant concentrations;
- Result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is in nonattainment under any applicable National or State ambient air quality standards (including releasing emissions that exceed quantitative standards for ozone precursors); or
- Create objectionable odors affecting a substantial number of people.

Consistency with the Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan

The 2015 Triennial Air Quality Attainment Plan (TAQAP) is the only air quality plan applicable to the proposed BSMP project. According to the Air Quality Section of the Sutter County 2030 General Plan EIR,¹⁴ projects in the SVAB could be considered to conflict with the TAQAP if project emissions are greater than what was projected in the emissions inventories of the TAQAP. The TAQAP's emissions inventories are developed based upon anticipated growth parameters such as population and housing, which are based upon the growth projections found in the Metropolitan Transportation Plan (MTP) prepared by the Sacramento Area Council of Governments (SACOG). Therefore, the proposed BSMP project is compared to the MTP to determine whether it is consistent with the TAQAP.

Criteria Pollutants

Development projects have the potential to directly and indirectly generate air pollutants that would result in adverse environmental impacts. In order to evaluate air pollutant emissions from development projects, the FRAQMD has established significance thresholds for emissions of ROG, NO_x, and PM₁₀. The FRAQMD's *Indirect Source Review Guidelines* includes the

¹⁴ Sutter County, 2011. *Sutter County 2030 General Plan Draft Environmental Impact Report*. September 2010.

recommended significance thresholds as listed in **Table 3.3-4**, which serve as air quality standards in the evaluation of air quality impacts associated with development projects. FRAQMD has not established thresholds of significance for PM_{2.5}. Projects with emissions exceeding these thresholds would be considered to result in a cumulatively considerable net increase of a criteria air pollutant for which the region is in nonattainment including ozone precursors.

**TABLE 3.3-4
 FRAQMD THRESHOLDS OF SIGNIFICANCE**

Pollutant	Construction Threshold	Operational Threshold
ROG	25 ppd multiplied by project length, not to exceed 4.5 tpy ¹	25 ppd
NOx	25 ppd multiplied by project length, not to exceed 4.5 tpy ¹	25 ppd
PM ₁₀	80 ppd	80 ppd

NOTES:

ppd = pounds per day
 tpy = tons per year

1 ROG and NOx construction emissions may be averaged over the life of the project, but may not exceed 4.5 tpy.

SOURCE: Feather River Air Quality Management District, 2010. *Indirect Source Review Guidelines*. 2010.

Toxic Air Contaminants

The operation of any project with the potential to expose existing or future sensitive receptors to substantial levels of TACs (such as the proposed BSMP) would be deemed to have a potentially significant impact. More specifically, the proposed BSMP project would be considered to have a significant air quality impact if:

- The probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million people for 70-year exposure.
- Ground-level concentrations of non-carcinogenic TACs would exceed a Hazard Index¹⁵ greater than 1 for the MEI.

In addition, based on the programmatic nature of the proposed BSMP, impacts associated with TACs are analyzed based on buffer zones between sensitive receptors and existing and proposed land uses that emit TACs in accordance with the recommendations provided in the *Air Quality and Land Use Handbook: A Community Health Perspective*.¹⁶

¹⁵ Non-cancer adverse health risk, both for acute (short-term) and chronic (long-term) risk, is measured against a hazard index (HI), which is defined as the ratio of the predicted incremental exposure concentration from the proposed project to a published reference exposure level (REL) that could cause adverse health effects as established by Office of Environmental Health Hazard Assessment (OEHHA). The ratio (referred to as the Hazard Quotient [HQ]) of each non-carcinogenic substance that affects a certain organ system is added to produce an overall HI for that organ system.

¹⁶ California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005. pp. 4.

Methodology and Assumptions

Air quality emissions from construction and operation of the proposed BSMP project could result in significant impacts. Construction emissions would affect local particulate and ozone (ROG and NO_x) concentrations, primarily due to fugitive dust sources and diesel exhaust. Operation of development within the BSMP site would increase emissions from motor vehicle trips and on-site stationary sources. Other operational sources include fuel combustion associated with landscaping activities, space and water heating in buildings, and the use of consumer products.

Construction Impacts

The California Emission Estimator Model (CalEEMod version 2016.3.1) was used to determine if emissions of criteria air pollutants during project construction would exceed FRAQMD’s applicable regional significance thresholds. Since the Newkom Ranch (Phase 1), Kells East Ranch (Phase 2) and remainder of the BSMP (Final Phase) would be developed based on market demand, there is no project-specific information available for construction timing or phasing. Consequently, reasonable assumptions and default CalEEMod settings were used to estimate criteria air pollutant and ozone precursor emissions. The assumed phasing of the Full Master Plan is outlined in **Table 3.3-5**, which is for air quality modeling purposes and does not necessarily reflect the actual sequence of construction activities. It should be noted that, unless otherwise stated, all phasing of construction is assumed to overlap.

**TABLE 3.3-5
BOGUE-STEWART MASTER PLAN CONSTRUCTION TIMELINE ASSUMPTIONS**

Phase	Year
Newkom Ranch (Phase 1)	2019 to 2039
Kells East Ranch (Phase 2)	2020 to 2040
Rest of BSMP area (Final Phase)	2021 to 2041

NOTE:

Due to project delays, the start date of project construction has been changed from 2018 to 2019. Since the emission estimates for the first year of construction are based on 2018 off-road emission factors and off-road equipment are expected to be cleaner in 2019 as a result of the implementation of federal and state regulations requiring cleaner off-road equipment, the emission estimates presented in the following tables remain a conservative estimate of the project’s impact to regional air quality during project construction.

Operational Impacts

The California Supreme Court recently found that “agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project’s future users or residents.” In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore concerned with a project’s impact on the environment, rather than with the environment’s impact on a project and its users or residents. Thus, because the proposed BSMP would not affect any nearby facilities that could emit objectionable odors, the City is not required to consider the effects of bringing a new population into an area where such odor emissions exist. Nonetheless, in order to provide a

through understand of the potential effects of the proposed BSMP project, these impacts are addressed below (see specifically Impact 3.3-6).

Operation of development on the BSMP site would increase emissions of ozone precursors (ROG and NO_x), PM₁₀ and PM_{2.5} from vehicle trips, area sources (landscape maintenance, consumer products such as hairsprays, deodorants, and cleaning products), and energy sources (e.g., natural gas combustion for space and water heating).

CalEEMod was used to estimate vehicle, area and energy use emissions associated with the proposed BSMP project. For on-road vehicles, emissions were calculated using CalEEMod default trip rates and trip lengths. A separate CalEEMod run to adjust CalEEMod's default vehicle miles travelled (VMT) to match the VMT data provided by Fehr & Peers (presented in Section 3.14, Transportation and Traffic). The operational emissions were estimated for 2040, the year assumed for buildout in this analysis. **Appendix C** includes additional information and modeling results.

Localized CO Concentrations

CO concentration levels are highest near crowded or congested intersections where traffic is slow or idling. The proposed project would increase traffic volumes on surrounding roadways, possibly degrading the existing level of service (LOS) and increasing CO concentrations at nearby intersections. The FRAQMD currently does not provide guidance on how to determine whether or not a project-related traffic increase would cause a potential CO hotspot on any given intersection. Therefore, guidance found in the Sacramento Air Quality Management District's (SMAQMD) *CEQA Guidance* was used to assess CO hotspots. According to the SMAQMD, a project would not result in a significant CO impact if one of the following tiers is met:¹⁷

First Tier

The proposed BSMP would result in a less-than-significant impact to air quality for local CO if:

- Traffic generated by the proposed BSMP would not result in deterioration of intersection level of service (LOS) or LOS E or F; and
- The proposed BSMP would not contribute additional traffic to an intersection that already operates at LOS E or F.

Second Tier

If all of the following criteria are met, the proposed BSMP would result in a less-than-significant impact to air quality for local CO.

- The proposed BSMP would not result in an affected intersection experiencing more than 31,600 vehicles per day;

¹⁷ South Coast Air Quality Management District, 2015. *The CEQA Guidance*. Available: <http://www.airquality.org/ceqa/ceqaguideupdate.shtml>. December 2009.

- The proposed BSMP would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air will be substantially limited; and
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

The CALINE4 dispersion model is the preferred method of estimating CO pollutant concentrations at sensitive land uses near congested roadways and intersections. For each intersection analyzed, CALINE4 uses traffic volumes, CO emission rates, and receptor locations to estimate peak hour CO concentrations. For this analysis, CO concentrations were calculated based on a simplified CALINE4 screening procedure and CO emissions rates for Sacramento County from the California Air Resources Board's Emissions Factors (EMFAC) 2014 model. The model is used to identify potential CO hotspots. The modeling methodology assumed worst-case conditions to provide a maximum, worst-case CO concentration. To ensure that an adequate margin of safety was used, the highest 1-hour and 8-hour CO readings from Sutter County were used as the background concentration. Year 2016 and 2040 was selected for the baseline and cumulative analysis, respectively, in order to generate conservative emission factors and emission estimates. Appendix C contains the CO modeling results.

Toxic Air Contaminants and Health Risk Assessment

The primary TACs during construction would be DPM from construction equipment exhaust. DPM exhaust is a complex mixture of thousands of gases and fine particles commonly known as soot. Although construction activities within the BSMP site could be ongoing incrementally for several years, construction would be intermittent and occur in different areas for varying durations. TAC emissions would be spread out geographically over time, reducing exposure at any individual sensitive receptor. Based on guidance from the FRAQMD, the health risk resulting from exposure to emissions from BSMP construction equipment was evaluated qualitatively.

Impacts and Mitigation Measures

Impact 3.3-1: Construction of land uses under the proposed BSMP could generate criteria pollutant emissions that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Full Master Plan

Construction of the proposed BSMP project would consist of site grading, excavation for infrastructure and building foundations, building construction, and paving and landscaping installation. Construction of development pursuant to the proposed BSMP is expected to begin in 2019 and, assuming completion by 2041, would last 22 years. Construction of individual residences and commercial building under the proposed BSMP would occur as dictated by market conditions. For this analysis, it is assumed that activities on the Newkom Ranch (Phase 1), Kells East Ranch (Phase 2) and rest of the BSMP (Final Phase) would overlap, as shown in Table 3.3-5.

Construction emissions were estimated for the entire proposed BSMP using the methods in FRAQMD's *Indirect Source Review Guidelines*.¹⁸ The CalEEMod model was used to quantify construction ROG, NO_x, and PM₁₀ emissions from off-road equipment, haul trucks, on-road worker vehicle emissions, and vendor delivery trips. The unmitigated and mitigated construction emissions for each construction year can be found in **Table 3.3-6** and **Table 3.3-7**, respectively. Those tables compare emissions to FRAQMD's ROG, NO_x, and PM₁₀ construction thresholds.

**TABLE 3.3-6
UNMITIGATED FULL MASTER PLAN CONSTRUCTION EMISSIONS**

Construction Year	ROG (tpy)	NO _x (tpy)	PM ₁₀ (Peak ppd)
2019	1	12	21
2020	6	22	210
2021	6	20	35
2022	6	18	35
2023	5	17	34
2024	5	14	34
2025	5	14	34
2026	5	13	34
2027	5	13	34
2028	5	13	34
2029	5	13	34
2030	5	13	34
2031	5	12	33
2032	5	12	33
2033	5	12	33
2034	5	12	33
2035	5	12	33
2036	4	11	33
2037	4	11	33
2038	4	11	33
2039	4	11	33
2040	4	11	33
2041	4	11	33
FRAQMD Thresholds	4.5	4.5	80
Maximum	6	22	210
Significant (Yes or No)?	Yes	Yes	Yes

NOTES:

1. Project construction emissions estimates were made using CalEEMod version 2016.3.1. See Appendix C for model outputs and more detailed assumptions
2. Values in bold are in excess of the applicable FRAQMD significance threshold.

SOURCE: ESA, 2017

¹⁸ Feather River Air Quality Management District, 2010. *Indirect Source Review Guidelines*. June 7, 2010.

**TABLE 3.3-7
 MITIGATED FULL MASTER PLAN CONSTRUCTION EMISSIONS**

Construction Year	1	10	11
2019	6	18	116
2020	6	16	19
2021	5	15	19
2022	5	14	19
2023	5	11	19
2024	5	11	19
2025	5	11	19
2026	5	11	19
2027	5	10	19
2028	5	10	19
2029	5	10	19
2030	5	10	18
2031	4	9	18
2032	4	9	18
2033	4	9	18
2034	4	9	18
2035	4	9	18
2036	4	9	18
2037	4	9	18
2038	4	9	18
2039	4	9	18
2040	4	9	18
2041	1	10	11
FRAQMD Thresholds	4.5	4.5	80
Maximum	6	18	116
Significant (Yes or No)?	Yes	Yes	Yes

NOTES:

1. Project construction emissions estimates were made using CalEEMod version 2016.3.1. See Appendix C for model outputs and more detailed assumptions
2. Values in bold are in excess of the applicable FRAQMD significance threshold.

SOURCE: ESA, 2017

As shown in Table 3.3-6, construction emissions of ROG, NO_x and PM₁₀ would exceed the FRAQMD significance thresholds for each construction year. The predominant construction activity associated with these emissions would be off-road diesel equipment and on-road haul trucks during construction of the entire proposed BSMP. PM₁₀ emissions, in the form of fugitive dust, would be emitted during the transport of off- and on-road vehicles on unpaved surfaces. Overall, the proposed BSMP project would have a **significant** impact related to construction emissions.

Implementation of the emission reduction portion of Mitigation 3.3-2, identified below, would reduce proposed BSMP construction emissions to levels shown in Table 3.3-7. Emissions of ROG, NO_x and PM₁₀ would remain in excess of the thresholds for a majority of the years analyzed.

Newkom Ranch/Kells East Ranch

The development of the Newkom Ranch and Kells East Ranch projects is expected to begin in 2019 and last approximately 21 years. The construction emission for the proposed development for each year of construction was estimated using CalEEMod. Predicted unmitigated and mitigated construction emissions for each of the construction years are presented in **Table 3.3-8** and **Table 3.3-9**, respectively, and compared to the FRAQMD’s significance thresholds. Model output data and assumptions are included in Appendix C.

**TABLE 3.3-8
 UNMITIGATED NEWKOM/KELLS EAST RANCH CONSTRUCTION EMISSIONS**

Construction Year	ROG (ppd)	NO _x (ppd)	PM ₁₀ (Peak ppd)
2019	1	12	139
2020	3	17	218
2021	3	15	23
2022	3	14	23
2023	3	13	23
2024	3	11	22
2025	3	10	22
2026	2	10	22
2027	2	10	22
2028	2	10	22
2029	2	10	22
2030	2	10	22
2031	2	9	21
2032	2	9	21
2033	2	9	21
2034	2	9	21
2035	2	9	21
2036	2	8	21
2037	2	8	21
2038	2	8	21
2039	2	8	21
2040	2	8	21
FRAQMD Thresholds	4.5	4.5	80
Maximum	3	17	218
Significant (Yes or No)?	No	Yes	Yes

NOTES:
 1. Project construction emissions estimates were made using CalEEMod version 2016.3.1. See Appendix C for model outputs and more detailed assumptions
 2. Values in bold are in excess of the applicable FRAQMD significance threshold.
 SOURCE: ESA, 2017

**TABLE 3.3-9
 MITIGATED NEWKOM/KELLS EAST RANCH CONSTRUCTION EMISSIONS**

Construction Year	ROG (ppd)	NOx (ppd)	PM ₁₀ (Peak ppd)
2019	1	10	62
2020	3	13	98
2021	3	12	10
2022	3	11	10
2023	3	10	10
2024	2	8	10
2025	2	8	10
2026	2	8	10
2027	2	8	10
2028	2	8	10
2029	2	8	10
2030	2	8	10
2031	2	7	10
2032	2	7	10
2033	2	7	10
2034	2	7	10
2035	2	7	10
2036	2	6	10
2037	2	7	10
2038	2	6	10
2039	2	6	10
2040	2	6	10
FRAQMD Thresholds	4.5	4.5	80
Maximum	3	13	98
Significant (Yes or No)?	No	Yes	Yes

NOTES:

1. Project construction emissions estimates were made using CalEEMod version 2016.3.1. See Appendix C for model outputs and more detailed assumptions
2. Values in bold are in excess of the applicable FRAQMD significance threshold.

SOURCE: ESA, 2017

As shown in Table 3.3-8, construction emissions of NO_x and PM₁₀ would exceed the FRAQMD significance thresholds for each construction year. The predominant construction activity associated with these emissions would be off-road diesel equipment and on-road haul trucks during construction of the development proposed within the Newkom Ranch and Kells East Ranch properties. PM₁₀ emissions, in the form of fugitive dust, would be emitted during the transport of off- and on-road vehicles on unpaved surfaces. Overall, the development proposed

within the Newkom Ranch and Kells East Ranch properties would have a **significant** impact related to construction emissions.

Implementation of the emission reduction portion of Mitigation 3.3-2 would reduce construction emissions to levels shown in Table 3.3-9. ROG emissions would remain below the FRAQMD significance threshold. Emissions of NO_x and PM₁₀ would remain in excess of the thresholds.

Summary

Construction of the proposed BSMP project would result in emissions of ROG, NO_x and PM₁₀ that would exceed the FRAQMD significance thresholds. Consequently, construction of any of the land uses would result in a **significant** impact.

Mitigation Measure 3.3-1(a): Fugitive Dust Control Plan (BSMP/NR/KER)

During the construction of the BSMP, individual project applicants shall submit to FRAQMD a Fugitive Dust Control Plan with the following mitigation measures to be implemented:

- a) All grading operations on a project shall be suspended when sustained winds exceed 20 miles per hour (mph) or when winds carry dust beyond the property line despite implementation of all feasible dust control measures;
- b) Construction sites shall be watered as directed by the FRAQMD and as necessary to prevent fugitive dust violations;
- c) An operational water truck shall be on-site at all times. Water shall be applied to control dust as needed to prevent visible emissions violations and off-site dust impacts;
- d) On-site dirt piles or other stockpiled particulate matter shall be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce wind-blow dust emissions. The use of approved nontoxic soil stabilizers shall be incorporated according to manufacturers' specifications to all inactive construction areas;
- e) All transfer processes involving a free fall of soil or other particulate matter shall be operated in such a manner as to minimize the free fall distance and fugitive dust emissions;
- f) Approved chemical soil stabilizers shall be applied according to the manufacturers' specifications to all inactive construction areas (previously graded areas that remain inactive for 96 hours), including unpaved roads and employee/equipment parking areas;
- g) To prevent track-out, wheel washers shall be installed where project vehicles and/or equipment exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed before each trip. Alternatively, a gravel bed may be installed as appropriate at vehicle/equipment site exit points to effectively remove soil buildup on tires and tracks and prevent/diminish track-out;

- h) Paved streets shall be swept frequently (water sweeper with reclaimed water recommended; wet broom permitted) if soil material has been carried onto adjacent paved, public thoroughfares from the project site;
- i) Temporary traffic control shall be provided as needed during all phases of construction to improve traffic flow, as deemed appropriate by the appropriate department of public works and/or California Department of Transportation (Caltrans), and to reduce vehicle dust emissions. An effective measure is to enforce vehicle traffic speeds at or below 15 mph;
- j) Traffic speeds on all unpaved surfaces shall be reduced to 15 mph or less, and unnecessary vehicle traffic shall be reduced by restricting access. Appropriate training to truck and equipment drivers, on-site enforcement, and signage shall be provided;
- k) Ground cover shall be reestablished on the construction site as soon as possible and before final occupancy through seeding and watering; and
- l) Open burning shall be prohibited at the project site. No open burning of vegetative waste (natural plant growth wastes) or other legal or illegal burn materials (e.g., trash, demolition debris) may be conducted at the project site. Vegetative wastes shall be chipped or delivered to waste-to-energy facilities (permitted biomass facilities), mulched, composted, or used for firewood. It is unlawful to haul waste materials off-site for disposal by open burning.

Mitigation Measure 3.3-1(b): Control Exhaust Emissions (BSMP/NR/KER)

Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions Limitations (40 percent opacity or Ringelmann 2.0). Operators of vehicles and equipment found to exceed opacity limits shall take action to repair the equipment within 72 hours or remove the equipment from service. Failure to comply may result in a notice of violation from FRAQMD.

Mitigation Measure 3.3-1(c): Limit Equipment Idling (BSMP/NR/KER)

Construction contracts within the BSMP shall limit idling time to 5 minutes in accordance with ARB airborne air toxic control measure 13 (CCR Chapter 10 Section 2485) unless more time is required per engine manufacturers' specifications or for safety reasons.

Mitigation Measure 3.3-1(d): Equipment Registration (BSMP/NR/KER)

Portable engines and portable engine-driven equipment units used by construction contractors within the BSMP site, with the exception of on-road and off-road motor vehicles, may require ARB Portable Equipment Registration with the state or a local district permit. The owner/operator of the equipment shall be responsible for arranging appropriate consultations with ARB or the FRAQMD to determine registration and permitting requirements before the equipment is operated at the site.

Mitigation Measure 3.3-1(e): Equipment Emissions Plan (BSMP/NR/KER)

During the construction of the BSMP, individual project applicants shall assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that will be used an aggregate of 40 or more hours for a construction project. Applicants shall provide a plan for approval by FRAQMD demonstrating that the heavy-duty (equal to or greater than 50 horsepower) off-road equipment to be used for construction, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NO_x reduction and 45 percent particulate reduction compared to the most recent ARB fleet average at the time of construction.

These equipment emission reductions can be demonstrated using the most recent version of the Construction Mitigation Calculator developed by the SMAQMD. Acceptable options for reducing emissions may include use of late-model engines, low emission diesel products, alternative fuels, engine retrofit technology (Carl Moyer Guidelines), after-treatment products, voluntary off-site mitigation projects, the provision of funds for air district off-site mitigation projects, and/or other options as they become available. In addition, implementation of these measures would also result in a 5 percent reduction in ROG emissions from heavy-duty diesel equipment. FRAQMD shall be contacted to discuss alternative measures.

Significance after Mitigation: Implementation of the mitigation measures listed above would reduce the predicted level of emissions for construction of the BSMP, including the Full Master Plan and Newkom Ranch and Kells East Ranch properties. However, construction emissions would still exceed the FRAQMD significance thresholds for ROG and NO_x. Therefore, the construction of the BSMP would generate emissions of ROG and NO_x that would result in a **significant and unavoidable** impact.

Impact 3.3-2: Operational activities associated with development under the proposed BSMP would result in emissions of criteria air pollutants at levels that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Full Master Plan

Over the long-term, the proposed BSMP project would result in an increase in emissions of ozone precursors, ROG and NO_x, and PM₁₀, primarily due to project-related motor vehicle trips and on-site area and energy sources (e.g., natural gas combustion for space and water heating, landscape maintenance, use of consumer products such as hairsprays, deodorants, cleaning products).

Operational emissions were quantified using CalEEMod 2016.3.1 and are presented in **Table 3.3-10** below. Based on the estimates shown in Table 3.3-10, the proposed BSMP's criteria pollutant contribution to regional air quality would exceed the significance thresholds specified by the FRAQMD for ROG, NO_x, and PM₁₀ and would be significant.

**TABLE 3.3-10
 UNMITIGATED FULL MASTER PLAN OPERATIONAL EMISSIONS (POUNDS PER DAY)**

Pollutant	FRAQMD Thresholds (lbs/day)	Year 2040 Build-out Operation Emissions (lbs/day) ^{1,2}				
		Area Sources	Energy Sources	Mobile Sources	Total Emissions	Significant (Yes or No)?
ROG	25	160	3	35	198	Yes
NO _x	25	25	22	528	575	Yes
PM ₁₀	80	3	2	196	201	Yes

NOTES:

- Operational emissions estimates for summertime conditions were made using CalEEMod 2016.3.1. See Appendix C for details.
- Several adjustments were made to the CalEEMod default assumptions that were not considered mitigation. The default trip rates and lengths were adjusted to match the traffic data provided by Fehr & Peers.

Source: ESA, 2017

Newkom Ranch/Kells East Ranch

Operational emissions generated by the development proposed within the Newkom Ranch and Kells East Ranch properties would result in an increase in ROG, NO_x and PM₁₀ primarily due to project-related motor vehicle trips and onsite area and energy sources (e.g., natural gas combustion for space and water heating, landscape maintenance, use of consumer products such as hairsprays, deodorants, cleaning products). Operational emissions for build-out of Newkom Ranch and Kells East Ranch properties were quantified using CalEEMod 2016.3.1 and are presented in **Table 3.3-11** below. Based on the estimates shown in Table 3.3-11, operational criteria pollutant emissions within the Newkom Ranch property would exceed the significance thresholds specified by the FRAQMD for ROG, NO_x, and PM₁₀ and would be considered a significant impact.

**TABLE 3.3-11
 NEWKOM/KELLS EAST RANCH OPERATIONAL EMISSIONS (POUNDS PER DAY)**

Pollutant	FRAQMD Thresholds (lbs/day)	Year 2038 Build-out Operation Emissions (lbs/day) ^{1,2}				
		Area Sources	Energy Sources	Mobile Sources	Total Emissions	Significant (Yes or No)?
ROG	25	57	1	19	77	Yes
NO _x	25	1	8	291	300	Yes
PM ₁₀	80	1	1	88	90	Yes

NOTES:

- Specific Plan operational emissions estimates for summertime conditions were made using CalEEMod 2016.3.1. See Appendix C for details.
- Several adjustments were made to the CalEEMod default assumptions that were not considered mitigation. The default trip rates and lengths were adjusted to match the traffic data provided by Fehr & Peers.

SOURCE: ESA, 2017

Summary

The incremental build-out of the proposed BSMP project, including the Newkom Ranch and Kells East Ranch, would result in emissions of ROG, NO_x and PM₁₀ that would exceed the significance thresholds specified by the FRAQMD, creating a **significant** impact.

The mitigation measures most feasible for the proposed BSMP are provided in **Mitigation Measure 3.3-2**.

Mitigation Measure

Mitigation Measure 3.3-2: Implement Operational Mitigation Measures (BSMP/NR/KER)

The project applicant(s) for tentative subdivision maps and development projects proposed under the BSMP shall implement the mitigation measures, as applicable to the proposed subdivision map or development project. At the time entitlements are sought, the City will evaluate measures below, determine which measures are applicable, and include those measures as conditions of approval or some other enforceable mechanism. All feasible measures listed below shall be incorporated into subdivision maps and development projects within the BSMP.

- a) Subdivision maps and development projects located in areas designated Community Commercial, Neighborhood Commercial, Office Park, and Business Park shall be developed in coordination with local transit providers to ensure proper placement and design of transit stops and accommodate public transit for both employees and patrons.
- b) Subdivision maps and improvement plans shall be designed to provide convenient and safe bicycle, pedestrian, and transit access between neighborhoods and areas designated Community Commercial, Neighborhood Commercial, Office Park, and Business Park, as well as parks, trails, and other destinations.
- c) Subdivision maps and development projects within Community Commercial and Neighborhood Commercial areas shall distribute proposed parking and not concentrate parking exclusively between the front building façade and the primary abutting street where feasible.
- d) Cul-de-sacs are allowed only where they would not create a barrier for pedestrian and bicycle access or circulation between homes and destinations.
- e) Employment generating projects that anticipate more than 50 full-time equivalent employees shall participate in the Yuba-Sutter Transportation Management Association.
- f) Subdivision maps and improvement plans shall be designed to accommodate safe and frequent pedestrian crosswalks, with more frequent crossings in areas expected to have higher pedestrian traffic, such as schools, parks, trail connections, higher-density residential areas, and areas with retail, services, office uses, and other non-residential uses.
- g) Subdivision maps and improvement plans shall be designed to discourage concentration of traffic at a few intersections. Multiple points of access shall be provided whenever feasible. Roads shall be arranged in an interconnected block pattern. The maximum average block length in subdivisions is 600 feet unless unusual existing physical conditions warrant an exception to this standard, but shorter

block lengths should be used around areas designated Community Commercial and Neighborhood Commercial.

- h) Subdivision maps and improvement plans shall be designed to connect with adjacent roadways and stubbed roads and shall provide frequent stubbed roadways in coordination with future planned development areas.
- i) Subdivision maps and development projects within Community Commercial and Neighborhood Commercial areas shall be designed to minimize the amount of on-site land required to meet parking, internal circulation, and delivery/loading needs.
- j) Subdivision maps and development projects within Community Commercial and Neighborhood Commercial areas shall be designed to break up any proposed surface parking with landscaping and provide pedestrian routes from parking areas to building entrances.
- k) The City will reduce the amount of off-street parking required or eliminate off-street parking requirements for projects that propose housing units restricted to lower-, very low-, or extremely low-income households.
- l) Residential subdivision maps shall orient the majority of buildings so that the longer axis of the building, also known as the ridge line, is oriented east-to-west, in order to maximize the potential for passive solar heating in the winter and to minimize heat gain from the afternoon summer sun.
- m) Subdivision maps and development projects proposing off-street surface parking lots shall incorporate shade trees or shade structures to provide a minimum of 50 percent shading (at maturity, where trees are used).
- n) Subdivision maps and development projects shall use climate-appropriate landscaping in parks and open space, landscaping within new rights of way, yards, and other appropriate spaces.
- o) Provide secure, covered bicycle parking for employees of projects located in areas designated Community Commercial, Neighborhood Commercial, Office Park, and Business Park. This may consist of a separate secure, covered bicycle parking area at each employment location or larger shared bicycle parking area/s located and designed to serve multiple locations.
- p) Shower and locker facilities shall be provided for employees of projects located in areas designated Community Commercial, Neighborhood Commercial, Office Park, and Business Park. This may be achieved by incorporating a shower and locker facility into the design of each proposed use, or facilities located and designed to serve multiple locations.
- q) Residential development that proposes fireplaces shall use the lowest emitting commercially available fireplace.
- r) Provide electric vehicle charging facilities and priority parking at non-residential uses for electric and carpool/vanpool vehicles.

Significance After Mitigation: Although these mitigation measures would reduce the proposed BSMP's emissions of ROG, NO_x and PM₁₀, these mitigation measures would not reduce operational emissions to below the FRAQMD's significance thresholds. Therefore, operation of the BSMP, Newkom Ranch, and Kells East Ranch would generate emissions of ROG, NO_x and PM₁₀ that would exceed the FRAQMD significance thresholds and result in a **significant and unavoidable** impact.

Impact 3.3-3: The proposed BSMP project would conflict with or obstruct implementation of an applicable air quality plan.

Full Master Plan

The FRAQMD and a number of other air districts in the SVAB developed the 2015 Triennial Air Quality Attainment Plan (TAQAP) to comply with the requirements of the CCAA as implemented through the California Health and Safety Code. Projects in the SVAB could be considered to conflict with the TAQAP if project emissions are greater than what was projected in the emissions inventories of the TAQAP. The TAQAP's emissions inventories are developed based upon anticipated growth parameters such as population and housing, which are based upon the growth projections found in the MTP prepared by the SACOG.

The Full Master Plan would include design features that would reduce onsite ozone emissions (ROG and NO_x) and particulate matter (PM₁₀ and PM_{2.5}). These design features include bikeway/trail systems, pedestrian systems, and transit connections. While the build-out of the Full Master Plan would include design features that would result in a reduction in criteria pollutant emissions, the Full Master Plan was not included the SACOG development models and would not be consistent with the MTP. Therefore, because the proposed BSMP would conflict with implementation of the TAQAP, this impact would be considered **significant**.

Newkom Ranch

The development proposed within the Newkom Ranch property would result in similar impacts as those discussed under the Full Master Plan. Like the Full Master Plan, the development proposed in the Newkom Ranch property would include design features that would reduce onsite ozone emissions (ROG and NO_x) and particulate matter (PM₁₀ and PM_{2.5}). While the build-out of the Newkom Ranch development would include design features that would result in a reduction in criteria pollutant emissions, the proposed development within the Newkom Ranch property was not included the SACOG development models and would not be consistent with the MTP. Therefore, because the proposed Newkom Ranch development would conflict with implementation of the TAQAP, this impact would be considered **significant**.

Kells East Ranch

The development proposed within the Kells East Ranch property would result in similar impacts as those discussed under the Full Master Plan. Like the Full Master Plan, the development proposed in the Kells East Ranch property would include design features that would reduce onsite

ozone emissions (ROG and NO_x) and particulate matter (PM₁₀ and PM_{2.5}). While the build-out of the Kells East development would include design features that would result in a reduction in criteria pollutant emissions, the proposed development within the Kells East Ranch property was not included in the SACOG development models and would not be consistent with the MTP. Therefore, because the proposed Kells East Ranch development would conflict with implementation of the TAQAP, this impact would be considered **significant**.

Summary

Development associated with the proposed BSMP project, including the Newkom Ranch and Kells East Ranch developments, would not be consistent with the SACOG growth projections for the Sutter County area. Thus, the proposed BSMP project would conflict with implementation of the TAQAP, this impact would be considered **significant**.

Mitigation Measure

Mitigation Measure 3.3-3: Consistency with the Triennial Air Quality Attainment Program (BSMP/NR/KER)

Implement **Mitigation Measure 3.3-1(a)** through **Mitigation Measure 3.3-1(e)** and **Mitigation Measure 3.3-2**

Significance after Mitigation: Although implementation of Mitigation Measure 3.3-3 would reduce construction and operation emissions, they would not establish consistency with the TAQAP. The growth projections as a result of the proposed BSMP project would exceed the projections found in SACOG's MTP, making the proposed BSMP project inconsistent with the TAQAP. There are no other feasible mitigation measures with the exception of reducing development to reduce the impact. As such, impacts would be **significant and unavoidable**.

Impact 3.3-4: Traffic associated with development under the proposed BSMP could result in exposure of persons to substantial localized carbon monoxide concentrations.

Full Master Plan

CO is a localized pollutant of concern. Due to the temporary operation of equipment in any one area, construction of individual development or infrastructure projects pursuant to the proposed BSMP project would not emit CO in quantities that could pose health concerns. For operation, traffic was analyzed to determine its potential to affect CO concentrations near surface streets and intersections in and around the BSMP site. The analysis presented in section 3.12, Transportation and Traffic, shows that none intersections would result in a LOS below E during the AM or PM hours under Existing plus Full Master Plan conditions. CO modeling was conducted for these intersections using CALINE4.

Table 3.3-12 shows the CO results. Conservative assumptions were used to estimate worst-case CO concentrations. Those assumptions included the use of worst case meteorology, the inclusion

of the highest 1-hour and 8-hour background CO concentrations recorded in Sacramento during the past five years, the use of baseline plus project (2016) traffic volumes, and the use of 2016 CO emission rates.

**TABLE 3.3-12
 CARBON MONOXIDE CONCENTRATIONS AT AFFECTED INTERSECTIONS
 FULL MASTER PLAN**

Intersection	CO Concentrations	
	1-hour (ppm)	8-hour (ppm)
SR 99 / Bridge Street	3	3
SR 99 / Bogue Road	4	3
SR 99 / Stewart Road	2	2
SR 99 / Reed Road	2	2
S. Walton Avenue / Bogue Road	2	2
Railroad Avenue / Lincoln Road	2	1
Phillips Road / Bogue Road	2	2
Railroad Avenue / Bogue Road	2	2
Gilsizer Ranch Way / Bogue Road	2	1
Threshold	20	9
Exceed Threshold?	No	No

NOTES:
 CO concentrations include a worst case 1-hour CO background concentration of 0.3 ppm and a worst case 8-hour background concentration of 0.3 ppm. The modeled 1-hour concentrations were converted to 8-hour concentrations using a persistence factor of 0.80. CALINE4 modeling results and additional assumptions are included in Appendix C.

As shown in Table 3.3-12, the analysis finds that no exceedances of the CO 1- hour or 8-hour standard would occur at any of the intersections. Thus, the proposed BSMP project would have a **less-than-significant** impact on local CO concentrations.

Newkom Ranch/Kells East Ranch

A review of the traffic data associated with development within the Newkom Ranch/Kells East Ranch properties shows that four intersections would result in a LOS below E during either the AM or PM hours under Existing plus Newkom Ranch/Kells East Ranch conditions. CO modeling was conducted for these intersections using CALINE4. As shown in **Table 3.3-13**, the analysis finds that no exceedances of the CO 1- hour or 8-hour standard would occur at any of the receptor locations. Thus, the development of the Newkom Ranch/Kells East Ranch properties would have a **less-than-significant** impact on local CO concentrations.

**TABLE 3.3-13
 CARBON MONOXIDE CONCENTRATIONS AT AFFECTED INTERSECTIONS
 NEWKOM RANCH/KELLS EAST RANCH**

Intersection	CO Concentrations	
	1-hour (ppm)	8-hour (ppm)
SR 99 / Hunn Road	3	2
SR 99 / Smith Road	2	2
Phillips Road / Bogue Road	2	2
Railroad Avenue / Bogue Road	2	1
Threshold	20	9
Exceed Threshold?	No	No

NOTES:
 CO concentrations include a worst case 1-hour CO background concentration of 0.3 ppm and a worst case 8-hour background concentration of 0.3 ppm. The modeled 1-hour concentrations were converted to 8-hour concentrations using a persistence factor of 0.80. CALINE4 modeling results and additional assumptions are included in Appendix C.

Summary

As shown in Tables 3.3-12 and 3.3-13, none of the intersections resulting in an LOS below E during the AM or PM peak hours affected by the proposed BSMP project would result in significant CO concentrations. Therefore, the proposed BSMP, Newkom Ranch, and Kells East Ranch projects would generate CO concentrations from vehicular traffic that would result in a **less than significant**.

Mitigation Measure

None required.

Impact 3.3-5: Construction and operation of the proposed BSMP could result in short-term and long-term exposure to Toxic Air Contaminants (TACs).

Full Master Plan

Construction

Construction activities would produce diesel DPM emissions due to combustion equipment such as loaders, backhoes, and cranes, as well as haul trucks. DPM represents the primary TAC of concern from construction activities. Exposure of sensitive receptors – both existing residences and future proposed residences within the BSMP area – is the primary factor used to determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure. A longer exposure period would result in a higher exposure level. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time.

According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments should be based on a 30-year exposure period.¹⁹ However, such assessments should be limited to the period/duration of activities associated with the project. Although the construction of the development proposed under the proposed BSMP project is assumed to be less than 30 years, it would likely constitute a large percent of the total 30-year exposure period. Based on an assumed 22-year exposure period,²⁰ TACs generated during construction could result in concentrations causing significant health risks. Consequently, construction of the proposed BSMP project would result in **potentially significant** construction-related health risks.

Operation

Long-term operation of the proposed BSMP project could include the development of stationary and mobile sources that emit TACs. Any stationary sources that may emit TACs would be subject to FRAQMD permitting and Toxics Best Available Control Technology (T-BACT) requirements. FRAQMD would assess such sources for potential health risk impacts based on their potential to emit TACs. If it is determined that the sources would be considered a major source of TACs, T-BACT would be implemented to reduce emissions (such as through process changes or control equipment incorporation) to ensure a level of control that, at a minimum, is no less stringent than new source maximum achievable control technology. If the implementation of T-BACT would achieve the required level of control, then FRAQMD would deny the required permit. As a result, impacts associated with exposure of sensitive receptors to substantial toxic air emissions from stationary source operations would be **less than significant**.

According to CARB's *Air Quality and Land Use Handbook: Community Health Perspective*, sensitive uses in a rural area within 500 feet of a freeway with a traffic volume of 50,000 or more vehicles per day could be exposed to mobile TAC emissions that could result in a significant health risk.²¹ Development of the proposed BSMP would result in an increase in vehicular traffic along State Route (SR) 99, which would result in an increase in mobile TAC emissions within the BSMP area. The highest average daily traffic along SR 99 under existing plus proposed BSMP conditions is 32,775 vehicles per day, well below CARB's 50,000 vehicles per day threshold. As a result, impacts associated with exposure of sensitive receptors to substantial toxic air emissions from mobile source operations would be **less than significant**.

Newkom Ranch/Kells East Ranch

Construction

As previously discussed above for the entire proposed BSMP, health risks are based on a 30-year exposure period. Since the construction duration of the development of the Newkom Ranch and Kells East Ranch properties would constitute a large percentage of the total 30-year exposure

¹⁹ Office of Environmental Health Hazard Assessment, 2015. *Guidance Manual for Preparation of Health Risk Assessments*. February 2015.

²⁰ While each development (i.e., Full BSMP, Newkom Ranch, Kells East Ranch) have an assumed 20-year construction horizon, the one-year offsets in the schedules of each create a composite 22-year exposure period when considered in aggregate.

²¹ California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

period, TACs generated during construction could result in concentrations causing significant health risks. Construction of the proposed Newkom Ranch and Kells East Ranch properties would result in **potentially significant** construction-related health risks. Therefore, this mitigation measure, if implemented, would further reduce exposure to the TACs that would be emitted during the construction period. Health risks associated with construction of the Newkom Ranch and Kells East Ranch properties would be **less than significant**.

Operation

Much like the Full Master Plan, the Newkom Ranch and Kells East Ranch properties could include the development of stationary sources that emit TACs. If it is determined that the developments proposed on the Newkom Ranch and Kells East Ranch properties would include sources that are considered a major source of TACs, T-BACT would be implemented to reduce emissions (such as through process changes or control equipment incorporation). This would ensure a level of control that, at a minimum, is no less stringent than new source maximum achievable control technology. If the implementation of T-BACT would achieve the required level of control, then FRAQMD would deny the required permit. As a result, impacts associated with exposure of sensitive receptors to substantial toxic air emissions from stationary source operations would be **less than significant**.

Development of the developments proposed on the Newkom Ranch and Kells East Ranch properties would result in an increase in vehicular traffic along SR 99, which would result in an increase in mobile TAC emissions within the BSMP area. The highest average daily traffic along SR 99 under existing plus developments proposed on the Newkom Ranch and Kells East Ranch properties conditions is 29,725 vehicles per day, well below CARB's 50,000 vehicles per day threshold. As a result, impacts associated with exposure of sensitive receptors to substantial toxic air emissions from mobile source operations would be **less than significant**.

Summary

Any sources of TAC during the operation of the BSMP, include the Full Master Plan and Newkom Ranch and Kells East Ranch properties, would be regulated through the FRAQMD permitting process and mobile source TAC emissions would be below CARB's screen criteria. Therefore, this impact would result in a **less-than-significant** impact.

Construction durations of the BSMP, include the Full Master Plan and Newkom Ranch and Kells East Ranch properties, would constitute a large percentage of the total 30-year exposure period used for health risk evaluations. Since construction of the BSMP would represent approximately 73 percent of the 30-year evaluation period, TACs generated during construction could result in concentrations causing significant health risks. This impact is **potentially significant**.

Mitigation Measure 3.3-5: Equipment Emissions Plan (BSMP/NR/KER)

Implement Mitigation Measure 3.3-1(e).

Significance after Mitigation: With implementation of **Mitigation Measure 3.3-1(e)**, health risks associated with construction of the BSMP would be reduced to be **less than significant**.

Impact 3.3-6: Land uses to be developed under the proposed BSMP could result in exposure of substantial persons to objectionable odors.

Full Master Plan

The FRAQMD has identified typical odor sources in its *Indirect Source Review Guidelines*.²² These include wastewater treatment plants, sanitary landfills, composting and green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting and coating operations, rendering plants, and food packaging plants.²³ The proposed BSMP would not allow uses that have been identified by FRAQMD as potential sources of objectionable odors. In addition, the BSMP site is not located within one mile of any facilities or uses known to generate objectionable odors. Diesel equipment used during construction can produce odorous exhaust, but equipment use in any one area of the BSMP site would be temporary and potential odors would not affect a substantial number of people, as this area would not be fully populated as envisioned in the proposed BSMP at that time. Therefore, construction and operation of the proposed BSMP project would generate odors that would result in a **less-than-significant** impact.

Newkom Ranch/Kells East Ranch

The development proposed in the Newkom Ranch and Kells East Ranch properties would result in similar odor impacts as discussed under the Full Master Plan. Construction the Newkom Ranch and Kells East Ranch properties could produce odorous exhaust, but equipment use in any one construction site on the BSMP site would be temporary and potential odors would not affect a substantial number of people. Much like the full BSMP, the Newkom Ranch and Kells East Ranch properties would not include uses identified by FRAQMD as potential sources of objectionable odors. Therefore, construction and operation of Newkom Ranch and Kells East Ranch properties would generate odors that would result in a **less-than-significant** impact.

Summary

In summary, none of the proposed activities or uses proposed within any of the BSMP would be classified by the FRAQMD as typical odor sources. Although odors could be generated by diesel exhaust from off-road equipment during the construction of the BSMP, these odors would be temporary and would not affect a substantial number of people. Therefore, this impact would result in a **less-than-significant** impact.

²² Feather River Air Quality Management District, 2010. *Indirect Source Review Guidelines*. June 7, 2010.

²³ Sacramento Metropolitan Air Quality Management District, 2009. *Guide to Air Quality Assessment*. Adopted December 2009 and last updated October 2013. pp. 7-2.

Mitigation Measure

None required.

Cumulative Impacts

The geographic context for changes in the air quality environment due to development of the proposed BSMP would be both regional and local. Ozone would be the primary pollutant of regional concern, and the cumulative context would be comprised of the SVAB, which includes a multitude of projects planned therein, including the River Edge Apartments (650 Lincoln Road) and tenant improvements to an urgent care building at 520 Bogue Road.

Particulates (fugitive dust and DPM), CO, and TACs would result in localized impacts in close proximity to pollutant sources. The CO and TAC localized exposure analysis detailed in Impacts 3.3-4 and 3.3-5, incorporated cumulative traffic assumptions in order to determine the worst case pollutant scenario. Development under the BSMP would result in a less-than-significant impact related to localized impacts of CO and TACs.

As described above in Impact 3.3-7, the proposed BSMP would not include uses that have been identified by FRQAQMD as potential sources of objectionable odors. Therefore, the BSMP would not contribute to a cumulative odor impact.

Impact 3.3-7: The proposed BSMP could contribute to cumulative increases in short-term (construction) emissions.

ROG, NO_x and PM₁₀ are the pollutants that FRQAQMD has identified as the primary concerns from construction. The BSMP plus other concurrent construction activities in the SVAB could contribute to cumulative construction-related ROG, NO_x and PM₁₀ emissions. Construction of development pursuant to the proposed BSMP would result in significant emissions of ROG and NO_x, which could combine with emissions generated by other existing and future development within the SVAB to contribute to an air quality impact in the region. Since the emissions generated by development pursuant to the proposed BSMP would exceed the FRAQMD project level thresholds, the emissions would also be considered significant contributors to cumulative emissions. Consequently, without mitigation, the proposed BSMP project would have a cumulatively considerable contribution to a **significant cumulative** impact.

Mitigation Measures

Mitigation Measure 3.3-7(a): Fugitive Dust Control Plan (BSMP/NR/KER)

Implement Mitigation Measure 3.3-1(a).

Mitigation Measure 3.3-7(b): Control Exhaust Emissions (BSMP/NR/KER)

Implement Mitigation Measure 3.3-1(b).

Mitigation Measure 3.3-7(c): Limit Equipment Idling (BSMP/NR/KER)

Implement Mitigation Measure 3.3-1(c).

Mitigation Measure 3.3-7(d): Equipment Registration (BSMP/NR/KER)

Implement Mitigation Measure 3.3-1(d)

Mitigation Measure 3.3-7(e): Equipment Emissions Plan (BSMP/NR/KER)

Implement Mitigation Measure 3.3-1(e).

Significance After Mitigation: Implementation of **Mitigation Measure 3.3-7(a)** through **Mitigation Measure 3.3-7(e)** would reduce the predicted level of emissions for construction of the BSMP. However, construction emissions would still exceed the FRAQMD significance thresholds for ROG and NO_x, and thus would remain cumulatively considerable. Therefore, the construction of the BSMP would generate emissions of ROG and NO_x that would result in a **significant and unavoidable** impact.

Impact 3.3-8: The proposed BSMP could contribute to cumulative increases in long-term (operational) emissions.

ROG, NO_x and PM₁₀ are primarily of regional concern. Thus, all other mobile, area, and energy sources in the SVAB that would operate concurrently with the proposed BSMP would contribute to cumulative operational-related ROG, NO_x and PM₁₀ emissions. As described in Impact 3.3-3, development consistent with the proposed BSMP would result in substantial emissions of ROG, NO_x and PM₁₀, which would combine with emissions generated by other existing and future development within the SVAB to contribute to an air quality violation in the region.

Consequently, without mitigation, the proposed BSMP's contribution to ROG, NO_x and PM₁₀ emissions would be cumulatively considerable, resulting in a **significant cumulative** impact.

Mitigation Measures

Mitigation Measure 3.3-8: FRAQMD Best Available Mitigation Measures (BSMP/NR/KER)

Implement Mitigation Measure 3.3-2.

Significance After Mitigation: Mitigation Measure 3.3-8 would reduce the proposed BSMP's net contribution of ozone precursors (i.e., ROG and NO_x) and PM₁₀ by encouraging the use of electric vehicles and walk or bike. These mitigation measures would reduce mobile emissions of ROG, NO_x and PM₁₀, but not below the FRAQMD's significance threshold. Therefore, operation of the proposed BSMP would generate cumulatively considerable emissions of ROG, NO_x and PM₁₀ that would result in a **significant and unavoidable** impact.

Impact 3.3-9: The proposed BSMP could contribute to cumulative increases in CO concentrations.

Cumulative traffic was analyzed to determine its potential to affect CO concentrations along surface streets proximate to sensitive receptors near the BSMP site. A review of the traffic data shows that 26 intersections would result in an LOS below E during the AM or PM peak hours during cumulative year 2040. **Table 3.3-14** shows the results of the cumulative CO modeling. As shown in Table 3.3-14, there would be no exceedances of the CO 1- hour or 8-hour standard at any of the eighteen intersections. Thus, the proposed BSMP would result in a **less-than-significant** cumulative impact on local CO concentrations.

**TABLE 3.3-14
 CARBON MONOXIDE CONCENTRATIONS AT AFFECTED INTERSECTIONS
 UNDER CUMULATIVE PLUS BSMP CONDITIONS**

Intersection	CO Concentrations	
	1-hour (ppm)	8-hour (ppm)
SR 99 / SR 20	2	2
SR 99 / Sunsweet Boulevard	2	1
SR 99 / Bridge Street	2	1
SR 99 / Franklin Road	2	1
SR 99 / Hunn Roa	1	1
SR 99 / Richland Road	1	1
SR 99 / Lincoln Road	2	1
SR 99 / Smith Road	1	1
SR 99 / Bogue Road	2	1
SR 99 / Stewart Road	1	1
SR 99 / Reed Road	1	1
SR 99 / Walnut Avenue	1	1
SR 99 / Barry Road	1	1
S. Walton Avenue / Bridge Street	1	1
S. Walton Avenue / Franklin Road	1	1
S. Walton Avenue / Richland Road	1	1
S. Walton Avenue / Lincoln Road	1	1
S. Walton Avenue / Bogue Road	1	1
Phillips Road / Lincoln Road	1	1
Railroad Avenue / Lincoln Road	1	1
Garden Highway / Lincoln Road	1	1
Phillips Road / Bogue Road	1	1
Railroad Avenue / Bogue Road	1	1
Wallace Drive / Stewart Road	1	1
Garden Hwy/ Bogue Road	1	1
Gilsizer Ranch Way / Bogue Road	1	1
Threshold	20	9
Exceed Threshold?	No	No

NOTES:

CO concentrations include a worst case 1-hour CO background concentration of 0.3 ppm and a worst case 8-hour background concentration of 0.3 ppm. The modeled 1-hour concentrations were converted to 8-hour concentrations using a persistence factor of 0.80. CALINE4 modeling results and additional assumptions are included in Appendix C.

Mitigation Measure

None required.

Impact 3.3-10: The proposed BSMP could contribute to cumulative increases in short- and long-term exposures to Toxic Air Contaminants.

Construction

The evaluation of health risks from TAC represents a local rather than regional analysis. The analysis described in Impact 3.2-5 shows that TACs and resulting health risks produced during construction and full-buildout of the BSMP would result in a potentially significant impact. The FRAQMD considers the project-level threshold of significance for evaluating TACs generated by a project as also applicable to a project's contribution to cumulative TACs. Therefore, since the BSMP would not have a significant project-specific health risk during its construction, it would also not cause or contribute to a significant cumulative health risk. This impact is **potentially significant**.

Operation

As discussed under Impact 3.2-5, TAC emissions generated during the operation of the BSMP would be regulated through the FRAQMD permitting process. The highest average daily traffic along SR 99 under cumulative plus the proposed BSMP condition is 37,875 vehicles per day, well below CARB's 50,000 vehicles per day threshold established by CARB for significant health risks. As a result, impacts associated with exposure of sensitive receptors to substantial toxic air emissions from stationary and mobile source operations would be **less than significant**.

Mitigation Measure

Mitigation Measure 3.3-10: Equipment Emissions Plan (BSMP/NR/KER)

Implement Mitigation Measure 3.3-1(e).

Significance After Mitigation: With implementation of **Mitigation Measure 3.3-1(e)**, health risks associated with construction of the BSMP would be reduce to be **less than significant**.

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3.4 Biological Resources

This section assesses the potential effects on biological resources of implementing the proposed Bogue Stewart Master Plan (BSMP). The section includes a description of relevant baseline information including: a description of the habitat types within the BSMP area; a description of special-status plant and wildlife species that could potentially occur in the BSMP area; and the federal, state, and regional regulations that protect plant and wildlife species and the regulatory agencies that enforce these standards. A description of the potential impacts resulting from implementation of the proposed BSMP is also provided, as well as feasible mitigation (where applicable) to avoid or lessen the magnitude of significant impacts. In addition to evaluating the environmental impacts resulting from implementation of the overall BSMP, this section also describes the potential project-specific impacts resulting from implementation of the Newkom Ranch (Phase 1) and Kells East (Phase 2) developments, where specific information is known for those areas.

Comments on the notice of preparation relevant to biological resources were received from a local individual. The scoping comments focused on nesting raptors and migratory birds and are addressed in this section.

The primary sources of data referenced for this section include the Yuba City General Plan,¹ the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) List of Regionally Occurring Special-Status Species,² the U.S. Fish and Wildlife Service (USFWS) List of Federally Threatened and Endangered Species that May Occur in the Project Location,³ and the California Native Plant Society (CNPS) Plant List of Regionally Occurring Special-Status Plants.⁴

3.4.1 Environmental Setting

Project Location

The BSMP area is located within a rural area in the eastern border of Sutter County, just south of Yuba City. The BSMP area is surrounded by residential development to the north, a levee along Feather River to the east, and low density, estate residential, and agriculture to the west and south. The BSMP area is bordered by Stewart Road to the south, South Walton Avenue to the west, Bogue

¹ City of Yuba City, 2004. *Yuba City General Plan*. Resolution #04-049. Adopted April 8, 2004.

² California Department of Fish and Wildlife, 2017. California Natural Diversity Database. (CNDDDB: Browns Valley, Gilsizer Slough, Kirkville, Nicolaus, Olivehurst, Sheridan, Sutter, Sutter Buttes, Sutter Causeway, Tisdale Weir, Wheatland, and Yuba U.S. Geological Survey 7.5-minute series quadrangles), Sacramento, California. Accessed April 14, 2017.

³ California Native Plant Society, 2017. Inventory of Rare and Endangered Plants (online edition, v8-01a) (CNPS: Browns Valley, Gilsizer Slough, Kirkville, Nicolaus, Olivehurst, Sheridan, Sutter, Sutter Buttes, Sutter Causeway, Tisdale Weir, Wheatland, and Yuba U.S. Geological Survey 7.5-minute series quadrangles). Accessed April 14, 2017.

⁴ U.S. Fish and Wildlife Service, 2017. List of Threatened and Endangered Species that May Occur in your Proposed Project Location, and/or May Be Affected by your Proposed Project. Consultation Code" 08ESMF00-2017-SLI-1775, Event Code: 08ESMF00-2017-E-04488. Accessed April 14, 2017.

Road to the north, and Feather River West Levee to the east. The BSMP area is bisected by State Route 99 (SR 99) within the western portion and residential development, a school, and maintained grassland within the eastern portion. The BSMP area consists primarily of agricultural land comprised of orchards and includes low density rural residential development, non-native annual grassland, and an unlined canal. Gilsizer Slough, which is an approximately 20-foot-wide concrete-lined irrigation canal, extends north to south through the western portion of the BSMP area.

The BSMP area is located in Sections 3 and 4, Township 14 North, and Range 3 East of the Gilsizer Slough⁵ and in un-sectioned portions of Townships 14 and 15 North, and Range 3 East of the Olivehurst⁶ U.S. Geological Survey 7.5-minute series quadrangles, Mount Diablo Base and Meridian. See Figure 2-2 in Chapter 2, Project Description delineating the BSMP project site.

Methodology

A reconnaissance-level biological survey was conducted within the Newkom Ranch (Phase 1) and Kells East Ranch (Phase 2) areas of the BSMP project site on November 11, 2016. The purpose of the survey was to map habitat types and to determine whether special-status species have the potential to occur within these portions of the BSMP area based on those habitat types. The biologist drove along roads and driveways throughout the remainder of the BSMP area (Final Phase), where accessible. The entire BSMP area was not surveyed to protocol-level for any resource. For further discussion regarding methodology please refer to Methodology and Assumptions discussion in Section 3.4.3, Analysis, Impacts, and Mitigation.

Project Setting

The BSMP area is located in the Sacramento Valley subregion, Great Valley region of the California Floristic Province.⁷ This area is characterized by a Mediterranean climate typical of the Great Valley of California. The annual precipitation in Marysville (approximately 5 miles to the east) is 20.96 inches (with the wettest period during November through March), and average daily temperatures range from 38°F in December to 96.3°F in July.⁸ The local topography is flat to gently sloping. The elevation ranges from 40 to 60 feet above mean sea level (MSL).

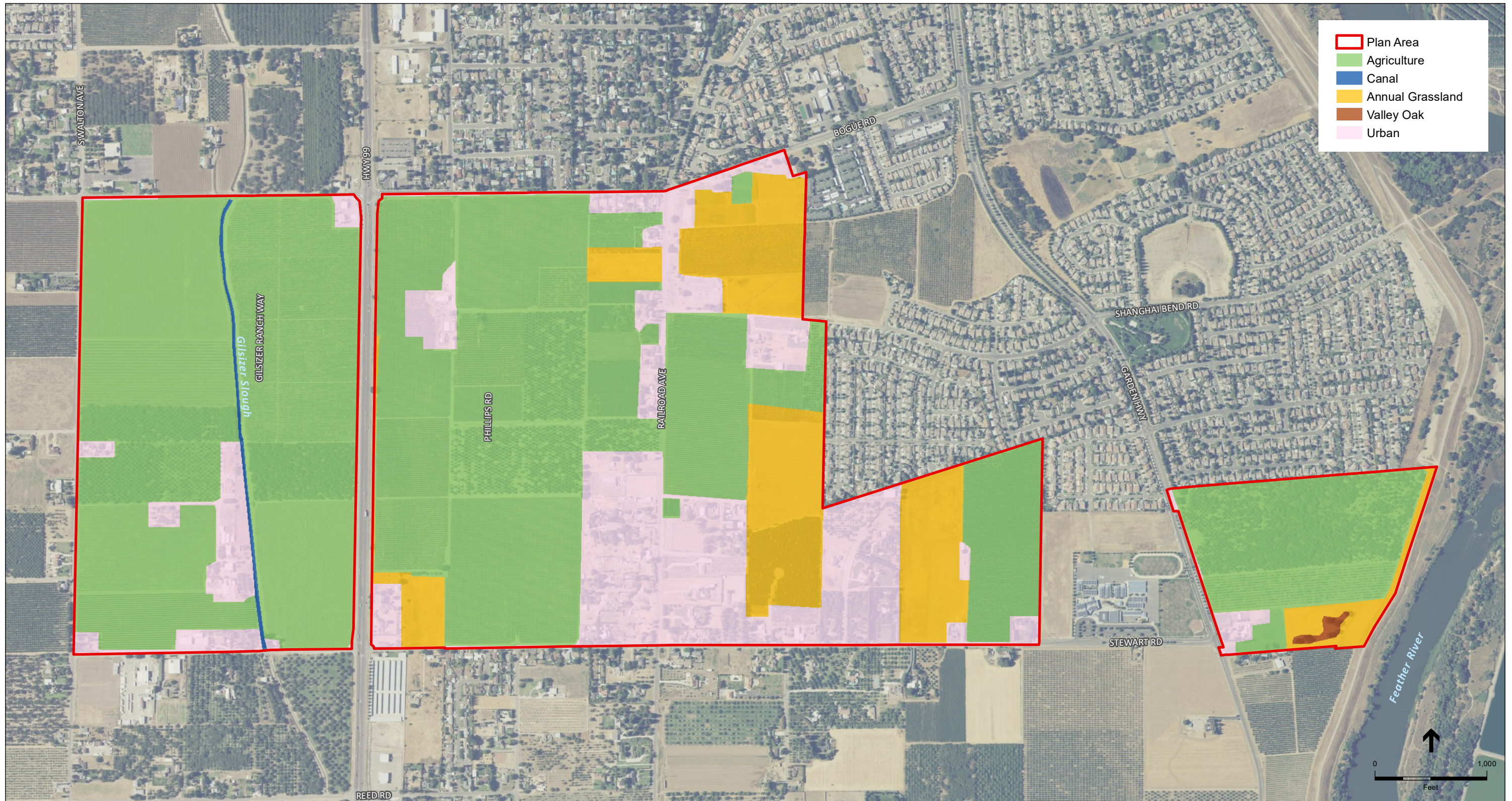
Habitat types within the BSMP area include agricultural, non-native annual grassland, developed, oak woodland, and man-made cement-lined irrigation canal (i.e., Gilsizer Slough). **Table 3.4-1** details the approximate acreage of each habitat type within the BSMP area by phase. Habitat types that could be impacted within each phase of the proposed BSMP are shown in **Figure 3.4-1**.

⁵ U.S. Geological Survey, 1952. Gilsizer Slough, California. U.S. Geological Survey 7.5-minute series quadrangles Mount Diablo Base and Meridian (MDBM). SE/4 Marysville 15' Quadrangle. 39121-A6-TF-024. Photorevised 1973. DMA 1662 II SE-Series V895.

⁶ U.S. Geological Survey, 1952. Olivehurst, California. U.S. Geological Survey 7.5-minute series quadrangles Mount Diablo Base and Meridian (MDBM). SE/4 Marysville 15' Quadrangle. 39121-A5-TF-024. Photorevised 1973. DMA 1662 II SE-Series V895.

⁷ Baldwin, B. G., D.H Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors, 2012. The Jepson Manual; Vascular Plants of California, Second Edition. University of California Press, Berkeley, California.

⁸ Western Regional Climate Center. Marysville, California (045385), Period of Record Monthly Climate Summary, Period of Record: 02/01/1897 to 10/31/2007. <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5385>. Accessed April 14, 2017.



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**TABLE 3.4-1
 APPROXIMATE ACREAGE OF LAND COVER TYPES BY MASTER PLAN PHASE**

Land Cover Type	Newkom Ranch (Phase 1)	Kells East (Phase 2)	Final Phase	Total Potentially Affected	Percent Composition
Agricultural	160.68	93.34	252.12	505.28	68
Non-Native Annual Grassland	--	--	91.61	92.47	12
Developed	7.86	0.97	131.63	140.46	19
Valley Oak Woodland	--	--	1.23	1.23	<1
Man-Made Drainage Canal (Gilsizer Slough)	--	0.42	1.76	2.18	<1
Total	168.54	94.72	478.36	741.62	100

SOURCE: Environmental Science Associates, 2017. Geographic Information System Habitat Acreage Calculations.

Upland Habitat

All three phases of the BSMP area contain agricultural land comprised primarily of walnut (*Juglans* sp.) orchards. Understory vegetation consists of scattered weeds including prickly lettuce (*Lactuca serriola*), ripgut brome (*Bromus diandrus*), and cranesbill (*Geranium molle*). Large, mature, isolated oak (*Quercus* sp.) trees occur within the agricultural land.

Non-native annual grassland occurs within the final phase of the proposed BSMP (i.e., outside Newkom and Kells East ranches). Dominant vegetation includes redstem filaree (*Erodium cicutarium*), Johnson’s grass (*Sorghum halepense*), turkey-mullein (*Croton setigerus*), prickly lettuce, cranebill, and medusa head (*Elymus caput-medusae*). Large, mature, isolated oak trees occur within the non-native annual grassland.

All three phases of the BSMP area contain developed areas. Developed areas include residential dwellings, agricultural infrastructures including barns and warehouses, a cell phone tower, and ornamental landscaping. Ornamental landscape trees include mature coast redwood (*Sequoia sempervirens*), eucalyptus sp. (*Eucalyptus* sp.), sycamore (*Platanus* sp.), crape myrtle (*Lagerstroemia* sp.), oleander (*Nerium* sp.), edible fig (*Ficus carica*), Italian cypress (*Cupressus sempervirens*), and deadar cedar (*Cedrus deodara*).

A small area of valley oak woodland occurs within the southeastern portion of the final phase. Overstory vegetation consists of valley oak (*Quercus lobata*). Understory vegetation are similar to those identified within the non-native annual grassland habitat.

Aquatic Habitat

Gilsizer Slough extends from north to south through the western portion of the BSMP area. As noted above, it is a concrete-lined canal within the BSMP area and meanders along the western portion of Kells East and the eastern edge of the final phase. The Gilsizer Slough lacks vegetation within the bed and along the banks. The majority of the canal was dry except for a few ponded

areas during a November 11, 2016 reconnaissance-level biological survey. The Feather River flows immediately to the east of the BSMP area, but is physically separated from it by a levee.

Wetlands/Waters of the U.S.

A formal delineation of jurisdictional waters of the U.S. was not conducted within the BSMP area. Although Gilsizer Slough has been channelized, the U.S. Army Corps of Engineers (USACE) may consider it jurisdictional if it has a significant nexus to a waters of the U.S. downstream outside the BSMP area. This would be determined by a formal wetland delineation (which was not within the scope of this analysis). No other wetland features were observed within the BSMP area as a result of this reconnaissance-level survey.

Sensitive Natural Communities

The CNDDDB generates a list of ecologically sensitive and/or threatened habitat types within the state of California. The CNDDDB list documents the following sensitive communities within the vicinity of the BSMP area: coastal and valley freshwater marsh, great valley cottonwood riparian forest, great valley mixed riparian forest, and northern hardpan vernal pool. There are no sensitive natural communities present within the BSMP area, aside from potential wetlands and waterways, discussed above.

Wildlife Corridors

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. Fragmentation can also occur when a portion of one or more habitats is converted into another habitat, such as when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or grading activities. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The BSMP area is not part of a major or local wildlife corridor/travel route because it does not connect two significant habitat areas. The BSMP area is surrounded by residential development to the north, the levee along the Feather River to the east, and low density residential and agriculture to the west and south. In addition, the BSMP area is divided into three separate areas due to SR 99, Garden Highway, and a school. Gilsizer Slough, which extends north to south through the western portion of the site, lacks overstory vegetation used by wildlife for cover and is surrounded by active agricultural land on all sides. Therefore, no wildlife corridors occur within the BSMP area.

Special-Status Species

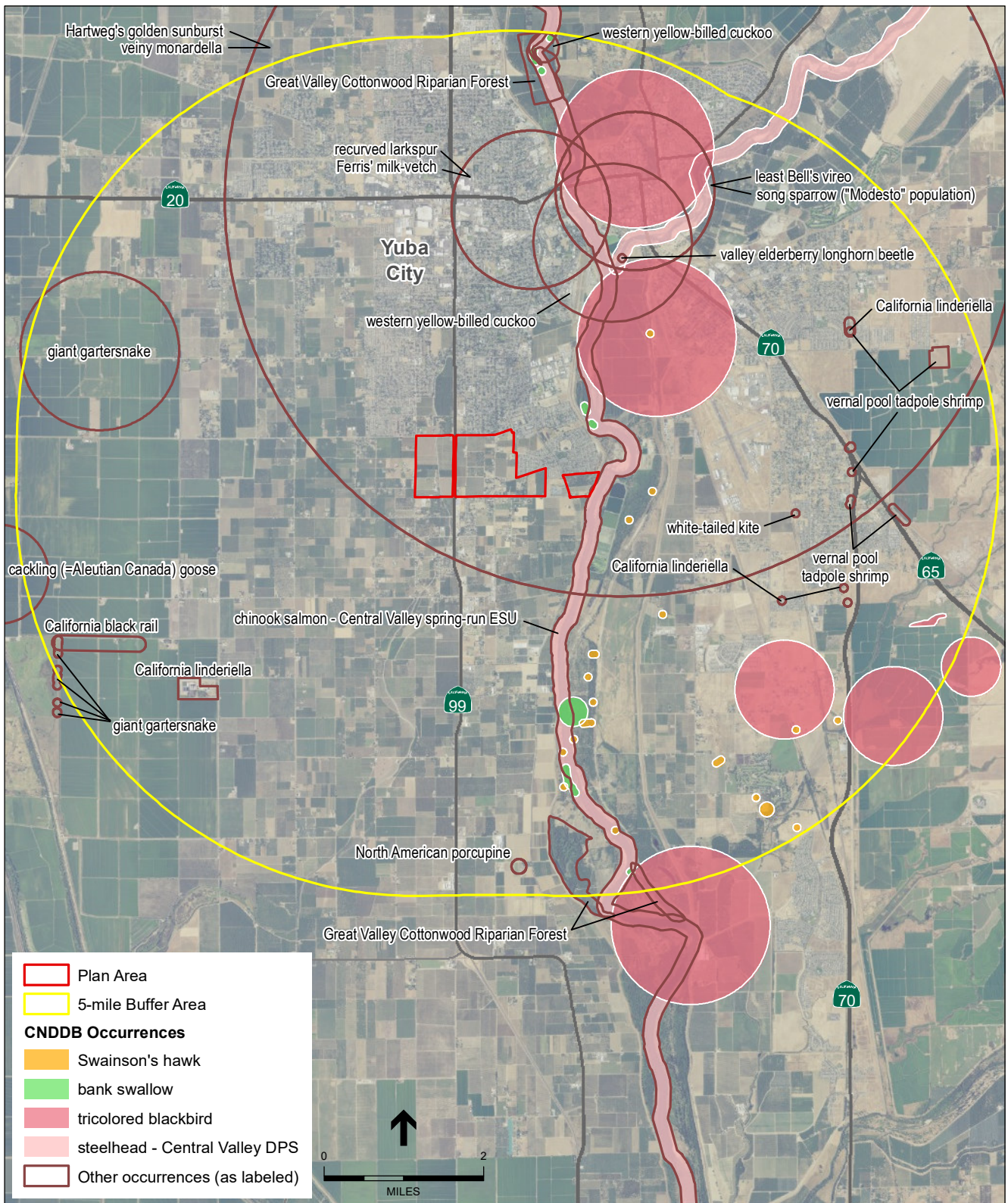
For the purposes of this EIR, special-status species include species listed, proposed, or candidate species for listing as threatened or endangered by the USFWS; species designated as species of special concern by the CDFW; species listed as rare, threatened, or endangered by the CDFW pursuant to the California Endangered Species Act (CESA); species designated as fully protected under Sections 3511 (birds), 4700 (mammals), and 5050 (reptiles and amphibians) of the California Fish and Game Code; plant species listed as California Rare Plant Rank (CRPR) 1B or 2 by the CNPS; and species not currently protected by statute or regulation, but considered rare, threatened, or endangered under CEQA (section 15380).

Special-status species considered for this analysis are based on the CNDDDB, CNPS, and USFWS lists (**Appendix D-1**). CNDDDB occurrences of special-status species documented within five miles of the BSMP are illustrated within **Figure 3.4-2**. Appendix D-1 includes the common and scientific names for each species, regulatory status (federal, State, local), habitat descriptions, and potential for occurrence on the BSMP. A reconnaissance-level biological survey was conducted on November 11, 2016 to determine whether the BSMP area contains known special-status species or provides habitat for potentially occurring special-status species. Special-status species determined to not having the potential to occur are based on the BSMP project site lacking suitable habitat or occurring outside of the known extant geographic or elevation ranges; these species are not discussed further in this section, except for an explanation as to why giant garter snake (*Thamnophis gigas*) does not have the potential to occur within the BSMP area.

The USFWS identifies the following essential habitat components for giant garter snake: (1) adequate water during the snake's active season (early spring through mid-fall) to provide adequate permanent water to maintain dense populations of food organisms; (2) emergent, herbaceous wetland vegetation, such as cattails (*Typha* sp.) and bulrushes (*Bolboschoenus* sp. and *Schoenoplectus* sp.), for escape cover and foraging habitat during the active season; (3) upland habitat with grassy banks and openings in waterside vegetation for basking; and (4) higher elevation upland habitats for cover and refuge from flood waters during the snake's inactive season in the winter.⁹ Within Sutter County, the Gilsizer Slough Giant Garter Snake Conservation Complex is a 620-acre site on Gilsizer Slough approximately 8 miles southwest of the BSMP area.

The BSMP area does not provide suitable aquatic habitat for giant garter snake. Gilsizer Slough is located within the western portion of the BSMP project site, but lacks aquatic emergent or water-edge vegetation, lacks upland habitat with grassy banks and openings in waterside vegetation for basking, and lacks a permanent water source given that the majority of the canal was dry during the November 11, 2017 survey. Additionally, the BSMP project site is located approximately four miles east of the nearest documented CNDDDB records. These records occur in agricultural land comprised of irrigated rice crops, not agricultural land comprised primarily of orchards.

⁹ U.S. Fish and Wildlife Service, 1999. Draft Recovery Plan for the Giant Garter Snake (*Thamnopsis gigas*). U.S. Fish and Wildlife Service, Portland, Oregon. ix + 192 pp.



SOURCE: Esri, 2018; City of Yuba City, 2016; CDFW, 2019; ESA, 2019

Bogue Stewart Master Plan . 140720

Figure 3.4-2
Special-status Species Occurrences
within 5 miles of the Plan Area

Table 3.4-2 summarizes special-status species with the potential to occur within the BSMP area based on suitable habitat.

**TABLE 3.4-2
 SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE BSMP**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description/ Blooming Period ^{10,11}	Potential to Occur in the BSMP
Plants			
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	--/--/1B	Annual herb found in mesic areas of cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, and vernal pools from 5 to 1,740 meters. Blooms April through July.	Yes. The non-native annual grassland and oak woodland provide habitat for this species.
Dwarf downingia <i>Downingia pusilla</i>	--/--/2B	Annual herb found occasionally in mesic areas within valley and foothill grassland and vernal pools from 1 to 445 meters. Blooms March through May.	Yes. The non-native annual grassland provides habitat for this species.
Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i>	--/--/1B	Annual herb found in meadows and seeps, which are occasionally vernal mesic, and valley and foothill grassland, which are occasionally on subalkaline flats, from 2 to 75 meters. Blooms April through May.	Yes. The non-native annual grassland provides habitat for this species.
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	FE/CE/1B	Annual herb found on clay, often acidic substrate in cismontane woodland and valley and foothill grassland from 15 to 150 meters. Blooms March through April.	Yes. The non-native annual grassland and oak woodland provide habitat for this species.
Invertebrates			
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT/-- /--	Host plant is elderberry (<i>Sambucus</i> sp.) shrubs usually associated with riparian areas. Adults emerge in spring until June. Exit holes visible year-round.	Yes. While no elderberry shrubs were observed, the survey was only reconnaissance in nature. The BSMP project site may provide habitat for this species.
Birds			
Burrowing owl <i>Athene cucularia</i>	--/CSC/-- (burrowing sites and some wintering sites)	Nests in burrows in the ground, often in old ground squirrel burrows or badger, within open dry grassland and desert habitat. The burrows are found in dry, level, open terrain, including prairie, plains, desert, and grassland with low height vegetation for foraging and available perches, such as fences, utility poles, posts, or raised rodent mounds. Found year-round. Breeding season extends from March to August.	Yes. The non-native annual grassland and agricultural land provide nesting and wintering habitat for this species.

¹⁰ California Native Plant Society, 2017. Inventory of Rare and Endangered Plants (online edition, v8-01a) (CNPS: Browns Valley, Gilsizer Slough, Kirkville, Nicolaus, Olivehurst, Sheridan, Sutter, Sutter Buttes, Sutter Causeway, Tisdale Weir, Wheatland, and Yuba U.S. Geological Survey 7.5-minute series quadrangles). Accessed April 14, 2017.

¹¹ Nature Serve, 2017. *Nature Serve Explorer: An Online Encyclopedia of Life* [Web Application]. Version 7.1. NatureServe, Arlington, Virginia. Available online at: <http://www.natureserve.org/explorer>. Accessed July 10, 2017.

**TABLE 3.4-2
 SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE BSMP**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description/ Blooming Period ^{10,11}	Potential to Occur in the BSMP
Birds (cont.)			
Northern harrier <i>Circus cyaneus</i>	--/CSC/--	Forages in meadows, grasslands, and open rangelands; nests on the ground in shrubby vegetation, often near marshes. Nesting extends from March to September.	Yes. The non-native annual grassland provides potential nesting and foraging habitat for this species.
Song sparrow <i>Melospiza melodia</i>	--/CSC	Nests on the ground and in marshes. Inhabits grassland, chaparral, orchard, woodland, wetland, riparian, and scrub-shrub. Nesting extends from March to September.	Yes. The non-native annual grassland, oak woodland, and orchard provide potential nesting and foraging habitat for this species.
Swainson's hawk <i>Buteo swainsoni</i>	--/CT/--	Nests peripherally to valley riparian systems and within lone trees or groves of trees in agricultural fields. Valley oak, Fremont cottonwood (<i>Populus fremontii</i> ssp. <i>fremontii</i>), walnut, and large willow (<i>Salix</i> sp.) trees, ranging in height from 41 to 82 feet, are the most commonly used nest trees in the Central Valley. Breeding season extends from March 1 through September 14.	Yes. The agricultural land is comprised of orchards, which does not provide suitable foraging habitat. The non-native annual grassland provides foraging habitat for this species. The mature trees within the non-native annual grassland, oak woodland, and developed areas provide nesting habitat for this species.
White-tailed kite <i>Elanus leucurus</i>	--/CFP/-- (nesting)	Nests in isolated trees or woodland areas with suitable open foraging habitat. Nesting season extends from February 15 to August 31.	Yes. The trees within the non-native annual grassland, oak woodland, and developed areas provide nesting and foraging habitat for this species.
Mammals			
Pallid bat <i>Antrozous pallidus</i>	--/CSC/--	Most abundant in oak woodland, savannah, and riparian habitats. Roosts in crevices and hollows in trees, rocks, cliffs, bridges, and buildings.	Yes. The trees within the non-native annual grassland, oak woodland, and developed areas and the buildings within the developed areas provide roosting habitat for this species.

Special-Status Plants

The non-native annual grassland within the BSMP project site provides habitat for the following species: dwarf downingia and Ferris' milk-vetch. The non-native grassland and oak woodland provide habitat for Baker's navarretia and Hartweg's golden sunburst. Although no special-status plants were observed within the BSMP area, the reconnaissance-level survey was conducted outside of the evident and identifiable blooming period for these species. These special-status plants have the potential to occur within the BSMP area.

Special-Status Wildlife

The BSMP project site could provide habitat for valley elderberry longhorn beetle, as it is located within the general geographic range of this species. The non-native annual grassland, oak woodland, orchards associated with agricultural land, and developed areas provide nesting habitat

for the migratory birds and other birds of prey that are protected under the federal Migratory Bird Treaty Act (MBTA) (50 CFR 10) and/or Section 3503 of the California Fish and Game Code including: burrowing owl, northern harrier, song sparrow, Swainson's hawk, and white-tailed kite. The trees within the non-native annual grassland, oak woodland, and developed areas and the buildings within the developed areas provide roosting habitat for pallid bat.

Suitable foraging habitat for Swainson's hawk includes alfalfa, fallow fields, beet, tomato, and other low-growing row or field crops, dryland and irrigated pasture, rice land (when not flooded), and cereal grain crops (including corn after harvest). The CDFW considers important suitable foraging habitat to be any of these vegetation types/agricultural crops occurring within ten miles of an active Swainson's hawk nest, in accordance with the Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (Appendix D-5).¹² The agricultural land within the BSMP project site is comprised of orchards, which does not provide suitable foraging habitat. The non-native annual grassland within the BSMP project site provides suitable foraging habitat for Swainson's hawk.

3.4.2 Regulatory Framework

Federal

Federal Clean Water Act

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Section 404 of the CWA regulates activities that result in discharge of dredged or fill material into waters of the United States. The USACE is responsible for permitting certain types of activities affecting wetlands and "other" waters of the United States. Under Section 404 of the CWA, the USACE has the authority to regulate activities that discharge fill or dredge material into wetlands or other waters of the U.S. The USACE implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland values or acres.

The State Water Resources Control Board (SWRCB) has authority over wetlands through Section 401 of the CWA, which requires that an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the U.S.) first obtain certification from the appropriate state agency stating that the fill is consistent with the State's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the SWRCB to the nine regional boards. The Central Valley Regional Water Quality Control Board is the appointed authority for Section 401 compliance in the BSMP area. A request for certification or waiver is submitted to the regional board at the same time that an application is filed with the USACE. The regional board has 60 days to review the application and act on it. Because no USACE permit is valid under the CWA unless "certified" by the state, the board may effectively veto or add conditions to any USACE permit.

¹² California Department of Fish and Game, 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) (16 U.S. Code Section 1531 et seq.) protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways. The first pathway is a Section 10(a) incidental take permit, which applies to situations where a non-federal government entity must resolve potential adverse impacts to species protected under the FESA. The second pathway involves Section 7 consultation, which applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval such as a Section 404 permit under the CWA, or receiving federal funding.

FESA defines an endangered species as “any species or subspecies that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” The term “take” means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect or to attempt to engage in any such conduct.”

Migratory Bird Treaty Act

The MBTA (16 USC, Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

State

Porter-Cologne Water Quality Control Act

The SWRCB and the nine Regional Water Quality Control Boards (RWQCB) are the principal state agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (California Water Code Section 13000 et seq.), the Legislature declared that the “state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation...” (California Water Code Section 13000).

The Porter-Cologne Act grants the SWRCB and RWQCB the authority to implement and enforce the water quality laws, regulations, policies, and plans to protect the groundwater and surface waters of the state. Waters of the state determined to be jurisdictional would require, if impacted, waste discharge permitting and/or a CWA Section 401 certification (in the case of the required USACE permit). The enforcement of the state’s water quality requirements is not solely the purview of the Board and their staff. Other agencies (e.g., the CDFW) also have the ability to enforce certain water quality provisions in state law.

California Endangered Species Act

The CESA was enacted in 1984. Under CESA, the California Fish and Game Commission has the responsibility for maintaining a list of threatened species and endangered species. Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project site and determine whether the proposed project would have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project which may impact a candidate species. “Take” of protected species incidental to otherwise lawful management activities may be authorized under Fish and Game Code Section 206.591.

Authorization from the CDFW would be in the form of an Incidental Take Permit under Section 2801. Project-related impacts to species on the CESA endangered or threatened list would be considered significant.

California Fish and Game Code

Fully Protected Species

Under the California Fish and Game code, certain species are *fully protected*, meaning that the Code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals. Except as provided in Sections 2081.7 or 2835, fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the species for the protection of livestock.

Protection of Birds

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, while other specified birds are protected under Section 3505.

Streambed Alteration Agreements

The CDFW has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Section 1600 et seq. through administration of lake or streambed alteration agreements. The CDFW has the authority to regulate work that will “substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river lake or stream.” The CDFW enters into a streambed alteration agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources. Because the CDFW includes under its

jurisdiction streamside habitats that may not qualify as wetlands under the federal CWA definition, the CDFW jurisdiction may be broader than USACE jurisdiction.

A project proponent must submit a notification of streambed alteration to the CDFW before construction commences. The notification requires an application fee for streambed alteration agreements, with a specific fee schedule to be determined by the CDFW. The CDFW can enter into programmatic agreements that cover recurring operation and maintenance activities and regional plans. These agreements are sometimes referred to as Master Streambed Alteration Agreements (MSAAs).

California Rare Plant Rank

The CNPS maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California as a system of California Rare Plant Ranks (CRPRs). Potential impacts to populations of CNPS-listed plants may receive consideration under CEQA review. The following identifies the definitions of the CRPR listings:

- Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.
- Rank 2A: Plants presumed extirpated in California, but more common elsewhere.
- Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere.
- Rank 3: Plants about which more information is needed - A Review List.
- Rank 4: Plants of limited distribution - A Watch List.

In general, CRPR¹³ 1A, 1B, 2A, or 2B plants are considered to meet the criteria of CEQA Guidelines Section 15380 and impacts to these species are considered “significant” in this EIR.

Species of Special Concern

The CDFW maintains lists for candidate-endangered species and candidate-threatened species. California candidate species are afforded the same level of protection as listed species. California also designates species of special concern, which are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species or fully protected species, but may be added to official lists in the future. The CDFW intends the species of special concern list to be a management tool for consideration in future land use decisions.

¹³ CRPRs also include Code Extensions which add detail to individual rankings as defined below:

- .1 = Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- .2 = Fairly threatened in California (20-80 percent occurrences threatened)
- .3 = Not very threatened in California (less than 20 percent of occurrences threatened or no current threats known)

CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria that define “endangered” and “rare” as specified in CEQA Guidelines section 15380(b).

Local

The BSMP area is currently in unincorporated Sutter County and under jurisdiction of its General Plan goals, policies, and ordinances. As a result of the implementation of the BSMP, this area would be annexed into the City of Yuba City and development resulting from plan implementation must be found to be substantially compliant with its General Plan goals, policies, and ordinances. Although within the City, adjacent areas to the west and south would remain unincorporated; therefore, BSMP development would still need to consider the County’s goals, policies, and ordinances at those adjacent areas. The following presents those goals, policies, and ordinances of both the Yuba City General Plan and the Sutter County General Plan that address a project’s effect to biological resources.

City of Yuba City General Plan

The following goals and policies from the City of Yuba City General Plan are relevant to biological resources.

Guiding Policy 8.4-G-1 Protect special-status species, in accordance with State regulatory requirements.

Guiding Policy 8.4-G-3 Preserve and enhance heritage oaks in the Planning Area.

Implementing Policies

- 8.4-I-1 Require protection of sensitive habitat areas and special status species in new development site designs in the following order: 1) avoidance; 2) onsite mitigation, and 3) offsite mitigation. Require assessments of biological resources prior to approval of any development within 300 feet of any creeks, sensitive habitat areas, or areas of potential sensitive status species.

- 8.4-I-2 Require preservation of oak trees and other native trees that are of a significant size, by requiring site designs to incorporate these trees to the maximum extent feasible.

The proposed project is consistent with the City’s General Plan policies.

Yuba City Municipal Code

The following goals and policies from Chapter 3, Street Trees of the City of Yuba City’s Municipal Code are relevant to biological resources goals and policies pertaining to the development of the proposed project:

Section 9-3.05. Removing

- (d) Any person who wishes to remove a tree from the planting strip or planting easement abutting his property shall make written application to and obtain a permit from the Director. The Director shall determine whether such tree is required to be retained in order to preserve the intent and purpose of the street tree plan and whether a replacement tree is required. In making his determination, the Director shall consider the inconvenience or hardship which retention of the tree would cause the property owner and consider also the condition, age, desirability of variety, and location of the tree. If the Director finds that the tree may be removed without violating the intent and spirit of the street tree plan, he may authorize the property owner to remove such tree at his own expense and liability. If a permit is granted for removal of a street tree, all removal work shall be completed within sixty (60) calendar days from the date of the issuance of the permit and shall be under the general supervision of, and in accordance with, rules established by the Director. All tree stumps shall be removed completely. All removal permits shall be void after the expiration of sixty (60) calendar days from the date of issuance unless extended by the Director. When a replacement tree is required, the property owner shall supply and plant the tree at his own expense. (§ 1, Ord. 563, eff. December 18, 1968)

Section 9-3.06. Protection

- (b) It shall be unlawful for any person to trim, prune, spray, or cut any street tree in a planting strip or planting easement without first obtaining permission from the Director.

Section 9-3.09. Violations

It shall be unlawful for any person to injure or destroy by any means any tree planted or maintained by the City in a planting strip or planting easement, including, but not limited to, the following:

- (a) Damaging, cutting, or carving the bark of any tree;
- (b) Causing or permitting any wire charged with electricity to be attached to any tree;
- (c) Allowing any gaseous, liquid, or solid substance harmful to trees to come in contact with the roots, leaves, bark, or any other part of any tree;
- (d) Constructing a concrete sidewalk or driveway or otherwise filling up the ground around any tree so as to shut off air or water from its roots;
- (e) Piling building materials, equipment, or other substance around any tree;
- (f) Posting any sign, poster, notice, or other object on any tree, tree stake, or guard, or fastening any guy wire, cable, rope, nails, screws, or other device to any tree, tree stake, or guard; or
- (g) Causing or encouraging any fire or burning near or around any tree. (§ 1, Ord. 563, eff. December 18, 1968)

Sutter County General Plan

The following goals and policies from the Sutter County General Plan are relevant to biological resources.

Goal ER 1 Support a comprehensive approach for the conservation, enhancement, and regulation of Sutter County’s significant habitat and natural open space resources.

Policies

- ER 1.5 Resource Assessment. Require discretionary development proposals that could potentially impact biological resources to conduct a biological resources assessment to determine if any resources will be adversely affected by the proposal and, if so, to identify appropriate measures to avoid or mitigate such impacts.
- ER 1.6 Avoidance. Ensure that new development projects avoid, to the extent feasible, significant biological resources (e.g. areas of rare, threatened, or endangered species of plants, riparian areas, vernal pools), except where such projects are identified as “Authorized Development” within an adopted Habitat Conservation Plan.
- ER 1.7 Mitigation. Mitigate biological and open space effects that cannot be avoided in accordance with an applicable Habitat Conservation Plan and federal, state, and local regulations.
- ER 1.8 Permits. Require that new development secure all necessary state and federal resource permits/approvals prior to any development activity.

Goal ER 2 Conserve, protect, and enhance Sutter County’s significant natural wetland and riparian habitats.

Policies

- ER 2.1 No Net Loss. Require new development to ensure no net loss of state and federally regulated wetlands, other waters of the U.S. (including creeks, rivers, ponds, marshes, vernal pools, and other seasonal wetlands), and associated functions and values through a combination of avoidance, restoration, and compensation.
- ER 2.2 Minimize Surface Runoff. Minimize direct discharge of surface runoff into wetland areas and design new development in such a manner that pollutants and siltation will not significantly affect jurisdictional wetlands.
- ER 2.4 Wetland Mitigation Banks. Encourage the creation and use of regional wetland mitigation banks to the extent that they do not conflict with Sutter County agricultural lands and flood control operations.

Goal ER 3 Conserve, protect, and enhance Sutter County’s varied wildlife and vegetation resources.

Policies

- ER 3.1 Special-Status Species. Preserve special-status fish, wildlife, and plant species (e.g., rare, threatened, or endangered species) and habitats consistent with an applicable Habitat Conservation Plan and federal, state, and local regulations.
- ER 3.6 Natural Vegetation. Preserve important areas of natural vegetation and the ecological integrity of these habitats, where feasible, including but not limited to riparian, vernal pool, marshes, oak woodlands and annual grasslands.
- ER 3.7 Oak Trees. Preserve native oak trees when possible through the review of discretionary development projects and activities. Reduce the loss of oak trees through consideration of tree mitigation/replanting programs. (ER 3-B/ER 3C)
- ER 3.8 Native Plant Use. Encourage the use of native and drought tolerant plant materials, including native tree species, in all public and private landscaping and revegetation projects.

The proposed project is consistent with the Sutter County General Plan policies.

3.4.3 Analysis, Impacts, and Mitigation

Significance Criteria

For the purposes of this EIR, impacts on biological resources are considered significant if the proposed project would:

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community, policies, or regulations or by the CDFW or the USFWS;
- Have a substantial adverse effect on federally or state protected wetlands defined by Sections 401 or 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or by other means;
- Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Methodology and Assumptions

Information for this biological resources impact assessment is based on a review of literature research (e.g., CNDDDB, CNPS, and USFWS) and the results of a reconnaissance-level biological

survey of the BSMP project site conducted on November 11, 2016. The reconnaissance-level biological survey was conducted to gather information on existing habitats, plants, and wildlife found within the BSMP area. For this impact analysis, a conservative assumption is made that all habitat would be lost within the areas designated for development (Figure 3.4-1). Resources potentially impacted by the proposed BSMP have been identified and recommendations for mitigation, if necessary to protect those resources, are provided.

No protocol-level surveys were conducted for this analysis, as currently no defined project-specific development proposals are proposed in the BSMP area. It is assumed that a more detailed biological resources assessment would be prepared for each phase area prior to issuance of a grading permit that would include a comprehensive survey of each project site, including appropriate protocol level surveys and a survey for potential wetlands and other waters of the U.S.

Issues Not Discussed in Impacts

The proposed BSMP would have no impact on the following significance criteria, as discussed below, and are not analyzed further.

- **Have a substantial adverse effect on any riparian habitat or other sensitive natural community, policies, or regulations or by the CDFW or the USFWS.** The BSMP project site does not contain riparian habitat or other sensitive natural communities (excluding aquatic features), and thus these resources could not be adversely affected by the proposed BSMP. This issue is not discussed further in the EIR.
- **Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.** Project implementation would not interfere substantially with the movement of any native resident or migratory wildlife species, because the BSMP project site does not contain any wildlife movement corridors. The BSMP project site does not contain any known wildlife nurseries, such as deer fawning sites. This issue is not discussed further in the EIR.

Impacts and Mitigation Measures

Impact 3.4-1: Development pursuant to the proposed BSMP could impact wetlands or other waters of the U.S.

Full Master Plan, Newkom Ranch, Kells East Ranch

The reconnaissance level survey of the BSMP project site did not identify any wetland features aside from Gilsizer Slough, a man-made canal within the Kells East Ranch and final phase of the BSMP project site, although a formal delineation of potentially jurisdictional waters of the U.S. was not conducted. There is the potential that some wetland features may exist in the areas not surveyed. Aerial imagery of the areas of the BSMP project site not accessed during the reconnaissance survey indicate similar land cover and land uses as the portions of the project site that were surveyed, and do not display visual indicators of potential wetlands or waterways. In addition, wetlands and waterways could establish in the future, prior to project development

activities. Fill or disturbance to a potential wetland or other water of the U.S. is considered a **significant** impact.

Mitigation Measure

Mitigation Measure 3.4-1: Protection of Jurisdictional Waters and Wetlands (BSMP/NR/KER)

- a) Prior to grading activities, the City shall require the project applicant [for an individual project pursuant to the BSMP] to prepare a formal aquatic resources delineation in accordance with the USACE Minimum Standards for Acceptance of Aquatic Resources Delineation Reports¹⁴ for all areas of the individual development project site to determine if any wetlands or other waters of the U.S. potentially subject to Sections 401 and 404 of the CWA exist on that site. If no potential wetlands or other waters of the U.S. are identified, a report shall be submitted to the City for its records and no additional measures are required. If the formal aquatic resources delineation identifies potentially jurisdictional features on an individual project site, then measure 3.4-1(b) shall be implemented (below). If potential canals, streams, or lakes are identified that may be impacted by project activities, mitigation 3.4-1(c) shall also be implemented.
- b) If the formal aquatic resources delineation identifies potentially jurisdictional features on an individual development project site, then the report shall be submitted to the USACE for verification and issuance of a jurisdictional determination. If any wetlands or waters are determined to be under the jurisdiction of the USACE or the RWQCB and may be impacted by project development, then the individual project applicant shall obtain Section 404/401 permits based on the jurisdictional determination with the appropriate regulatory agency for the potentially impacted features. During the permitting process, mitigation measures shall be developed as necessary to reduce impacts on wetlands through avoidance, minimization and/or compensatory mitigation. Permanent losses to potentially jurisdictional wetlands and other waters of the U.S. shall be compensated at a minimum 1:1 ratio (or otherwise agreed upon ratio with the USACE and RWQCB) to achieve a no net loss of wetlands.
- c) If the individual development project would result in impacts to the bed and banks of Gilsizer Slough, or other jurisdictional water courses with a defined bed and bank as identified in an aquatic resources delineation or jurisdictional determination, the City shall notify, or require the project applicant to notify, the CDFW. The CDFW will determine whether a Section 1600 Lake and Streambed Alteration Agreement (LSAA) is required. If required, the individual project applicant shall apply for and adhere to the conditions of the LSAA. This action shall be completed prior to issuance of a grading permit or initiation of other project activities that may impact the canal or other jurisdictional water courses.

¹⁴ U.S. Army Corps of Engineers, 2016. *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports*. U.S. Army Corps of Engineers. January 2016.

Significance After Mitigation: Mitigation Measure 3.4-1 would require that the project achieves a no net loss of wetlands through avoidance and/or mitigation. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-2: Development pursuant to the proposed BSMP could impact valley elderberry longhorn beetle if suitable elderberry shrubs are present within 165 feet of any BSMP construction footprint.

Full Master Plan, Newkom Ranch, Kells East Ranch

Although the reconnaissance survey of the BSMP project site did not identify any elderberry shrubs, the biological survey was reconnaissance in nature and a comprehensive pedestrian or protocol-level survey was not conducted. Further, over time elderberry shrubs could grow and be present prior to the initiation of construction of an individual project developed under the proposed BSMP. Therefore, there is the potential for elderberry shrubs to occur on the project site. According to the USFWS Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) (VELB Impact Assessment, **Appendix D-2**),¹⁵ elderberry shrubs within 165 feet of an individual project area could impact valley elderberry longhorn beetle as a result of project activities. Project activities include, but are not limited to the individual project site, staging areas, spoils sites, and construction access. This would be a **significant** impact.

Mitigation Measure

Mitigation Measure 3.4-2: Protection of Valley Elderberry Longhorn Beetle (BSMP/NR/KER)

- a) The individual project applicant shall engage a qualified biologist to conduct a survey of the construction footprint and 165-foot buffer around the proposed construction footprint to determine whether any elderberry shrubs with stems at least one inch dgl are present. If no such elderberry shrubs are present within 165 feet of construction activities, a report shall be submitted to the City for its records and no additional measures are required.
- b) If elderberry shrubs with stems at least one inch dgl are present within 165 feet of construction activities, the following avoidance measures shall be implemented, at minimum, in accordance with the VELB Impact Assessment.
 1. Fencing shall be installed as close to the construction limits as feasible for shrubs occurring within 165 feet.
 2. In areas where work would occur within near proximity to elderberry shrub, exclusion fencing shall be established a minimum of a 20-foot radius around the shrubs.

¹⁵ U.S. Fish and Wildlife Service, 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). May 2017.

3. An individual project applicant shall engage a qualified biologist to provide worker awareness training for all contractors, work crews, and any onsite personnel, on the status of the VELB, its host plant and habitat, the need to avoid damaging the shrubs, and the possible penalties for non-compliance.
 4. Mechanical weed removal within the drip-line of the shrub shall be limited to the season when adults are not active (August - February) and shall avoid damaging the elderberry.
- c) If elderberry shrubs cannot be avoided or if indirect effects will result in the death of stems or entire shrubs, the elderberry shrubs with stems greater than one inch dgl shall be transplanted.
1. The individual project applicant shall engage a qualified biologist to monitor the transplanting activities.
 2. Elderberry shrubs shall be transplanted when the shrubs are dormant (November through February 14) and after they have lost their leaves.
- d) For shrubs that cannot be avoided, the individual project applicant shall purchase compensatory mitigation for impacts to elderberry shrubs. The appropriate type and amount of compensatory mitigation shall be determined through coordination with the USFWS. Appropriate compensatory mitigation may include purchasing credits at a USFWS-approved conservation bank at a minimum 1:1 ratio, providing onsite mitigation, and/or establishing and/or protecting habitat for the valley elderberry longhorn beetle.

Significance After Mitigation: Mitigation Measure 3.4-2 would ensure that individual projects developed pursuant to the proposed BSMP avoids or reduces the magnitude of impacts to the federally listed valley elderberry longhorn beetle by avoiding impacts to the elderberry shrubs, their host plants, by transplanting during the dormant season, or by mitigating for removal of shrubs. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-3: Development pursuant to the proposed BSMP could result in impacts to nesting migratory birds and raptors.

Full Master Plan, Newkom Ranch, Kells East Ranch

Migratory birds and other birds of prey that are protected under the MBTA and/or Section 3503 of the California Fish and Game Code could nest on or in the vicinity of the BSMP project site. If birds nest in the construction footprint of any individual project developed pursuant to the proposed BSMP (i.e., individual project site, staging areas, spoils sites, construction access, etc.) and construction were to occur during the nesting season (February 1 through August 31) direct mortality could result from removal or damage to eggs or young. Implementation of any element of the BSMP could affect migratory bird nests should they be present in the buildings and outbuildings, if proposed for demolition, in the annual grassland, if proposed for vegetation grading, or in the trees associated with the urban areas, agricultural land, and oak woodland, if

proposed for removal, through direct mortality because of removal of or damage to eggs or young. This would be a **significant** impact.

Mitigation Measure

Mitigation Measure 3.4-3: Protection of Migratory Birds and Raptors (BSMP/NR/KER)

- a) Building demolition and vegetation clearing operations, including initial grading and tree removal, shall occur outside of the nesting season (September 1 through January 31) to the extent feasible. If vegetation removal or building demolition begins during the nesting season (February 1 to August 31), the individual project applicant shall engage a qualified biologist to conduct a pre-construction survey for active nests within a 500-foot buffer around the individual project footprint. The pre-construction survey shall be conducted within 14 days prior to commencement of ground disturbing activities. If the pre-construction survey shows that there is no evidence of active nests, then a report shall be submitted to the City for its records and no additional measures are required. If construction does not commence within 14 days of a pre-construction survey, or halts for more than 14 days, an additional pre-construction survey is required for each period of delay.
- b) If any active nests are located within the construction footprint – including, but not limited to individual project site, staging areas, spoils sites, construction access – an appropriate buffer zone shall be established around the nests, as determined by the qualified biologist based on applicable regulatory requirements in force at the time of construction activity. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of breeding season or until the young have successfully fledged or the nest is determined to no longer be active. Buffer zones are typically 50-100 feet for migratory bird nests and 250-500 feet for raptor nests (excluding Swainson’s hawk). If active nests are found within the vicinity of the construction areas, the qualified biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. If establishing the typical buffer zone is impractical, the qualified biologist shall adjust the buffer depending on the species and daily monitoring would be required to ensure that the nest is not disturbed and no forced fledging occurs. This daily monitoring shall occur until the qualified biologist determines that the nest is no longer occupied.

Additional Measures for Burrowing Owl

- c) Prior to any individual project construction, the project applicant shall engage a qualified biologist to conduct a habitat assessment to determine if potential nesting habitat is present with an individual project area. If potential nesting habitat is present, nesting and wintering season surveys for burrowing owl shall be conducted to determine if potential habitat within 500 feet of ground disturbance is used by this species. As described in Table 3.4-2, suitable burrowing owl habitat includes the annual grassland and agricultural land. The timing and methodology for the surveys shall be conducted in accordance with the current CDFW Staff Report on Burrowing Owl Mitigation (**Appendix D-3**).¹⁶ A minimum of three survey visits should be

¹⁶ California Department of Fish and Wildlife, 2012. Staff Report on Burrowing Owl Mitigation. State of California. Natural Resources Agency. Department of Fish and Game. March 7, 2012.

conducted at least three weeks apart during the peak breeding season between April 15 and July 15. One of these surveys could be conducted at the same time as the nesting bird survey (Mitigation Measure 3.4-3a) should work be anticipated to commence within 14 days and between April 15 and July 15. A winter survey shall be conducted between December 1 and January 31, during the period when wintering owls are most likely to be present.

- d) If an active burrowing owl nest site/active burrow is discovered in the vicinity of an individual project construction footprint – including, but not limited to individual project site, staging areas, spoils sites, construction access – the project applicant shall notify the City and CDFW. A qualified biologist shall monitor the owls and establish a fenced exclusion zone around each occupied burrow. No construction activities shall be allowed within the exclusion buffer zone until such time that the burrows are determined by a qualified biologist to be unoccupied. The buffer zones shall be a minimum of 150 feet from an occupied burrow during the non-breeding season (September 1 through January 31) and a minimum of 250 feet from an occupied burrow during the breeding season (February 1 through August 31).
- e) If avoidance is not feasible, the CDFW shall be consulted to develop and the implement avoidance or passive relocation methods. All activities that will result in a disturbance to burrows shall be approved by the CDFW prior to implementation.

Additional Measures for Swainson’s Hawk

- f) If construction activities are anticipated to commence during the Swainson’s hawk nesting season (March 1 to September 15), the individual project applicant shall engage a qualified biologist to conduct a minimum of two pre-construction surveys during the recommended survey periods in accordance with the Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley (**Appendix D-4**).¹⁷ All potential nest trees within 0.25 mile of the proposed project footprint shall be visually examined for potential Swainson’s hawk nests, as accessible. If no active Swainson’s hawk nests are identified on or within 0.25 mile of the proposed project, a report documenting the survey methodology and findings should be submitted to the City for its files and no additional mitigation measures are required.
- g) If active Swainson’s hawk nests are found within 0.25 mile of construction activities, a survey report shall be submitted to the CDFW and the CNDDDB, and an avoidance and minimization plan shall be provided to and approved by the CDFW prior to the start of construction of the given development proposal. The avoidance plan shall identify measures to avoid or minimize impacts to the active Swainson’s hawk nest. These measures may include, but are not limited to:
 - 1. Conducting a Worker Awareness Training Program prior to the start of construction;
 - 2. Establishing a buffer zone and work schedule to avoid impacting the nest during critical periods. If practicably feasible, no work will occur within 200 yards of the nest while it is in active use. If work will occur within 200 yards of the nest, then construction shall be monitored by a qualified biologist to ensure that no

¹⁷ Swainson’s Hawk Technical Advisory Committee, 2000. *Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in the Central Valley*. May 31, 2000.

work occurs within 50 yards of the nest during incubation or within ten days after hatching;

3. Having a qualified biological monitor conduct regular monitoring of the nest during construction activities; and
4. Allowing the qualified biologist to halt construction activities until CDFW determines that the construction activities are disturbing the nest.

Significance After Mitigation: Mitigation Measure 3.4-3 would ensure that the individual project avoids or reduces the magnitude of impacts to migratory birds and birds of prey through clearing vegetation outside of the nesting season or conducting preconstruction surveys if vegetation clearing is anticipated during the nesting season, and establishing a no-work buffer if birds are observed nesting in the vicinity of the construction footprint. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-4: Implementation of the proposed project could result in impacts to roosting bats including pallid bat.

Full Master Plan, Newkom Ranch, Kells East Ranch

Bats have the potential to roost in the buildings, outbuildings, and trees within the BSMP project site. Implementation of the proposed project could result in direct mortality of roosting bats should they be present in the buildings, outbuildings, and trees proposed for removal. This is considered a **significant** impact.

Mitigation Measure

Mitigation Measure 3.4-4: Protection of Bat Species (BSMP/NR/KER)

- a) The individual project applicant shall engage a qualified biologist to conduct a pre-construction survey for special-status bat species within 14 days prior to the start of tree or building removal within the BSMP project site. If no special-status bats are observed roosting, a report shall be submitted to the City for its records and no additional measures are required. If construction does not commence or if any trees or buildings anticipated for removal are not removed within 14 days of the pre-construction survey or halts for more than 14 days, a new survey and reporting shall be conducted.
- b) If bats including pallid bats are found, the qualified biologist shall consult with the CDFW to determine and implement avoidance measures. Avoidance measures may include, but are not limited to, establishing a buffer around the roost tree or building until it is no longer occupied or installing exclusion material around the tree/opening of the building after dusk, once the qualified biologist has determined that the bat has left the roost to forage. The tree or building shall not be removed until a biologist has determined that the tree or building is no longer occupied by the bats.

Significance After Mitigation: Mitigation Measure 3.4-4 would ensure that individual projects developed pursuant to the proposed BSMP avoids or reduces the magnitude of

impacts to special-status bats by delaying tree or building removal until the roosting bats vacate the buildings/trees. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-5: Development of the proposed project could result in the loss of protected trees and street trees.

Full Master Plan, Newkom Ranch, Kells East Ranch

Sutter County Policy ER 3.7 requires that native oak trees be preserved when possible through the review of discretionary development projects by considering mitigation/replanting programs for the removal. However, under the proposed BSMP, the project site would be annexed into the City of Yuba City and, therefore, would be required to comply with the City's tree preservation policies and ordinances. Yuba City protects trees through implementation of its General Plan policies, and through Section 9-3.05 for street trees. Section 9-3.05 requires that any person who wishes to remove a tree from the planting strip or planting easement abutting his property shall make written application to and obtain a permit from the Director. The Director shall determine whether the tree may be removed at the expense of the applicant and whether a replacement tree is required. Policy 8.4-G-3 states that heritage oaks will be preserved and enhanced in the City. Policy 8.4-I-2 requires preservation of oak trees and other native trees that are of significant size, by requiring site designs to incorporate these trees to the maximum extent feasible.

Street trees occur along the perimeter of the BSMP project site. Several heritage oak trees occur within the non-native annual grassland and within the oak woodland within the BSMP area boundaries. Because several trees within the BSMP area could be impacted by development pursuant to the proposed BSMP, this is considered a **significant** impact.

Mitigation Measure

Mitigation Measure 3.4-5: Protection of Heritage and Street Trees (BSMP/NR/KER)

- a) The individual project applicant shall engage a certified arborist to conduct a tree survey and prepare an arborist report. The arborist report shall include the species, diameter at breast height, location, condition of each street tree and native oak tree, and identify whether the native oak tree should be considered for preservation. The arborist report shall also recommend whether oak trees and heritage oak trees should be preserved. The arborist report shall include compensatory mitigation for impacts to native and heritage oak trees at a minimum 1:1 ratio based on diameter at breast height (DBH) for each tree.
- b) The individual project applicant shall submit an application to the Director of the City of Yuba City for any street tree proposed for removal. If authorized by the Director, the street tree may be removed at the expense of the applicant.

- c) During any construction activities, construction shall be avoided within the critical root zones of preserved/protected trees, unless the area has been previously paved. Encroachments shall be held to no more than 20 percent of the critical root zone area. Avoidance areas shall be fenced prior to any activities onsite or offsite.
- d) During project construction, the individual project applicant shall retain an arborist to supervise all grade cuts in the critical root zone of protected trees, and properly treat all roots subject to damage as soon as possible after excavation. Cut-faces exposed for more than two to three days shall be covered with a dense burlap fabric and watered to maintain soil moisture at least on a daily basis until the area is permanently covered.
- e) Avoid placement of fill exceeding one foot in depth within the critical root zone of all preserved/protected trees. If unavoidable, either design drainage away from the critical root zone of the tree or consider tree removal. Placement of fill material less than one foot in depth and encroachment of less than 20 percent into the critical root zone area shall not require such additional mitigation measures.
- f) Any proposed structures shall not encroach more than 20 percent into the critical root zone area of a preserved/protected tree. If unavoidable, tree removal shall be considered.
- g) Onsite and offsite utilities shall be designed to avoid the critical root zone of preserved/protected trees. In some circumstances, hand digging of utilities through the critical root zone areas would be an option. Boring beneath the critical root zone area would also be an option.
- h) Branches and limbs that have been torn, broken, or spilt during construction shall be removed. In addition, any dead, diseased, or rubbing limbs shall be removed.

Significance After Mitigation: Mitigation Measure 3.4-5 would reduce impacts to trees by ensuring that trees identified for preservation would be avoided, by limiting construction activities in the critical root zone of the trees through avoidance, and by complying with the City's General Plan policies and the City's Municipal Code. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-6: Implementation of the proposed project could result in the loss and/or degradation of rare plant populations.

Newkom Ranch, Kells East Ranch

As noted herein, annual grassland and oak woodland were not found to exist on the Phase 1 (Newkom Ranch) and Phase 2 (Kells East Ranch) portions of the BSMP area. Therefore, no habitat that would support rare plant populations would be disturbed. **No impact** would occur to rare plant populations in the Phase 1 and Phase 2 portions of the BSMP area.

Full Master Plan

Non-native annual grassland within the final phase of the BSMP provides habitat for the following species: dwarf downingia (blooms March through May) and Ferris' mile-vetch (blooms April through May). The non-native grassland and oak woodland within the final phase provide habitat for Baker's navarretia (blooms April through July) and Hartweg's golden sunburst (blooms March through April). If these species are present and are not identified and appropriately managed, grading or other ground disturbance related to development under the proposed BSMP would result in the removal of the species. This is considered a **significant** impact.

Mitigation Measure

Mitigation Measure 3.4-6: Rare Plant Protection (BSMP only; not NR or KER)

- a) The individual project applicant shall retain a qualified biologist to conduct focused botanical protocol-level surveys in the nonnative annual grassland for dwarf downingia (blooms March through May) and Ferris' mile-vetch (blooms April through May) and in the non-native grassland and oak woodland for Baker's navarretia (blooms April through July) and Hartweg's golden sunburst (blooms March through April). Surveys shall be conducted during blooming periods for all special-status species. (It is noted that the blooming periods for these plant species overlap in the month of April.) If no special-status plants are observed within the survey area, then a report shall be submitted to the City and no additional mitigation is required so long as construction commences within two years of the survey.
- b) If Baker's navarretia, dwarf downingia, or Ferris' milk-vetch are observed within the project site, the plants should be avoided with a minimum 10-foot avoidance buffer with exclusion fencing, to the extent feasible. If these special-status plants cannot be avoided, a mitigation plan shall be prepared by a qualified botanist. At minimum, the mitigation plan shall include locations where the plants will be transplanted, success criteria, and monitoring activities for the transplanted populations. The mitigation plan shall be finalized prior to transplantation and commencement of construction activities.
- c) If the federal and state endangered Hartweg's golden sunburst is observed, the plants shall be avoided to the extent feasible.
 1. If the plants cannot be avoided, the individual project applicant shall obtain a CESA Section 2081(b) Incidental Take Permit. Measures to minimize the take and to mitigate the impacts caused by the take shall be set forth in one or more conditions of the permit. Potential conservation measures include, but are not limited to, purchasing credits from a mitigation bank, establishing a preserve, and/or preparing a mitigation plan.
 2. If the plants cannot be avoided and if the project requires USFWS Section 7 consultation (i.e., would impact a jurisdictional wetland or water of the U.S. requiring a Section 404 CWA permit), consultation with the USFWS through the Section 7 process shall occur to determine any additional avoidance, conservation, and mitigation measures that may be needed for the species, if any.

The individual project applicant is not required to consult for impacts to federally listed plants without a federal nexus.

Significance After Mitigation: Mitigation Measure 3.4-6 would ensure that the project avoids or mitigates for impacts to special-status plants by avoiding, relocating, or mitigating for any potentially occurring special-status plants. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-7: Implementation of the proposed project could result in the loss of Swainson's hawk foraging habitat.

The CDFW considers 5 or more vacant acres within 10 miles of a Swainson's hawk nest active within the last five years to be significant foraging habitat for Swainson's hawk, the conversion of which to urban uses is considered a significant impact, in accordance with the Staff Report Regarding Mitigation for Impacts to Swainson's Hawk in the Central Valley of California.¹⁸ There are 58 documented occurrences within 10 miles of the BSMP area. However, none of these occurrences documented that nesting occurred within the last five years. Removal of the non-native annual grassland within the BSMP area would remove foraging habitat for Swainson's hawk if found nesting within 10 miles. This would be a **significant** impact.

Mitigation Measure

Mitigation Measure 3.4-7: Protection of Swainson's Hawk Foraging Habitat (BSMP only; not NR or KER)

- a) Prior to disturbance of a minimum of five acres of non-native annual grassland, the individual project applicant shall engage a qualified biologist to conduct a CNDDDB search for active Swainson's hawk nests occurring within 10 miles of the individual project footprint and documented within five years of commencement of ground disturbance. The CNDDDB search shall be conducted within one year prior to commencement of construction activities. If no nests are documented within 10 miles within the last five years, then a report shall be submitted to the City documenting the results. No additional mitigation is required.
- b) If an active nest is documented within 10 miles of the individual project footprint and within five years prior to the anticipated start of ground disturbance, the individual project applicant shall mitigate at ratios that correspond to the distance of the nest or shall establish a conservation easement, in accordance with the Staff Report (Appendix D-5). These ratios are identified below:
 1. Projects within one mile of an active nest tree shall provide:
 - i. One acre of Habitat Management (HM) land (at least 10 percent of the HM Land requirements shall be met by fee title acquisition or a conservation easement allowing for the active management of the habitat, with the remaining 90 percent of the HM lands protected by a conservation easement

¹⁸ California Department of Fish and Game, 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California.

(acceptable to the CDFW) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk) for each acre of development authorized (1:1 ratio); or

- ii. One-half acre of HM land (all of the HM land requirements shall be met by fee title acquisition or a conservation easement (acceptable to the CDFW) which allows for the active management of the habitat for prey production on-the HM lands) for each acre of development authorized (0.5:1 ratio).
2. Projects within five miles of an active nest tree but greater than one mile from the nest tree shall provide 0.75 acres of HM land for each acre of urban development authorized (0.75:1 ratio). All HM lands protected under this requirement may be protected through fee title acquisition or conservation easement (acceptable to the CDFW) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk.
 3. Projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree shall provide 0.5 acres of HM land for each acre of urban development authorized (0.5:1 ratio). All HM lands- protected under this requirement may be protected through fee title acquisition or a conservation easement (acceptable to the CDFW) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk.
- c) Management Authorization holders/project sponsors shall provide for the long-term management of the HM lands by funding a management endowment (the interest on which shall be used for managing the HM lands) at the rate of 400 dollars per HM land acre (adjusted annually for inflation and varying interest rates).
 - d) Implement Mitigation Measures 3.4-3(f) and 3.4-3(g).

Significance After Mitigation: Mitigation Measure 3.4-7 would ensure that the project avoids impacts to Swainson's hawk foraging habitat through the purchase of mitigation credits or establishment of a conservation easement. Therefore, this impact would be reduced to a **less-than-significant** level.

Cumulative Impacts

The cumulative context for this analysis is the central portion of the Sacramento Valley, generally areas within portions of Sutter and Yuba counties. This region is bounded on the west by the Inner North Coast Ranges and to the east by the Sierra Nevada foothills.

Impact 3.4-8: Implementation of the proposed project, in combination with other development in the Central Sacramento Valley, could result in the loss of special-status plants and wildlife, protected trees, and wildlife resources.

As development within the Central Sacramento Valley continues, habitat for plant and wildlife species native to the region will be lost through conversion to urban environment. Although more mobile species may be able to survive these changes in their environment by moving to new areas, less mobile species could become extirpated. With continued conversion of natural habitat to urban and agricultural use, the availability and accessibility of habitat would decrease.

Although the majority of the existing project site supports land that has already been converted to agricultural land and residential development, the annual grassland and oak woodland areas could potentially be used by special-status bird species, including Swainson's hawk, burrowing owl, northern harrier, song sparrow, and white-tailed kite for foraging and nesting and by special-status plants, if present within these habitat types. In addition, elderberry shrubs, which are sole hosts of elderberry longhorn beetle, could be present within and adjacent to the project site. The project site also supports potentially jurisdictional waters of the U.S. Construction of the proposed project could result in the loss and/or degradation of sensitive habitats including waters of the U.S. Construction of the proposed project, in combination with other development projects in the vicinity could, therefore, contribute to the fragmentation and loss of regional biodiversity through the incremental conversion of natural habitat for special-status species to urban development, and thereby limit the availability and accessibility of remaining habitats to regional wildlife. The loss of land supporting areas of natural habitat will overcome any one project's ability to compensate for lost habitat values. Therefore, the loss of plant and wildlife habitat and waters of the U.S. as a result of implementation of the proposed project is cumulatively considerable, resulting in a **significant and unavoidable** impact.

Mitigation Measure

Mitigation Measure 3.4-8: Protection of Special Status Species

Implement Mitigation Measures 3.4-5a through 3.4-5h.

Impact 3.4-9: Implementation of the proposed project, in combination with other development in the Central Sacramento Valley, could result in cumulative impacts to heritage oaks and street trees.

The proposed BSMP project site would require removal of street trees and could require removal of oak and heritage oak trees protected under the City of Yuba City. Project construction may also result in damage to tree roots. Compliance with Section 9-3.05, Policy 8.4-G-3, Policy 8.4-I-2, and Mitigation Measure 3.4-5 would ensure that impacts are less than significant by identifying and recommending whether oak and heritage oak trees should be preserved, for mitigating at a 1:1 ratio by DBH for each oak tree removed, by requiring authorization to by the Director of the City of Yuba City to remove a street tree, by implementing measures to reduce impacts of retained trees by avoiding the critical root zones, and by removing branches and limbs of retained trees that were incidentally impacted as a result of construction activities. Other projects in the area may require removal of oak trees, heritage oak trees, or street trees. These projects have completed or will be required to complete the appropriate level of CEQA compliance and permitting, including the establishment of mitigation measures to minimize impacts to protected trees. With implementation of mitigation measures from other projects, the potential cumulative impacts associated with the proposed project would be considered **less than significant**.

Mitigation Measure

Mitigation Measure 3.4-9: Protection of Special Status Species

Implement Mitigation Measures 3.4-5a through 3.4-5h.

3.5 Cultural Resources

This section addresses potential adverse impacts on cultural resources that could result from implementation of the proposed BSMP. For the purposes of this section, cultural resources are defined as physical evidence or a place of past human activity, including sites, objects, landscapes, or structures of significance to a group of people traditionally associated with it. In compliance with Assembly Bill AB 52 and Senate Bill SB 18 the Cultural Resources section addresses tribal cultural resources, which include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe.

No comment letters addressing cultural resources were received in response to the notice of preparation (NOP). However, concerns regarding potential impacts of the proposed BSMP on cultural resources were expressed by members of the public at the EIR scoping meeting held on January 19, 2017 at Yuba City Hall.

Unless otherwise cited, the information, analysis, findings, and mitigation measures included in this section are drawn from the *Bogue-Stewart Master Plan Cultural Resources Survey Report*¹ and the Yuba City General Plan.²

Potential impacts to paleontological resources are addressed in Section 3.6, Geology, Soils, Mineral Resources, and Paleontological Resources.

3.5.1 Environmental Setting

Natural Setting

The BSMP project site is within the northern portion of California's Great Valley Geomorphic Province of the Sacramento Valley. The Great Valley, more commonly called the Central Valley, is a nearly flat alluvial plain that lies between the Sierra Nevada on the east and the Coast Ranges on the west. Its south end is defined by the Tehachapi Mountains north of Los Angeles, and its north end is defined by the Klamath Mountains. Subdivided into the Sacramento Valley to the north and the San Joaquin Valley to the south, the Central Valley has an average width east-west of about 40 miles, is about 450 miles long north-south overall, and is approximately 18,000 square miles.

The Sacramento Valley contains thousands of meters of accumulated fluvial, overbank, and fan deposits resulting from erosion of the surrounding ranges. The sediments vary from a thin veneer at the edges of the valley to more than 19 miles in the west-central portion. The Sacramento River is the main drainage of the northern Sacramento Valley, flowing generally south from the Klamath Mountains to its discharge point into the Suisun Bay in the San Francisco Bay area, and is California's largest watershed, covering 26,600 square miles. The Feather River is the principal

¹ Environmental Science Associates, 2017. *Bogue-Stewart Master Plan Cultural Resources Survey Report*. Prepared for the Yuba City Development Services Department. April 2017.

² City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004.

tributary of the Sacramento River. The BSMP project site is near the confluence of the Yuba and Feather Rivers. The Feather River has been confined by human-made levees since the mid-nineteenth century.

The BSMP project site is within the floodplain of the Feather River. The project site is virtually flat, with elevation at about 53 feet NAVD 1988. The underlying geology of the BSMP project site consists of Holocene³ alluvial fan deposits. Soils consist of Conejo-Tisdale complex, which are deep and very deep moderately well-drained soils that formed in alluvium from mixed sources.

Prehistoric Setting

Paleo-Indian Period (13,550 to 10,550 Before Present [BP])

Humans first entered the Central Valley sometime prior to 13,000 years ago. At that time Pleistocene glaciers had receded to the mountain crests leaving conifer forests on the mid- and upper elevations of the Sierra Nevada and a nearly contiguous conifer forest on the Coast Ranges. The Central Valley was covered with extensive grasslands and riparian forests. The central California Delta system had not yet developed. The Central Valley was home to a diverse community of large mammals, which soon became extinct. People were likely focused on large game hunting, although evidence remains scant, as does understanding of lifeways during this period.

Lower Archaic Period (10,550 to 7550 BP)

Climate change during the Lower Archaic Period led to the rapid expanse of oak woodland and grassland prairies across the Central Valley. After 10,550 Before Present (BP), a significant period of soil deposition ensued in the valley, capping older Pleistocene formation. This was followed around 7000 BP by a second period of substantial soil deposition in the valley.

It was during this period that the first evidence of milling stone technology appears, indicating an increased reliance on processing plants for food. Milling stones include hand stones and milling slabs and are frequently associated with a diverse tool assemblage including cobble-based pounding, chopping, and scraping tools. Milling tools were used for processing seeds and nuts. The Lower Archaic also saw the development of well-made bifaces used for projectile points and cutting tools, commonly formed from meta-volcanic greenstone and volcanic basalts.

Middle Archaic Period (7550 to 2550 BP)

After about 7550 BP, California was marked by a change in climate with warmer and drier conditions throughout the region. Oak woodland expanded upslope in the Coast Ranges and conifer forest moved into the alpine zone in the Sierra Nevada. Rising sea levels led to the formation of the Sacramento-San Joaquin Delta and associated marshlands. An initial period of upland erosion and lowland deposition was followed by a long period of stabilization of landforms. Scant evidence of human occupation from this period has been found in the

³ The Holocene is the latest interval of geologic time, covering approximately the last 11,700 years of the Earth's history.

Sacramento Valley or the adjacent Coast Ranges. Most evidence comes from the Sierra Foothills in Calaveras and Tuolumne counties.

Upper Archaic Period (2550 to 900 BP)

Archaeological evidence for Upper Archaic Period human occupation in the Central Valley is more extensive. The development of the Holocene landscape buried older deposits, resulting in the identification of more sites from the Upper Archaic than from older periods of development. Alluvial deposition was partially interrupted by two consecutive droughts known as the Medieval Climatic anomaly.

Two fundamental adaptations developed concurrently during the Upper Archaic Period, evidenced by a diversification in settlements patterns. Populations in the valley tended towards large, high-density, permanent settlements. These villages were used as hubs from which the populace roamed to collect resources, utilizing a wide range of technologies. The populations in the foothills and mountains lived in less dense settlements, moving with the seasons to maximize resource returns. Tools tended to be expedient and multipurpose for use in a wide variety of activities. Village sites show extended occupation as evidenced by well-developed midden, frequently containing hundreds of burials, storage pits, structural remains, hearths, ash dumps, and extensive floral and faunal remains.

Emergent Period (900 to 300 BP)

A major shift in material culture occurred around 900 BP, marking the beginning of the Emergent Period. Particularly notable was the introduction of the bow and arrow. The adoption of the bow occurred at slightly different times in various parts of the Sacramento Valley, but by 750 BP it was in use in the Delta region. The bow was accompanied by the Stockton Serrated point, a seemingly indigenous invention, distinctive from point types used in other parts of the State. Another key element of material culture from this period include big-head effigy ornaments thought to be associated with the Kuksu religious movement. In areas where stone was scarce, baked clay balls are found, presumably for cooking in baskets. Other diagnostic items from this period are bone tubes, stone pipes, and ear spools. Along rivers, villages are frequently associated with fish weirs, with fishing taking on an increasing level of importance in the diet of the local populace.

Ethnographic Setting

The BSMP project site is within the lands occupied and used by the Nisenan, or Southern Maidu, Native American tribe. The western boundary of Nisenan territory was the western bank of the Sacramento River. The eastern boundary was the foothills of the Sierra Nevada mountains. The northern extent was somewhere between the northern fork of the Yuba River and the southern fork of the Feather River. The southern extent was approximately the Cosumnes River north of Elk Grove.

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages usually were located on low rises along major

watercourses. Village size ranged from three houses to 40 or 50. Houses were domed structures covered with earth and tule or grass. Brush shelters were used in summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule or brush, with a central smoke hole at the top and an east-facing entrance. Another common village structure was a granary used for storing acorns.

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna that the rich valley environment provided. The Valley Nisenan economy involved riparian resources—in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco, but many wild species were closely husbanded. The acorn crop from the blue oak and black oak was so carefully managed that this activity served as the equivalent of agriculture. Acorns could be stored in anticipation of winter shortfalls in resource abundance. Deer, rabbit, and salmon were the chief sources of animal protein in the aboriginal diet, but many other insect and animal species were taken when available.

Religion played an important role in Nisenan life. The Nisenan believed that all natural objects were endowed with supernatural powers. Two kinds of shamans existed: curing shamans and religious shamans. Curing shamans had limited contact with the spirit world and diagnosed and healed illnesses. Religious shamans gained control over the spirits through dreams and esoteric experiences. The usual mode of burial was cremation.

As with other California Native American groups, the gold rush of 1849 had a devastating effect on the Valley Nisenan. The flood of miners that came to the area in search of gold brought diseases with them that decimated the Nisenan population. Those who survived were subjected to violence and prejudice at the hands of the miners, and the Nisenan eventually were pushed out of their ancestral territory. Although this contact with settlers had a profound negative impact on the Nisenan population through disease and violent actions, the Nisenan people survived and maintained strong communities and action-oriented organizations.

Numerous ethnographic villages have been documented near the confluence of the Feather and Yuba rivers. The closest documented Native American villages to the BSMP project site are *Molokum*, *Mimol*, and *Sisum*. These villages were all located on the west side of the Feather River near its confluence with the Yuba River in the vicinity of the BSMP project site.

Historic Setting

Europeans did not enter the Central Valley until 1806–1808, when Spanish army officer Gabriel Moraga led an expedition into the area. By the late 1820s, English, American, and French fur trappers, attracted by the valley's abundance of animal life, began operations throughout the Sacramento Valley. Native Americans still occupied the region, with only the occasional Spanish expedition into the interior to search for mission sites or escaped *neophytes* (Native Americans who had entered the mission system).

Permanent non-native settlement in the Sacramento Valley began in the 1830s when Spanish and Mexican governors issued large land grants to individuals, often in return for military or other services rendered to the government. Upon receipt of a land grant from Mexican Governor Juan Alvarado, Swiss immigrant John Augustus Sutter, Jr., settled the Sacramento area in 1839. Sutter established a fort away from the low-lying rivers area and Sutter's Fort served as an agricultural station and destination for immigrants into California until January 1848. In 1841 John Sutter established the Hock Farm on 600 acres along the banks of the Feather River just south of present day Yuba City. It is noted as one of California's first large scale agricultural enterprises with large grain, orchards, cattle, and vineyards. The Hock Farm is also attributed as the first non-Indian settlement in Sutter County.

In the spring of 1849, Sam Brannan and Pierson B. Reading purchased 640 acres of land from John Sutter on the west bank of the Feather River opposite the mouth of the Yuba River north of Sacramento. Brannan and Reading mapped out the town that would later become Yuba City. In 1852, Yuba City consisted of one hotel, one small grocery store, two saloons, one blacksmith shop, a post office, 15 or 20 houses, and a population of 150. As the gold rush escalated, the neighboring town of Marysville grew much more rapidly than Yuba City, presumably due to its proximity to the gold fields. Disappointed in the diminishing yields of the gold fields, many turned to other occupations such as farming and ranching in the fertile Central Valley.

In the 1860s wheat was the biggest crop in Sutter County and much of it was shipped out by riverboat from large warehouses along the Feather River. In 1875, the Yuba City Flour Mill was established at the corner of Bridge and Sutter streets. In 1875, the Thompson Seedless Grape vine, which was developed in Sutter County just west of Yuba City, was publically exhibited. By the 1920s Yuba-Sutter County produced half of the world's canned peaches and Sutter County was known as the "Peach Bowl of the World." Other significant crop types included Thompson seedless grapes, plums (prunes), cherries, pears, olives, apricots, figs, beans, apples, nectarines, grains, rice, and nuts such as almonds. Agricultural industries included Sunsweet (originally called the California Prune and Apricot Growers), Golden Empire Walnut Growers, Earle Fruit Company (Di Giorgio), Yuba City Refrigerating Company, Sacramento Freezers, Inc., Northrup King & Company, and Yuba City Mills. The Bogue Railroad Station, formerly located in the vicinity of Railroad Avenue and Bogue Road would transport agricultural goods grown in the area.

The BSMP project site is approximately four miles south of the original Yuba City townsite. The 1953 topographic map shows much of the BSMP project site as orchards. Today suburban residential and commercial development has encroached on the area. However, orchards still dominate much of land in the BSMP project site.

Newkom Family

Newkom Ranch, Phase 1 of the proposed BSMP, was likely the property of the Newkom family. Charles C. Newkom (died 1903), Charles C. Newkom (died 1888), Pauline B. Newkom (died 1893), and Sophia Newkom (died 1895) are listed as residents of Yuba City. There are records of

a Martin J. Newkom, Harold E. Newkom, and Dorothy M. (Armstrong) Newkom in Yuba City. In 1940, Harold Newkom is listed in the census as 42 years old and the son of Martin J. Newkom and husband to Dorothy M. Armstrong (listed as 34 years old). Based on newspaper articles they were farmers. In 1931, a newspaper identified M.J. Newkom as selling alfalfa and barley. In 1932, M.J. Newkom was a signatory to the articles of incorporation when the Peach Growers League of Yuba City, the Turlock Cooperative of Growers, and the Sutter Packing Company joined the California Federated Peach Growers. In 1935, M.J. Newkom was named to California Prune Control Board. In 1936, M.S. Newkom is noted as being associated with the Sutter Cooperative Marketing Association.

Kells Family

Kells East Ranch, Phase 2 of the proposed BSMP, was likely associated with the Kells family. R.C. (or R.O.) Kells is noted in a few newspaper articles in the 1890s. He was associated with the State's Fruit-Growers Association as an Officer of the Legislation Committee and was from Yuba City. Harriet A Kells (1852–1940), Jack Kells (1911–1912), Robert C. Kells (1852–1933), and Hope Kells Witt (1893–1946) are all listed as residents of Yuba City. R.N. Kells, Norma E. Kells, and Robert N. Kells are listed in Yuba City the 1930 census records.

3.5.2 Cultural Resources Investigation

The following subsection describes the cultural resources investigation that was conducted for the BSMP and identifies the cultural resources sensitivity of the BSMP project site. The investigation included background research, a records search of the Northeast Information Center (NEIC) of the California Historical Resources Information System (CHRIS), and Native American consultation, all of which addressed the entire BSMP project site. The investigation also included site-specific archaeological and architectural surveys of the Newkom Ranch and Kells East Ranch properties, which are within the BSMP project site.

Records Search

On September 8, 2016, staff of the NEIC conducted a records search to identify cultural resources and investigations located within 0.25 mile of the BSMP project site. In addition to NEIC maps and site record forms, other sources that were reviewed included historic maps, the Directory of Properties in the Historic Property Data File for Sutter and Yuba County, the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), topographic maps, the *California Inventory of Historic Resources* (1976), the *California Historical Landmarks* (1996), Cemetery Records on the Sutter County Historical Society website, and the *California Points of Historical Interest* (1992).

The records search identified reports for seven cultural resources studies previously conducted in or within 0.25 mile of the BSMP project site. Of these, one study covered areas within the BSMP project site. The NEIC has record of two previously recorded cultural resources within the 0.25-mile search area: a prehistoric site and the Feather River levee. Neither resource is located within the BSMP project site.

Native American Consultation

In accordance with the requirements of Assembly Bill 52, codified in PRC sections 21083.1 and 21083.2, the Yuba City staff conducted Native American outreach and consultation efforts. Pursuant to PRC section 21083.1(b), the City sent a Local Government Tribal Consultation List Request to the Native American Heritage Commission (NAHC) on July 29, 2016. The request included a request for a search of the NAHC Sacred Lands File and a list of contacts for tribes with traditional lands or cultural places within or near the BSMP site. The NAHC responded on August 1, 2016 with a letter that indicated the results of the search of the Sacred Lands File were negative. The letter included one Native American contact. It was subsequently determined that the provision of a single Native American contact was in error, and the NAHC provided a revised letter on August 24 that included six Native American contacts. Pursuant to PRC section 21083.1(d), the City sent letters that served as formal notification of the BSMP to each of the NAHC-provided contacts on August 26, 2016 via email and certified mail. The notification sent by the City initiated a 30-day period in which the Native American tribes could request consultation pursuant to this section of the PRC.

The City received two responses. On August 26, 2016, Michael D. DeSpain of the Mechoopda Indian Tribe requested via email that the information included in the City's letter should be forwarded to the Colusa, Enterprise, and Auburn Rancherias since the BSMP is within their lands. On August 29, 2016, Creig Marcus, Tribal Administrator of the Enterprise Rancheria Estom Yumeka Maidu, responded via email to Yuba City staff that a records search failed to locate any known cultural sites within the BSMP boundaries, but the tribe retains the right to consult should any discoveries be made. No tribes requested formal consultation under the provisions of Assembly Bill 52.

Archaeological Sensitivity Analysis

Northern California has undergone dramatic landscape changes since humans began to inhabit the region more than 10,000 years ago. The accumulated fluvial, overbank, and fan deposits in the Central Valley have resulted from erosion of the surrounding ranges. In many places, the interface between older land surfaces and alluvial deposits are marked by a well-developed buried soil profile, or a paleosol. A paleosol is formed from weathering at or near the ground surface during a period of comparative landform stability. This surface would also have been available for human occupation and use prior to subsequent sediment deposition. Paleosols preserve the composition and character of the earth's surface prior to subsequent sediment deposition; thus, paleosols have the potential to preserve archeological resources if the area was occupied or settled by humans. Because human populations have grown since the arrival of the area's first inhabitants, younger paleosols (late Holocene, or from approximately 4000 BP) are more likely to yield archaeological resources than older paleosols (early Holocene or Pleistocene, or from approximately 14,000 BP).

The BSMP project site is underlain by Holocene alluvial fan deposits and soils in the BSMP project site are Conejo-Tisdale complex (alluvium) to a depth of 42 inches. Given the Late

Holocene age of the BSMP project site's underlying geologic formation, the BSMP project site has a high sensitivity for buried archaeological deposits. During the prehistoric period, the BSMP project site would have been an amenable setting for procurement of the abundant flora and fauna found in the area's marshes, river channels, and adjacent forests and grasslands. The BSMP project site may also have been an ideal setting for prehistoric habitation, probably temporary or seasonal due to flood risks from the adjacent Feather River and Gilsizer Slough. This is corroborated by the dense number of ethnographic village sites on the west side of the Feather River at the confluence of the Yuba River as noted in the *Ethnographic Setting* above.

Historic-period agricultural activities have disturbed virtually the entire BSMP project site. Historic development and associated use may have resulted in the creation of buried historic archaeological deposits associated with agricultural residences and use. Because the project site has been used primarily for agriculture and low-density residential occupation, the potential for buried historic archaeological deposits in the BSMP project site is relatively low, due to associated ground disturbance.

Archaeological Survey and Results

On November 10 and 11, 2016, ESA archaeologists conducted a pedestrian cultural resources survey of the Newkom Ranch and Kells East Ranch properties. Intensive pedestrian survey methods were used, consisting of walking parallel transects spaced at no more than 15 meters (or 50 feet) apart and inspecting the surface for cultural material or evidence thereof. Visibility varied between 40 to 90 percent. When ground visibility was poor, cleared areas and areas disturbed by rodents along and between the transect lines were checked with special attention.

No evidence of prehistoric archaeological resources or other past human use or occupation were identified within the Newkom Ranch and Kells East Ranch properties. The negative survey results are not surprising given the deep alluvial deposits that may have buried prehistoric archaeological sites as well as the historical disturbance from agricultural activities.

Architectural Survey and Results

On November 11, 2016, an ESA architectural historian who meets the Secretary of the Interior's qualification standards for architectural history conducted an intensive pedestrian architectural survey of the Newkom Ranch and Kells East Ranch properties. The survey included an exterior examination of buildings and structures as well as digital photography and documentation. The investigation identified a residence within the Kells East Ranch property and group of buildings within the Newkom Ranch property that were determined to be sufficient age (i.e., 45 years old or older) that they could potentially qualify as historical resources pursuant to CEQA.

The buildings were evaluated for qualification as historical resources using the evaluation criteria identified in CEQA Guidelines Section 15064.5 (see *Regulatory Framework* below). The evaluation determined that none of the historic-age buildings within the Newkom Ranch and Kells East Ranch properties possessed associations with persons or events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or have yielded, or may be likely to yield, information important in prehistory or history; or otherwise qualifies as historical resources pursuant to CEQA.

3.5.3 Regulatory Framework

Federal

The NRHP, administered by the National Park Service, includes a list of buildings, structures, sites, objects, and districts that have been determined to possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historical resources. Properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP. As set forth in 36 CFR 60.1, the criteria for listing in the NRHP include resources that:

- a) Are associated with events that have made a significant contribution to the broad patterns of history;
- b) Are associated with the lives of persons significant in our past;
- c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d) Have yielded or may likely yield information important in prehistory or history.

Listing in the NRHP does not confer specific protection or assistance for a property but it does guarantee recognition in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, pursuant to section 15064.5 (a)(1) properties listed in the NRHP qualify as historical resources under CEQA and project effects on such resources must be evaluated.⁴

The National Register Bulletin also provides guidance in the evaluation of archaeological site significance. If a heritage property cannot be placed within a particular theme or time period, and thereby lacks “focus,” it is considered not eligible for the NRHP. In further expanding upon the generalized NRHP criteria, evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, flumes, etc.) are considered in terms of four related criteria that account for specific elements that define engineering and construction methods of linear features: (1) size and length; (2) presence of distinctive engineering features and associated properties;

⁴ Guidelines section 15064.1(a)(1) establishes that all resources listed in or eligible for the California Register of Historical Resources are considered historical resources under CEQA. Pursuant to PRC section 5024.1(d)(1), all resources eligible for or listed in the NRHP are included in the California Register.

(3) structural integrity; and (4) setting. The highest probability for NRHP eligibility exists within the intact, longer segments, where multiple criteria coincide.

State

The State implements provisions in CEQA through its statewide comprehensive cultural resources surveys and preservation programs. The California Office of Historic Preservation (OHP), as a division within the California Department of Parks and Recreation (DPR), oversees adherence to CEQA regulations. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer is an appointed official who implements historic preservation programs within the State's jurisdiction. Typically, a resource must be more than 50 years old to be considered as a potential historic resource. The OHP advises recordation of any resource 45 years or older, since there is commonly a five-year lag between resource identification and the date that planning decisions are made.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC § 5024.1[a]). The criteria for eligibility for the CRHR are based upon NRHP criteria (PRC § 5024.1[b]), as defined above. Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined eligible for, or listed in, the NRHP.

To be eligible for the CRHR, a cultural resource must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the CRHR must be of sufficient age, and retain enough of its historic character or appearance (integrity) to convey the reason for its significance.

Additionally, the California consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The CRHR automatically includes the following:

- California properties listed on the NRHP and those formally determined eligible for the NRHP;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the CRHR.

Other resources that may be nominated to the CRHR include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the NRHP, the CRHR, and/or a local jurisdiction register);
- Individual historic resources;
- Historic resources contributing to historic districts; and
- Historic resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Environmental Quality Act

CEQA (codified at Public Resources Code [PRC] § 21000 et seq.) is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a project would have a significant effect on historical resources, unique archaeological resources, or tribal cultural resources. CEQA Guidelines Section 15064.5 specify that a historical resource includes (1) a resource in the California Register of Historical Resources; (2) a resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

Unique Archaeological Resources

If a lead agency determines that an archaeological site is a historical resource, the provisions of CEQA § 21084.1 and *CEQA Guidelines* § 15064.5 apply. If an archaeological site does not meet the criteria for a historical resource contained in the *CEQA Guidelines*, then the site may be treated in accordance with the provisions of CEQA § 21083, pertaining to unique archaeological resources. As defined in CEQA § 21083.2 a “unique archaeological resource” is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;

- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (*CEQA Guidelines* § 15064.5[c][4]).

Tribal Cultural Resources

Impacts to tribal cultural resources also are considered under CEQA (PRC § 21084.2). PRC § 21074(a) defines a tribal cultural resource as:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - included or determined to be eligible for inclusion in the CRHR; or
 - included in a local register of historical resources, as defined in PRC § 5020.1(k).

A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

Per PRC § 21074(a)(c), an historical resource, unique archaeological resource, or non-unique archaeological resource may also be a tribal cultural resource if it is included or determined eligible for the CRHR or included in a local register of historical resources.

Assembly Bill 52

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on “tribal cultural resources” separately from archaeological resources (PRC § 21074; 21083.09). AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC § 21080.3.1, 21080.3.2, 21082.3).

Specifically, PRC § 21084.3 states:

- a) Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.
- b) If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process provided in § 21080.3.2, the following are examples of mitigation measures that, if feasible, may be considered to avoid or minimize the significant adverse impacts:

1. Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
2. Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - (A) Protecting the cultural character and integrity of the resource.
 - (B) Protecting the traditional use of the resource.
 - (C) Protecting the confidentiality of the resource.
3. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
4. Protecting the resource.

Finally, AB 52 requires the Office of Planning and Research to update Appendix G of the CEQA Guidelines by July 1, 2016 to provide sample questions regarding impacts to tribal cultural resources (PRC Section 21083.09). AB 52 applies to those projects for which a lead agency has issued a NOP of an environmental impact report or notice of intent to adopt a negative declaration on or after July 1, 2015. The NOP for this EIR was issued on January 4, 2017; therefore, AB 52 applies to the BSMP.

Local

The BSMP project site is currently in unincorporated Sutter County and under jurisdiction of its General Plan goals, policies, and ordinances. Pursuant to the proposed BSMP, the project site would be annexed into the City of Yuba City. In the future, individual projects pursuant to the proposed BSMP would be required to be found substantially compliant with the Yuba City General Plan goals, policies, and ordinances. The following presents those goals, policies, and ordinances of the Yuba City General Plan that address a project's effect to cultural and tribal resources.

City of Yuba City

The City of Yuba City General Plan provides the following guiding and implementing policies regarding cultural resources:

Guiding Policy 8.3-G-1 Identify and preserve the archaeological, paleontological, and historic resources that are found within the Yuba City Planning Area.

Implementing Policies

- 8.3-I-1 Encourage the preservation of historic sites, buildings, and structures.

- 8.3-I-2 Undertake an inventory of historic resources to determine sites or buildings of federal, State, or local historic significance. The State Office of Historic Preservation has determined that buildings or structures 45 years or older have the potential to be historically significant. Sections 5020-5029 of the State Public Resources Code addresses historic resource assessment and protection. The inventory conducted for the previous General Plan should be updated.
- 8.3-I-3 Promote the registration of historic sites, buildings, and structures in the National Register of Historic Places, and inclusion in the California Inventory of Historic Resources.
- 8.3-I-4 Consult with the local Native American community in the cases where new development may result in disturbance to Native American sites.
- 8.3-I-5 Require that new development analyze and avoid any potential impacts to archaeological, paleontological, and historic resources by:
- Requiring a records review for development proposed in areas that are considered archaeologically sensitive;
 - Studying the potential effects of development and construction (as required by CEQA);
 - Requiring pre-construction surveys and monitoring during any ground disturbance for all development in areas of historical and archaeological sensitivity; and
 - Implementing appropriate measures to avoid the identified impacts.
- 8.3-I-6 In accordance with CEQA and the State Public Resources Code, require the preparation of a resource mitigation plan and monitoring program by a qualified archaeologist in the event that archaeological resources are discovered.

In the event that historical or archaeological resources are accidentally discovered during construction, grading activity in the immediate area should cease and materials and their surroundings shall not be altered or collected. A qualified archaeologist must make an immediate evaluation and avoidance measures or appropriate mitigation should be completed, according to CEQA Guidelines. The State Office of Historic Preservation has issued recommendations for the preparation of Archeological Resource Management Reports that should be used as guidelines.

The cultural resources investigation for the proposed project included: consultation with the local Native American community; evaluation of potential impacts to archaeological and historic resources that could result from project construction or operation; and, identification of appropriate measures to avoid identified impacts to cultural resources where feasible. For these reasons the proposed BSMP would be consistent with the applicable cultural resources goals and policies of the Yuba City General Plan. Potential impacts to paleontological resources are addressed in Section 3.6, Geology, Soils, Mineral Resources, and Paleontological Resources.

3.5.4 Analysis, Impacts, and Mitigation

Significance Criteria

The significance criteria for this analysis were developed from questions presented in Appendix G of the State CEQA Guidelines and based on the professional judgment of the City of Yuba City and its consultants. The proposed BSMP would result in a significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Methodology and Assumptions

The cultural resource investigation conducted for the proposed BSMP includes background research, a records search of the NEIC, and Native American consultation, all of which address the entire BSMP project site. The investigation also includes site-specific archaeological and architectural surveys of the Newkom Ranch and Kells East Ranch properties, which are within the BSMP project site.

For the purposes of the impact discussion, “historical resource” is used to describe built-environment historic-period resources. Archaeological resources (both prehistoric and historic), which may qualify as “historical resources” pursuant to CEQA, are analyzed separately from built-environment historical resources.

Impacts and Mitigation Measures

Impact 3.5-1: Development pursuant to the proposed BSMP could cause a substantial adverse change in the significance of an historical architectural resource.

A significant impact could occur if construction or operations pursuant to the proposed BSMP would result in a substantial adverse change in the significance of historic-period architectural resources that are either listed or eligible for listing on the NRHP, CRHR, or a local register. Substantial adverse change is defined as the demolition, relocation, or alteration of a resource to the extent that the character-defining features which convey its significance would be lost.

Full Master Plan

As discussed above, the cultural resource investigation conducted for the proposed BSMP included background research and a records search of the NEIC, both of which address the entire

BSMP project site. The investigation also included a site-specific built-environment resource survey of the Newkom Ranch and Kells East Ranch properties.

The records search identified two previously recorded cultural resources within a 0.25-mile search area: a prehistoric site and the Feather River levee. Neither resource is located within the BSMP project site.

The site-specific built-environment resource survey of the Newkom Ranch and Kells East Ranch properties identified a residence within the Kells East Ranch property and group of buildings within the Newkom Ranch property that were determined to be of sufficient age (i.e., 45 years old or older) that they could potentially qualify as historical resources pursuant to CEQA. ESA's architectural historian, who meets the Secretary of the Interior's qualification standards for architectural history, evaluated the buildings for qualification as historical resources using the evaluation criteria identified in CEQA Guidelines Section 15064.5 (see *Regulatory Framework* above). The evaluation determined that none of the historic-age buildings within the Newkom Ranch and Kells East Ranch properties possessed associations with persons or events that have made a significant contribution to the broad patterns of California's history and cultural heritage; embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or have yielded, or may be likely to yield, information important in prehistory or history; or otherwise qualifies as historical resources pursuant to CEQA. Because none of the buildings evaluated qualify as historical resources under CEQA, development on the Newkom Ranch and Kells East Ranch projects would have no impact on historic architectural resources.

While no eligible or listed historic architectural resources were identified within the Newkom Ranch and Kells East Ranch properties, the remainder of the BSMP area project site has not yet been systematically analyzed for the presence of historic architectural resources. Therefore, it is possible that currently unknown historic architectural resources may be present within the BSMP area project site.

During the course of future phases of proposed BSMP-specific development outside of the Newkom Ranch and Kells East Ranch properties, structures greater than 45-years in age and located within the BSMP project site would need to be evaluated for their eligibility for listing on the NRHP, CRHR, or a local register. In the event that evaluation identifies the presence of buildings eligible for listing, direct or indirect impacts to these resources have the potential to result in substantial adverse changes to their character. This would be a **potentially significant** impact to historic architectural resources.

Operation of any development pursuant to the proposed BSMP would not result in any anticipated significant impacts to historic architectural resources within the Newkom Ranch and Kells East Ranch properties, and is therefore, not analyzed further in this document. In the event that historic architectural resources are identified within the remaining BSMP project site, significant indirect impacts to the historical setting of the resource could occur as a result of

construction and operation of development pursuant to the proposed BSMP, impacting the resource's ability to convey its historic associations. This could result in a substantial adverse change in the significance of historic architectural resources listed or eligible for listing on the NRHP, CRHR, or a local register, and would be a **potentially significant** impact.

Newkom Ranch

As described above, the site-specific built-environment resource survey of the Newkom Ranch property determined that there are no historic architectural resources eligible for listing on the NRHP, CRHR, or a local register within the Newkom Ranch property. The BSMP would therefore result in **no impact** to historic architectural resources within the Newkom Ranch property and no mitigation would be required.

Kells East Ranch

As described above, the site-specific built-environment resource survey of the Kells East Ranch property determined that there are no historic architectural resources eligible for listing on the NRHP, CRHR, or a local register within the Kells East Ranch property. The BSMP would therefore result in **no impact** to historic architectural resources within the Kells East Ranch property and no mitigation would be required.

Summary

The site-specific built-environment resource survey of the Newkom Ranch and Kells East Ranch properties determined that none of the building or structures on the properties qualifies as historical resources pursuant to CEQA. The BSMP would therefore result in no impact to historic architectural resources within the Newkom Ranch and Kells East Ranch properties and no mitigation would be required.

The remainder of the BSMP project site has not yet been systematically analyzed for the presence of historic architectural resources. Therefore, it is possible that currently unknown historic architectural resources may be present within the BSMP project site. In the event that historic architectural resources are identified within the remaining BSMP project site, significant indirect impacts to the resource or the historical setting of the resource could result from development pursuant to the proposed BSMP. **Mitigation Measure 3.5-1** requires site-specific built-environment resource investigations for development plans within the BSMP project site outside of the Newkom Ranch and Kells East Ranch properties.

Mitigation Measure

Mitigation Measure 3.5-1: Protection of Historic Architectural Resources (BSMP project site outside NR/KER)

- a) Concurrent with submittal of project-level development plans, the project applicant shall submit a built-environment resource investigation, for review and approval by the City, that includes, at a minimum:
 - An updated records search at the Northeast Information Center;

- An intensive built-environment resources survey, documenting buildings and structures 45 years or older within and adjacent to the project footprint for listing in the National, California, or local registers;
- A report that documents the results of the investigation; and
- Recommendations for mitigation to resolve adverse impacts to significant historic architectural resources.

The survey shall be carried out by a qualified historian or architectural historian meeting the Secretary of the Interior’s Standards for Architectural History.

- b) Demolition or substantial alteration of all previously recorded historic resources, including significant historic resources encountered during the survey and evaluation efforts, shall be avoided, if feasible.
- c) Any alterations to historic buildings or structures, including relocation, shall conform to the Secretary of the Interior’s Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.⁵
- d) If avoidance of identified historic resources is deemed infeasible, the project applicant shall prepare a treatment plan, subject to City review and approval, to include, but not limited to, adaptive reuse, photo-documentation and public interpretation of the resource.

The treatment plan shall include retention of a qualified architectural historian to document the affected historic resource in accordance with the National Park Service’s Historic American Buildings Survey (HABS) and/or Historic American Engineering Record (HAER) standards. Such standards typically include large format photography using (4x5) negatives, written data, and copies of original plans if available. The HABS/HAER documentation packages shall be archived at local libraries and historical repositories, as well as the Northeast Information Center of the California Historical Resources Information System.

Public interpretation of historic resources at their original site shall occur in the form of a plaque, kiosk, or other method of describing the building’s historic or architectural importance to the general public.

Significance After Mitigation: Avoidance of demolition, or alteration of historical resources in conformance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings would mitigate impacts to historic architectural resources to a less-than-significant level. However, in the event that such measures are determined infeasible, the recordation of an historical building or structure to HABS/HAER standards and public interpretation efforts would reduce the magnitude of impacts on significant historic buildings and structures, but not to a less-than-significant

⁵ National Park Service, 1995. Secretary of the Interior’s Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Available: <https://www.nps.gov/tps/standards/four-treatments/treatment-guidelines.pdf>.

level (CEQA section 15126.4(b)(2)). Impacts to significant historic buildings or structures under these circumstances would be significant and unavoidable.

Mitigation Measure 3.5-1 provides guidance for the identification and treatment of historic architectural resources discovered during the course of development. In the event that no resources eligible for listing within the remaining portions of the BSMP Project site, there would be no impact, and if eligible resources are protected according to Secretary of Interior Standards for Treatment of Historic Properties, impacts to historic architectural resources would be reduced to a less-than-significant level. However, the exact nature of future development and the eligibility of potentially affected resources are currently unknown, and thus impacts to potentially eligible resources may occur. Therefore, impacts to eligible resources would be potentially **significant and unavoidable**.

Impact 3.5-2: Development pursuant to the BSMP could result in adverse impacts on prehistoric archaeological resources, tribal cultural resources, and human remains.

Full Master Plan

As discussed above, the cultural resource investigation conducted for the proposed BSMP included background research, a records search of the NEIC, and Native American consultation, all of which addressed the entire BSMP project site. The investigation also included a site-specific archaeological survey that was limited to the Newkom Ranch and Kells East Ranch properties.

The records search identified two previously recorded cultural resources within a 0.25-mile search area: a prehistoric site and the Feather River levee. Neither resource is located within the BSMP project site.

As discussed above, tribal consultation pursuant to PRC section 21080.3.1, initiated by Yuba City staff in coordination with the NAHC and tribal contacts provided by the NAHC, identified no known traditional lands or cultural places within or near the BSMP project site. No tribes that were notified requested formal consultation. Creig Marcus, Tribal Administrator of the Enterprise Rancheria Estom Yumeka Maidu, responded via email to Yuba City staff that the tribe retains the right to be involved should any discoveries be made.

On November 10 and 11, 2016, ESA archaeologists conducted a pedestrian cultural resources survey of the Newkom Ranch and Kells East Ranch properties. Intensive pedestrian survey methods were used, consisting of walking parallel transects spaced at no more than 15 meters (or 50 feet) apart and inspecting the surface for cultural material or evidence thereof. Ground surface visibility varied between 40 to 90 percent. When ground visibility was poor due to the presence of vegetation, paving, and other features, cleared areas and areas disturbed by rodents along and between the transect lines were checked with special attention. No prehistoric archaeological resources or other evidence of past human use or occupation were identified within the Newkom Ranch and Kells East Ranch properties. The negative survey results are not surprising given the

deep alluvial deposits that may have buried prehistoric archaeological sites as well as historical disturbance from agricultural activities.

Given the Late Holocene age of the BSMP project site's underlying geologic formation, ESA archaeologists determined that the BSMP project site has a high sensitivity for buried prehistoric archaeological deposits. During the prehistoric period, the BSMP project site would have been an amenable setting for procurement of the abundant flora and fauna found in the area's marshes, river channels, and adjacent forests and grasslands. The BSMP project site may also have been an ideal setting for prehistoric habitation, probably temporary or seasonal due to flood risks from the adjacent Feather River and Gilsizer Slough. This is corroborated by the dense number of ethnographic village sites on the west side of the Feather River at the confluence of the Yuba River.

Historic-period agricultural activities have disturbed virtually the entire BSMP project site. Historic development and associated use may have resulted in the creation of buried historic archaeological deposits associated with agricultural residences and use. Because the project site has been used primarily for agriculture and low-density residential occupation, the potential for buried historic-period archaeological deposits in the BSMP project site is relatively low.

In the event that currently unknown unique significant archaeological resources of either the prehistoric or historic periods are disturbed by BSMP-related earth-moving activities, the disturbance of significant archaeological resources would be a **potentially significant** impact.

Operation of future uses within the entire BSMP project site, including the Newkom Ranch and Kells East Ranch properties, would not result in any anticipated significant impacts to unique archaeological resources, as impacts to archaeological resources typically occur as the result of earthmoving activities associated with construction. Earth-moving activities would not be associated with the operations of the BSMP, and operation of the BSMP would have **no impact** on historic or pre-historic archaeological resources.

Newkom Ranch

The site-specific archaeological investigation of the Newkom Ranch property, which included background research, a records search of the NEIC, Native American consultation, and a site-specific archaeological survey, identified no prehistoric archaeological resources or other evidence of past human use or occupation. The investigation determined that the Newkom Ranch property has a high sensitivity for buried archaeological deposits due to the Late Holocene age of the property's underlying geologic formation, and a low potential for buried historic archaeological deposits due to historic-period agricultural activities have disturbed virtually the entire property.

In the event that currently unknown unique significant archaeological resources of either the prehistoric or historic periods are disturbed by BSMP-related earth-moving activities in the

Newkom Ranch property, the disturbance of significant archaeological resources would be a **potentially significant** impact.

Operation of the uses within the Newkom Ranch property would not result in any anticipated significant impacts to unique archaeological resources, as impacts to archaeological resources typically occur as the result of earth-moving activities associated with construction. Operational activities within the Newkom Ranch property would have **no impact** on historic or pre-historic archaeological resources.

Kells East Ranch

The site-specific archaeological investigation of the Kells East Ranch property, which included background research, a records search of the NEIC, Native American consultation, and a site-specific archaeological survey, identified no prehistoric archaeological resources or other evidence of past human use or occupation. The investigation determined that the Kells East Ranch property has a high sensitivity for buried archaeological deposits due to the Late Holocene age of the property's underlying geologic formation, and a low potential for buried historic archaeological deposits due to historic-period agricultural activities have disturbed virtually the entire property.

In the event that currently unknown unique significant archaeological resources of either the prehistoric or historic periods are disturbed by BSMP-related earth-moving activities in the Kells East Ranch property, the disturbance of significant archaeological resources would be a **potentially significant** impact.

Operation of the uses within the Kells East Ranch property would not result in any anticipated significant impacts to unique archaeological resources, as impacts to archaeological resources typically occur as the result of earthmoving activities associated with construction. Operational activities within the Newkom Ranch property would have **no impact** on historic or pre-historic archaeological resources.

Summary

Based on the records search and survey results there are no identified archaeological resources within the Newkom Ranch and Kells East Ranch properties. However, the geologic and environmental conditions, as well as the identity of several ethnographic villages near the confluence of the Feather and Yuba Rivers, suggests the Newkom Ranch and Kells East Ranch properties have a high sensitivity for buried archaeological resources. Impacts to previously undiscovered archaeological resources and/or human remains would be a **significant** impact. Implementation of **Mitigation Measure 3.5-2(a)** below would ensure that archaeological resources or human remains are appropriately evaluated and treated if discovered during construction of the proposed BSMP.

Because ground-disturbing activities, including depth of disturbance have not yet been determined for the future phases of development within the BSMP project site, it is premature to

conduct detailed cultural resources surveys at this time. Because the BSMP project site has a high sensitivity for buried archaeological resources, individual projects pursuant to the proposed BSMP could adversely impact undiscovered archaeological resources and/or human remains, which would result in a **significant** impact. Implementation of **Mitigation Measure 3.5-2(b)** below would ensure that cultural resources analysis is conducted for future phases of the proposed BSMP.

Mitigation Measure

Mitigation Measure 3.5-2(a): Protection of Archaeological Resources (NR/KER)

Archaeological Monitoring Plan. Prior to issuance of grading permits or ground-disturbing construction activity in the Newkom Ranch and Kells East Ranch properties, the project applicant shall prepare and submit an Archaeological Monitoring Plan to the City of Yuba City for review and approval. Monitoring shall be required for all surface alteration and subsurface excavation work, including trenching, boring, grading, use of staging areas and access roads, and driving vehicles and equipment. A Secretary of the Interior-qualified professional archaeologist (project archaeologist) shall prepare the plan. The plan shall address (but not be limited to) the following issues:

- Training program for all construction and field workers involved in site disturbance;
- Person(s) responsible for conducting monitoring activities, including both archaeological and Native American monitors;
- How the monitoring shall be conducted and the required format and content of monitoring reports, including the need to conduct trenching, shovel-test units or auger samples to identify archaeological deposits in advance of construction, assessment, designation and mapping of the sensitive cultural resource areas on final project maps, assessment and survey of any previously unsurveyed areas;
- Person(s) responsible for overseeing and directing the monitors;
- Schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports;
- Procedures and construction methods to avoid sensitive cultural resource areas (i.e., planning construction to avoid the resource, incorporating the resource within open space, capping and covering the resource, or deeding the site into a permanent conservation easement);
- Clear delineation and fencing of sensitive cultural resource areas;
- Physical monitoring boundaries;
- Protocol for notifications in case of encountering of cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, curation);
- Methods to ensure security of cultural resources;

- Protocol for notifying local authorities (i.e. Sheriff, Police) should site looting and other illegal activities occur during construction.

Archaeological and Native American Monitoring. If an intact archaeological resource is encountered, all soil disturbing activities in the vicinity of the resource shall cease until it is evaluated. The project archaeologist shall immediately notify the City of Yuba City of an encountered archaeological resource. The project archaeologist and Native American monitor shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological resource, present the findings of this assessment to the City.

During the course of the monitoring, the project archaeologist and Native American monitor may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to impact resources.

If the City, in consultation with the project archaeologist and Native American monitor, determines that a significant archaeological resource is present and that the resource could be adversely impacted by the project, the City shall:

- Determine whether preservation in place is feasible. Consistent with CEQA Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.
- If avoidance is not feasible, prepare and implement a detailed Archaeological Research Design and Treatment Plan. Treatment of archaeological resources will follow the applicable requirements of Public Resources Code Section 21083.2. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals.
- If potential human remains are encountered, all work will halt in the vicinity of the find and the City will contact the county coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the coroner determines the remains are Native American, the coroner shall contact the Native American Heritage Commission. As provided in Public Resources Code Section 5097.98, the Commission will identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent makes recommendations for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.

Mitigation Measure 3.5-2(b): Protection of Historic Archaeological Resources (Full BSMP project site except NR/KER)

When BSMP-level development plans outside the Newkom Ranch and Kells East Ranch properties are submitted to the City of Yuba City for approval, the project applicant shall be required to complete a cultural resources investigation for review and approval by the City that includes, at a minimum:

- An updated records search at the Northeast Information Center;
- Updated Native American consultation in coordination with the Native American Heritage Commission.
- An intensive archaeological survey of the development area;
- A geoarchaeological assessment for the potential for buried archaeological resources;
- A report that documents the results of the investigation; and
- Recommendations for mitigation to resolve adverse impacts to significant archaeological resources or human remains.

The survey shall be carried out by a qualified archaeologist meeting the Secretary of the Interior's Standards for Archaeology, and can be documented in the same document as required in Mitigation Measure 3.5-1(a).

Significance After Mitigation: Mitigation Measure 3.5-2(a) provides guidance for the identification and treatment of unique archaeological resources, tribal cultural resources, and human remains discovered during the course of construction within the Newkom Ranch and Kells East Ranch properties. **Mitigation Measure 3.5-2(b)** would ensure that analysis and mitigation of impacts is conducted for future phases of development of the proposed BSMP. Implementation of Mitigation Measure 3.5-2(a) and Mitigation Measure 3.5-2(b) would ensure that impacts to prehistoric archaeological resources, tribal cultural resources, and human remains would be **less than significant**.

Cumulative Impacts

Impact 3.5-3: Development pursuant to the BSMP, in combination with other cumulative development in the Yuba City limits and the Yuba City sphere of influence could contribute to cumulative impacts on historic architectural resources.

The site-specific built-environment resource survey of the Newkom Ranch and Kells East Ranch properties determined that none of the building or structures on the properties qualifies as historical resources pursuant to CEQA. The BSMP would therefore result in no impact to historic architectural resources within the Newkom Ranch and Kells East Ranch properties and no mitigation would be required.

The remainder of the BSMP project site has not yet been systematically analyzed for the presence of historic architectural resources. Therefore, is it possible that currently unknown historic

architectural resources may be present within the remainder BSMP project site. Development within the remainder of the BSMP project site combined with cumulative development within the Yuba City sphere of influence runs the inherent risk of damaging or destroying significant historic architectural resources, which would result in a significant cumulative impact. Because the remainder of the BSMP site comprises approximately 489 acres, impacts to historic architectural resources that could occur with development of the remainder of the BSMP site could result in a cumulatively considerable contribution to the significant cumulative impact. Therefore, the impact would be **potentially cumulatively significant**.

Mitigation Measure

Mitigation Measure 3.5-3: Protection of Historic Architectural Resources (BSMP project site outside NR/KER)

Implement Mitigation Measure 3.5-1.

Significance After Mitigation: With implementation of **Mitigation Measure 3.5-1**, impacts resulting from the BSMP's cumulatively considerable contribution to the cumulative impacts on historic architectural and archaeological resources would be lessened, as the measure provides guidance for the identification and treatment of historic architectural resources discovered during the course of development. In the event that no resources eligible for listing within the remaining portions of the BSMP project site, there would be no impact, and if eligible resources are protected according to Secretary of Interior Standards for Treatment of Historic Properties, impacts to historic architectural resources would be reduced to a less-than-significant level. Implementation of **Mitigation Measure 3.5-1** would ensure that the contribution of the BSMP to the significant cumulative impact would be less than considerable. Therefore, the cumulative impact would be **less than significant**.

Impact 3.5-4: Development pursuant to the BSMP, in combination with other cumulative development, could contribute to cumulative impacts on archaeological resources, tribal cultural resources, and human remains.

The greater Central Valley has been inhabited by people for thousands of years, and development of urban areas has resulted in the demolition and loss of numerous significant cultural resources. The cumulative context for impacts of the BSMP on archaeological resources, tribal cultural resources, and human remains is the area identified as the territory of Nisenan, or Southern Maidu, Native American tribe, which is generally from the western bank of the Sacramento River to the foothills of the Sierra Nevada mountains, and from somewhere between the northern fork of the Yuba River and the southern fork of the Feather River to the Cosumnes River north of Elk Grove.

Because all significant cultural resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resource base. The loss of any one archaeological site affects all others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The boundaries of an

archaeologically important site extend beyond property boundaries. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on project or parcel boundaries.

The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains. In this case, cumulative development within the territory of Nisenan, or Southern Maidu, Native American tribe, could potentially disturb any known or unknown archaeological resources, tribal cultural resources, and human remains, contributing to the cumulative loss of subsurface cultural resources and human remains and a significant cumulative impact. The contribution of the proposed BSMP to this impact would be cumulatively considerable if prehistoric archaeological resources, tribal cultural resources, and human remains are damaged or destroyed as a result of project earth-moving activities during construction, as all adverse effects or negative impacts erode a dwindling resource base. Therefore, the impact would be **potentially cumulatively significant**.

Mitigation Measure

Mitigation Measure 3.5-4(a): Protection of Archaeological Resources (NR/KER)

Implement Mitigation Measure 3.5-2(a).

Mitigation Measure 3.5-4(b): Protection of Historic Archaeological Resources (Full BSMP project site except the Newkom Ranch and Kells East Ranch properties)

Implement Mitigation Measure 3.5-2(b).

Significance After Mitigation: Mitigation Measure 3.5-4(a) provides guidance for the identification and treatment of archaeological resources, tribal cultural resources, and human remains. **Mitigation Measure 3.5-4(b)** would ensure that analysis is conducted for potential impacts on prehistoric archaeological resources, tribal cultural resources, and human remains for future phases of development of the BSMP. Implementation of Mitigation Measure 3.5-4(a) and Mitigation Measure 3.5-4(b) would ensure that the contribution of the BSMP to the significant cumulative impact would be less than considerable. Therefore, the cumulative impact would be **less than significant**.

3.6 Geology, Soils, Mineral Resources, and Paleontological Resources

This section describes the geologic, soils, and seismic conditions, and mineral and paleontological resources within the BSMP project site. The chapter also describes site characteristics such as topography, regional and local geology, and soil types on site. The regulatory setting section discusses the applicable federal, state, and local regulations and policies that affect the proposed project. The possible presence of hazardous materials, hazardous waste, and soil and groundwater contamination is discussed in Section 3.8, Hazards and Hazardous Materials.

There were no comments received during the public comment period on the notice of preparation regarding geology, soils, or seismicity, mineral resources, or paleontological resources.

For geology, soils, and mineral resources, the analysis provided in this section is based on a review of existing reports and geologic maps; available geologic and geotechnical reports and information from the U.S. Geological Survey (USGS) and California Geological Survey (CGS). The evaluation of paleontological resources presented in this section is based on records collection search from the University of California Museum of Paleontology database. In addition, published and unpublished paleontological literature was reviewed to determine previous paleontological resources recovered in the study area.

All analyses provided in this section were developed based on the specific features and reasonable assumptions about construction and operational characteristics of the proposed BSMP, along with data provided in the City of Yuba City General Plan,¹ Sutter County General Plan,² and Sutter County General Plan Environmental Impact Report.³

3.6.1 Environmental Setting

This subsection describes the existing conditions for geology, soils, seismicity, mineral resources, and paleontological resources, providing the regional context and local setting for these resources. Specific topics addressed in the local setting include the topography, regional geology, geologic constraints, seismicity, secondary seismic hazards, soil characteristics, mineral resources, and paleontological resources.

For the purpose of analyzing potential impacts relative to geology and soils, mineral resources, and paleontological resources, the study area is defined as the BSMP project site. The study area for seismic shaking impacts extends farther to identify active faults that may subject the BSMP project site to seismic shaking.

¹ City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004.

² Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

³ Sutter County, 2011. *Sutter County 2030 General Plan Draft Environmental Impact Report*. September 2010.

Topography

Regional Topography

The BSMP project site is located within the Great Valley (the Valley) in eastern Sutter County approximately 0.25 mile west of the Feather River (see Figures 2-1 and 2-2 in Chapter 2, Project Description). The floor of the Valley is relatively flat and bordered by the Northern Coast ranges along its west side and the Sierra Nevada range along the east side of the Valley. Throughout the Valley, the most prominent topographic feature is the Sutter Buttes, which are an ancient volcanic remnants rising about 1,980 feet above the valley and about 12 miles to the northwest of the BSMP project site.

Local Site Conditions

The entire BSMP project site is generally flat, with the exception of a very slight downward slope in the southwest direction from the northeast corner of adjacent to the Feather River. The portion of the BSMP project site separated by Garden Highway and Riverbend Elementary to the west is essentially flat. The BSMP project site ranges from 40 to 56 feet above mean sea level.⁴

Geology

Regional Geology

The BSMP project site is located within the Great Valley geomorphic province⁵ of California, which consists of an elongate, northwest-trending structural trough situated between Northern Coast ranges to the west and the Sierra Nevada range to the east.⁶ Generally, the Sierra Nevada range fills the Great Valley with sediments, and the geologic units found in the BSMP project site are characterized by flat-lying sedimentary rocks overlain by alluvial soils.⁷

Local Site Conditions

The BSMP project site is underlain by the late Pleistocene⁸ Modesto Formation, bisected by a Quaternary⁹ Alluvium unit likely a former stream channel, as shown on **Figure 3.6-1**.¹⁰ Both units are sedimentary geologic units composed of varying amounts of gravel, sand, silt, and clay. The east side of the BSMP project site is bordered by the Feather River with Holocene Stream Channel deposits in the open active stream channel.

⁴ NAVD 1988

⁵ A geomorphic province is an area that possesses similar bedrock, structure, history, and age. California Geological Survey, 2002, *California Geomorphic Provinces*, CGS Note 36.

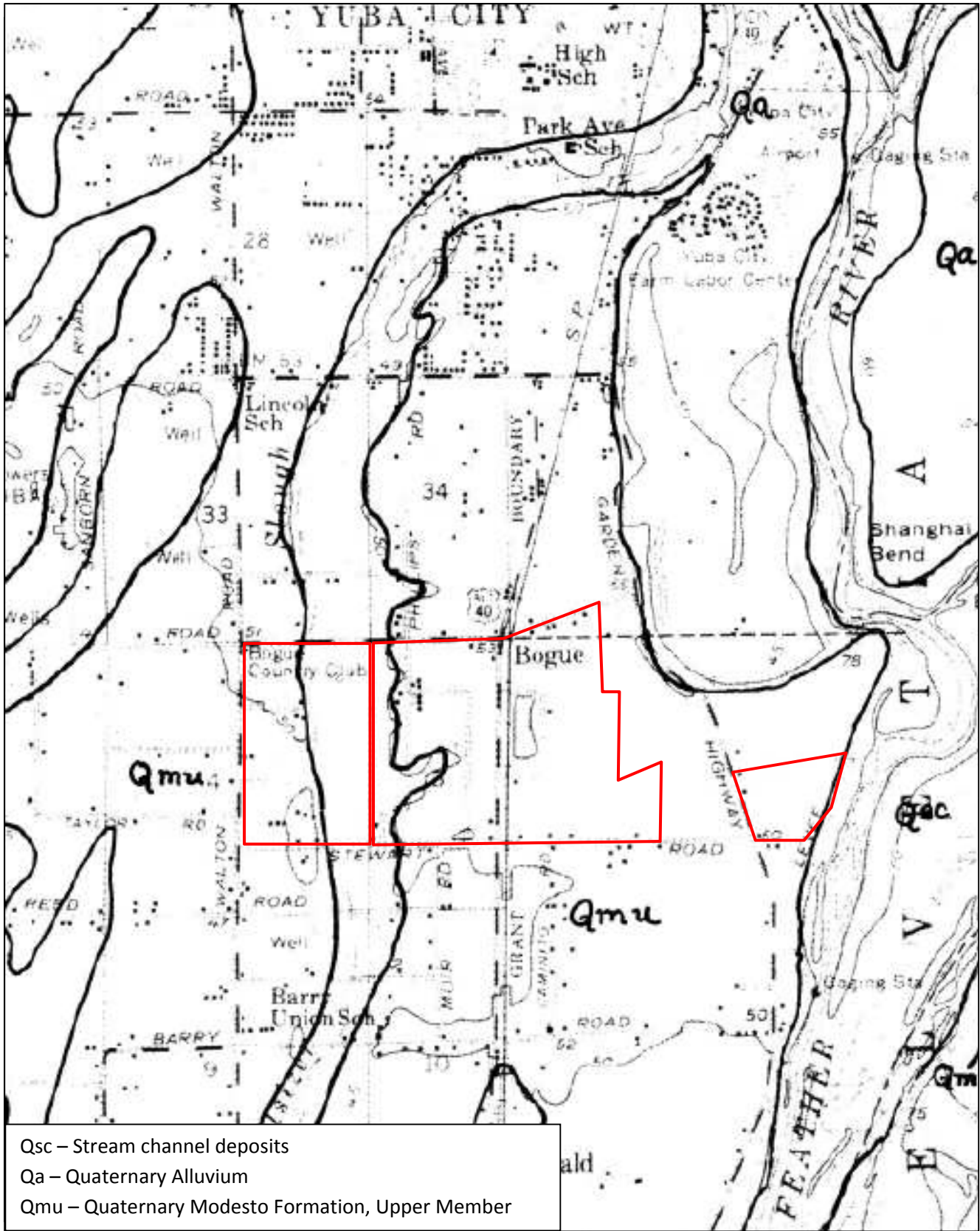
⁶ Dyett and Bhatia, 2003. *Yuba City General Plan Draft Environmental Impact Report*. pp. 3-97

⁷ Sutter County, 1996. *County of Sutter General Plan 2015: Technical Background Report*. pp. 10-1.

⁸ Pleistocene time is from 11,000 to 1.6 million years before present.

⁹ Quaternary time is from the present to 1.6 million years before present.

¹⁰ Helley, Edward J. and David S. Harwood, 1986. Geologic Map of the Late Cenozoic Deposits of the Sacramento Valley and Northern Sierran Foothills, California, Miscellaneous Field Studies Map MF-1790.



Qsc – Stream channel deposits
 Qa – Quaternary Alluvium
 Qmu – Quaternary Modesto Formation, Upper Member

SOURCES: Helley and Harwood, 1985

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Figure 3.6-1
 Geologic Units in BSMP Area

Seismicity and Faults

Earthquake Terminology and Concepts

Earthquake Mechanisms and Fault Activity

Faults are planar features within the earth's crust that have formed to release strain caused by the dynamic movements of the earth's major tectonic plates. An earthquake on a fault is produced when these strains overcome the inherent strength of the earth's crust, and the rock ruptures. The rupture causes seismic waves that propagate through the earth's crust, producing the groundshaking effect known as an earthquake. The rupture also causes variable amounts of rupture or slip along the fault, which may or may not be visible at the earth's surface.

An active fault is defined by the State of California as a fault that has had surface displacement within Holocene time (the CGS defines this as within last 11,000 years; the USGS uses 15,000 years). A potentially active fault is defined as a fault that has shown evidence of surface displacement during the Quaternary period, unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not mean that a fault lacking evidence of surface displacement is necessarily inactive. The term "sufficiently active" is also used to describe a fault if there is some evidence that Holocene displacement has occurred on one or more of its segments or branches.

Earthquake Magnitude

When an earthquake occurs along a fault, its size can be determined by measuring the energy released during the event. Seismographs record the amplitude and frequency of the seismic waves that an earthquake generates. The Richter magnitude (M or ML) of an earthquake represents the highest amplitude measured by the seismograph at a distance of 100 kilometers from the epicenter. Richter magnitudes vary logarithmically with each whole number step, representing a tenfold increase in the amplitude of the recorded seismic waves and 32 times the amount of energy released.

While Richter magnitude was historically the primary measure of earthquake magnitude, seismologists now use Moment Magnitude as the preferred way to express the size of an earthquake. The Moment Magnitude scale (MW) is related to the physical characteristics of a fault, including the rigidity of the rock, the size of fault rupture, and the style of movement or displacement across the fault. Although the formulae of the scales are different, they both contain a similar continuum of magnitude values, except that MW can reliably measure larger earthquakes and do so from greater distances.

Peak Ground Acceleration

A common measure of ground motion at any particular site during an earthquake is the peak ground acceleration (PGA). The PGA for a given component of motion is the largest value of horizontal acceleration. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. In terms of automobile accelerations, one "g" of acceleration is equivalent to the motion of a car traveling 328 feet from rest in 4.5 seconds. For comparison purposes, the maximum PGA value recorded during the Loma Prieta earthquake in the vicinity of the epicenter, near Santa Cruz, was 0.64 g. Unlike measures of

magnitude, which provide a single measure of earthquake energy, PGA varies from place to place and is dependent on the distance from the epicenter and the character of the underlying geology (e.g., hard bedrock, soft sediments, or artificial fills).

Modified Mercalli Intensity Scale

The Modified Mercalli (MM) Intensity Scale assigns an intensity value based on the observed effects of groundshaking produced by an earthquake. Unlike measures of earthquake magnitude and PGA, this scale is qualitative, in that it is based on observed effects rather than measured values. Similar to PGA, MM intensity values for an earthquake at any one place can vary depending on the earthquake's magnitude, the distance from its epicenter, the focus of its energy, and the type of geologic material. The MM values for intensity range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from IV to X could cause moderate to significant structural damage. Because the MM is a measure of groundshaking effects, intensity values can be related to a range of average PGA values, as shown below in **Table 3.6-1**.

Faults

As described above, the BSMP project site is located within the Great Valley geomorphic province of California, which is not associated with high seismic activity. However, the neighboring Coast Ranges and Sierra Nevada Mountains both have experienced historic seismic activity.

Sutter County, including the BSMP project site, does not contain and is not intersected by an active fault as delineated under the Alquist-Priolo Earthquake Fault Zoning Act. The nearest active fault is the Dunnigan Hills Fault shown on **Figure 3.6-2**, located about 24 miles to the southwest. This fault is a Holocene Fault but is not known to have had seismic activity within historic time (the last 200 years), and has not been delineated by the State under the Alquist-Priolo Earthquake Fault Zoning Act.

Potentially active faults¹¹ near the BSMP project site are shown on Figure 3.6-2 and include the Sutter Buttes faults (approximately 8 miles to the northwest) and the Swan Ravine, Spenceville, and Deadman faults (approximately 20 miles to the east), which are part of the Sierra Nevada Foothill Suture fault zone along the western slope of the Sierra Nevada.¹²

Ground Shaking

As discussed above, no known active faults are present in the BSMP project site. However, according to the Sutter County General Plan Update Technical Background Report, the area has the potential to experience low to moderate ground shaking.¹³ Two earthquakes of Magnitude 4.0 and 4.9 occurred between 1900 and 1974 with epicenters near Williams, California (approximately 27 miles west of the BSMP area). The Foothills Suture Zone also experienced a magnitude 5.7 earthquake, which occurred in 1975 and had an epicenter in the northern portion of the Zone in Butte County, approximately 37 miles to the northeast.

¹¹ Potentially active faults had movement between 11,000 and 1.6 million years before present.

¹² Jennings, C.W. and Bryant, W.A., compilers, California Geological Survey, 2010. *2010 Fault Activity Map of California*, CGS Geologic Data Map No. 6. Available: www.quake.ca.gov/gmaps/FAM/faultactivitymap.html. Accessed April 17, 2017.

¹³ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*, Section 5.1. February 2008.

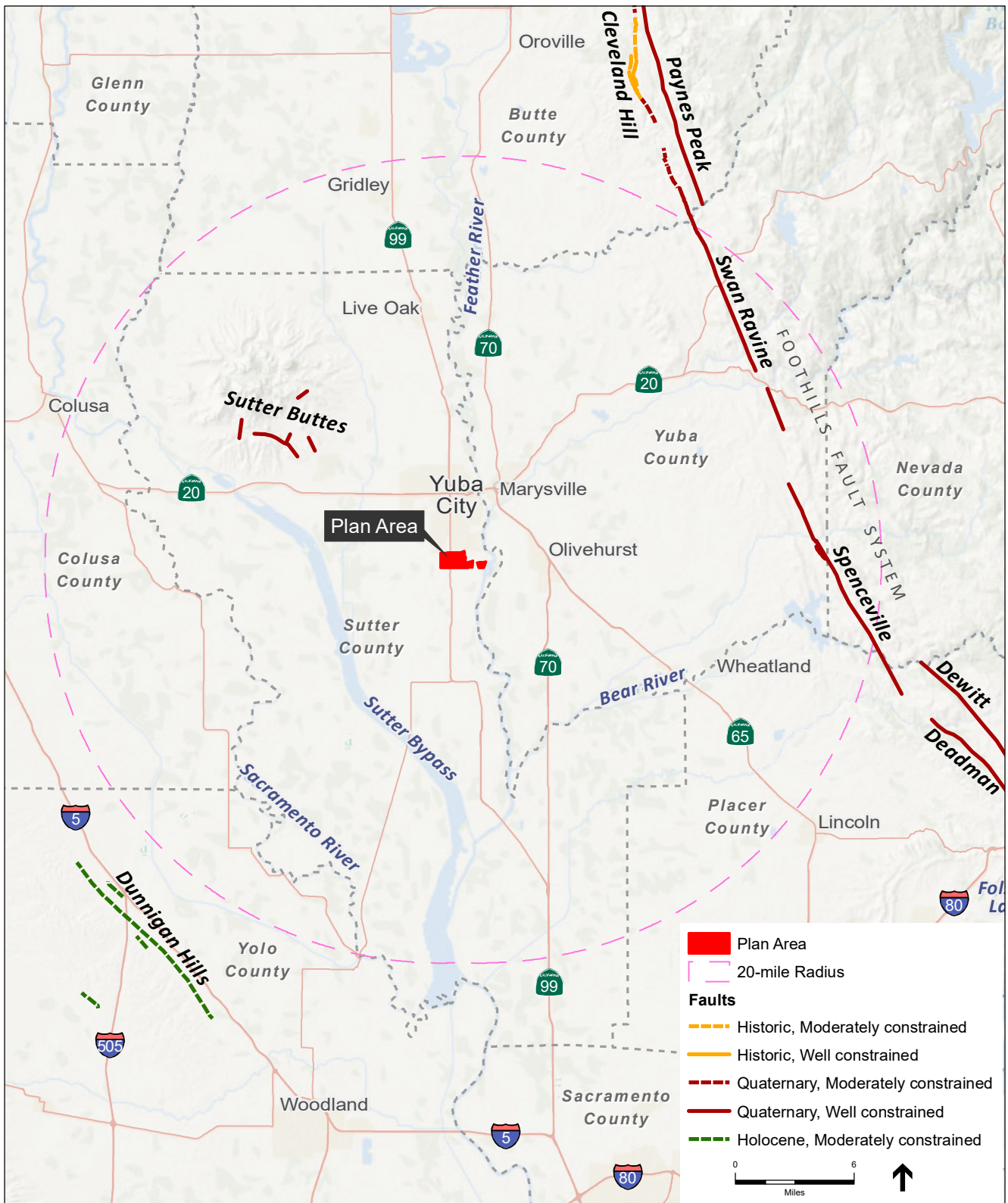
**TABLE 3.6-1
 MODIFIED MERCALLI INTENSITY SCALE**

Intensity Value	Intensity Description	Average Peak Ground Acceleration^a
I	Not felt	< 0.0017 g
II	Felt by people sitting or on upper floors of buildings	0.0017 to 0.014 g
III	Felt by almost all indoors. Hanging objects swing. Vibration like passing of light trucks. May not be recognized as an earthquake.	0.0017 to 0.014 g
IV	Vibration felt like passing of heavy trucks. Stopped cars rock. Hanging objects swing. Windows, dishes, doors rattle. Glasses clink. In the upper range of IV, wooden walls and frames creak.	0.014 to 0.039 g
V (Light)	Felt outdoors. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing. Pictures move. Pendulum clocks stop.	0.035 to 0.092 g
VI (Moderate)	Felt by all. People walk unsteadily. Many frightened. Windows crack. Dishes, glassware, knickknacks, and books fall off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster, adobe buildings, and some poorly built masonry buildings cracked. Trees and bushes shake visibly.	0.092 to 0.18 g
VII (Strong)	Difficult to stand or walk. Noticed by drivers of cars. Furniture broken. Damage to poorly built masonry buildings. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices, unbraced parapets and porches. Some cracks in better masonry buildings. Waves on ponds.	0.18 to 0.34 g
VIII (Very Strong)	Steering of cars affected. Extensive damage to unreinforced masonry buildings, including partial collapse. Fall of some masonry walls. Twisting, falling of chimneys and monuments. Wood-frame houses moved on foundations if not bolted; loose partition walls thrown out. Tree branches broken.	0.34 to 0.65 g
IX (Violent)	General panic. Damage to masonry buildings ranges from collapse to serious damage unless modern design. Wood-frame structures rack, and, if not bolted, shifted off foundations. Underground pipes broken.	0.65 to 1.24 g
X (Very Violent)	Poorly built structures destroyed with their foundations. Even some well-built wooden structures and bridges heavily damaged and needing replacement. Water thrown on banks of canals, rivers, lakes, etc.	> 1.24 g
XI (Very Violent)	Few, if any, masonry structures remain standing. Bridges destroyed. Rails bent greatly. Underground pipelines completely out of service.	> 1.24 g
XII (Very Violent)	Damage nearly total. Practically all works of construction are damaged greatly or destroyed. Large rock masses displaced. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown into the air.	> 1.24 g

NOTES:

^a Average peak ground acceleration is expressed as a fraction of the acceleration due to gravity (g). Gravity (g) is 9.8 meters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

SOURCES: Association of Bay Area Governments, 2016. Adapted from Modified Mercalli Intensity Scale (MMI). Available: <http://resilience.abag.ca.gov/shaking/mmi/>. Accessed May 12, 2017; Wald, D., Quitoriano, V., Heaton, T., and Kanamori, H., 1999. Relationships between peak ground acceleration, peak ground velocity, and Modified Mercalli Intensity in California: Earthquake Spectra, 15(3):557–564.



SOURCE: ESRI, 2012; City of Yuba City, 2016; USGS, 2009; ESA, 2019

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Figure 3.6-2
Faults

The USGS, the CGS, and the Southern California Earthquake Center formed the Working Group on California Earthquake Probabilities to evaluate the probability of one or more earthquakes of MW 6.7 or higher occurring in the State of California over the next 30 years.¹⁴ The predictive seismic parameters estimate an earthquake MM intensity of VII (Strong) and a PGA of 0.300 g¹⁵ in the center of the BSMP project site. The intensity of ground shaking at any specific site depends on the characteristics of the earthquake, the distance from the earthquake fault, and on the local geologic and soil conditions. Fault zone maps are used to identify where such hazards are more likely to occur based on analyses of faults, soils, topography, groundwater, and the potential for earthquake shaking sufficiently strong to trigger landslide and liquefaction, described below.

Liquefaction and Lateral Spreading

Liquefaction is the rapid loss of shear strength experienced in saturated, predominantly granular soils below the groundwater level during strong earthquake groundshaking and occurs due to an increase in pore water pressure. Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore-pressure buildup or liquefaction in a shallow underlying deposit during an earthquake.¹⁶ The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of groundshaking, particle-size distribution, and density of the soil.

The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of structure slabs due to sand boiling, and buckling of deep foundations due to ground settlement. Dynamic settlement (i.e., pronounced consolidation and settlement from seismic shaking) may also occur in loose, dry sands above the water table, resulting in settlement of and possible damage to overlying structures. In general, a relatively high potential for liquefaction exists in loose, sandy soils that are within 50 feet of the ground surface and are saturated (below the groundwater table). Lateral spreading can move blocks of soil, placing strain on buried pipelines that can lead to leaks or pipe failure.

As noted in the Sutter County General Plan Update Technical Background Report, “the sandy layers paralleling the Feather River have lower soil densities, a high overall water table, and are potentially a higher risk area for liquefaction if major seismic activity were to occur.”¹⁷ The other areas within the BSMP project site have soils with more clay and are thus less susceptible to liquefaction.

¹⁴ Working Group on California Earthquake Probabilities, 2015. UCERF3: A new earthquake forecast for California’s complex fault system: U.S. Geological Survey Fact Sheet 2015–3009, March, 2015.

¹⁵ State of California Department of Conservation, 2008. Ground Motion Interpolator. Available: http://www.quake.ca.gov/gmaps/PSHA/psha_interpolator.html. Accessed April 18, 2017.

¹⁶ Virginia Polytechnic Institute and State University, 2013. Liquefaction-Induced Lateral Spreading.

¹⁷ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February 2008. pp. 5.1-2.

Geologic Hazards

Slope Instability and Landslides

Slope stability and landslides are uncommon to the project area because of the flat topography and gently oscillating terrain. Neither the Yuba City General Plan¹⁸ nor the Sutter County General Plan Update Technical Background Report¹⁹ found any issues with slope instability and landslides for the BSMP project site or its surrounding vicinity.

Subsidence and Settlement

When groundwater is extracted from a confined aquifer, subsidence of the overlying land surface can occur. This type of subsidence is usually associated with severe, long-term withdrawal in excess of recharge that eventually leads to overdraft of the aquifer. Subsidence can also occur in oil production fields. Most of the fluid extracted is groundwater with varying but small percentages of oil. This is the reason that the groundwater separated from the oil is injected back into the production zone to prevent subsidence. In either case, as groundwater is pumped out, water is removed from the soil pore spaces leading to a reduction in soil strength. The subsurface conditions more conducive to subsidence include clay or organic-rich soils. Sand- and gravel-rich soils are less prone to subsidence because the larger grains comprise a skeleton less dependent on water pressure for support. The subsidence can result in damage to infrastructure such as buildings, roads, and utilities, or can result in a decrease in the volume of available aquifer storage.

To date, subsidence caused by groundwater withdrawal in Sutter County is very small and subsidence and settlement were identified by the Yuba City General Plan as unlikely to occur because of the close proximity of the Sacramento and Feather Rivers, which provide significant groundwater recharge.^{20,21} There are no natural gas or oil withdrawals in the BSMP project site.

Soils and Soil Characteristics

Soil Types

According to the United States Department of Agriculture, Natural Resources Conservation Service, the BSMP project site consists of three different surface and near-surface soils.²² The soil map units are depicted in **Figure 3.6-3**, and discussed below.

Conejo-Tisdale Complex (126)

A complex consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. This map unit consists of approximately 45 percent Conejo clay loam²³ and similar soils, 40 percent Tisdale clay loam, with the remaining 15 percent composed of a mixture of Gridley clay loam, Liveoak sandy clay loam, and Oswald clay. The Conejo series consists of very deep, well drained soils that formed in

¹⁸ City of Yuba City, 2004. *Yuba City General Plan*, Chapter 9- Noise and Safety. Adopted April 8, 2004. pp. 9-11.

¹⁹ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February 2008. pp. 5.1-11.

²⁰ Sutter County, 1996. *County of Sutter General Plan 2015: Technical Background Report*. November 1996. pp. 5.1-5.

²¹ City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004. pp. 9-10.

²² National Resources Conservation Service, 2017. Custom Soil Resource Report for Sutter County, California. April 18.

²³ A loam is a soil mixture of similar portions of sand, silt, and clay with some organic material.



Source: Custom Soil Resource Report for Sutter County, 2017

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Figure 3.6-3
Soils in the BSMP Area

alluvium from basic igneous or sedimentary rocks found on alluvial fans and stream terraces. Conejo soils are found on alluvial fans and stream terraces at elevations of 30 to 2,000 feet, with slopes ranging from 0 to 9 percent. The Tisdale clay loam is also well drained and also at a shallow depth over bedrock.

Conejo-Urban Land Complex (127)

This map unit consists of approximately 45 percent Conejo clay loam and similar soils, 45 percent Urban Land, with the remaining 10 percent composed of a mixture of Gridley clay loam and other unnamed soils. The Conejo clay loam is, as described above, well drained, at a shallow depth over weathered bedrock, with a depth to water table of approximately 80 inches. Urban Land was found to occur in 45 percent of this map unit, and is considered to be a miscellaneous area. Miscellaneous areas have essentially no soil and support little or no vegetation. This can be a result of active erosion, washing by water, unfavorable soil conditions, or man's activities. Urban Land is land mostly covered by streets, parking lots, buildings, and other structures of urban areas.²⁴

Garretson Variant Loam (131)

This map unit primarily consists of Garretson variant loam, and similar soils (85 percent). Garretson variant loam is also well drained, with a depth to water table of over 80 inches. While the soil was found to be well-drained, this type of soil has a very high availability of storage for water in its profile (about 9.3 inches). Minor components, including Conejo clay loam, Liveoak sandy clay loam, and Tisdale clay loam, make up the remainder of the map unit profile.

Expansive Soils

Expansive soils are soils that swell or shrink when they absorb or lose water. The potential for expansion, also referred to as linear extensibility or shrink-swell potential, refers to the change in volume of an unconfined clod of soil as moisture content is increased or decreased between a moist and dry state. The amount and type of clay minerals in the soil influence changes in soil volume. This reaction can cause cracking, tilting, and, occasionally, collapse of foundations or structures. The presence of expansive soils may also indicate a potential for settlement. As described under the discussion of subsidence and settlement, above, settlement may take place when vertical loads compress weak soils by squeezing out air and water, causing supported structures to sink. If different soil conditions cause the ground under a structure to settle to different depths (differential settlement), structural damage such as cracked foundations, cracked columns, and even collapse could result.

The Natural Resources Conservation Service (NRCS) Soil Survey identifies areas with low and moderate ratings for expansiveness in the BSMP project site. The area parallel to State Route (SR) 99 within the Kells East Ranch site has a low rating for expansiveness. The rest of the

²⁴ Natural Resources Conservation Service, 2017. Technical References. Soil Survey Manual – Chapter Two. Available: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054252. Accessed April 17, 2017.

BSMP project site, including the Newkom Ranch site, has a moderate rating for linear extensibility.²⁵

Erosive Soils

Erosive soils are those that are easily worn away and transported to another area either by wind, water, or gravity. Soils that contain high amounts of loose sand and silt (fine soil particles smaller than sand) are more easily erodible than soils which are more consolidated. Excessive soil erosion can lead to damage of building foundations and roadways. Wind-driven erosion (fugitive dust) is analyzed in Section 3.3 Air Quality. Stormwater runoff from an unstabilized construction site can result in the loss of approximately 35 to 45 tons of sediment per acre per year.²⁶

The NRCS soil survey was used to identify potentially erosive soils at the BSMP project site due to water erosion.²⁷ The “K” factor is used by the NCRS to determine susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter, and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. The overall BSMP project site, including the Newkom Ranch site, is rated with a K factor between 0.32 and 0.37, meaning moderate susceptibility to erosion due to water. As a subset of the BSMP project site, the Kells East Ranch site has the lower susceptibility to erosion due to water at with a rating of 0.32.

Mineral Resources

The CGS is responsible for preparing Mineral Land Classification Maps that designate Mineral Resource Zones (MRZ). MRZs define areas where important mineral deposits occur, based on the value of the mineral resource. MRZs are defined as follows:

- **MRZ 1** – Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence
- **MRZ 2** – Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists
- **MRZ 3** – Areas containing mineral deposits, the significance of which cannot be evaluated from available data
- **MRZ 4** – Areas where available information is inadequate for assignment to any other MRZ zone

The Central Valley is underlain by alluvial deposits, which contain significant reserves of sand and gravel suitable for use as aggregate in cement production. The extraction of mineral resources

²⁵ National Resources Conservation Service, 2017. Custom Soil Resource Report for Sutter County, California. April 18, 2017.

²⁶ U.S. Environmental Protection Agency, 2007. *Developing Your Stormwater Pollution Prevention Plan*.

²⁷ National Resources Conservation Service, 2017. Custom Soil Resource Report for Sutter County, California. April 18, 2017.

in Sutter County has historically been limited to the extraction of clay, sand, soils, and rock. Oil and natural gas resources are not known within or near the BSMP project site. These materials have generally been used for construction.

Construction aggregate is currently the County's main market for mining resources produced in the County and consists predominantly of sand, gravel, and crushed stone. The unincorporated portions of Sutter County have rich deposits in mineral resources. The County Surface Mining Code and the Zoning Code both permit the extraction of mineral resources from land under Sutter County's jurisdiction. Historic mining extraction has included kaolin and common clay, sand, soils, rock, pumice, and some gold. All of the mines in the County are open-pit mines. Sutter County has no deep-shaft mining activity. Sutter County does not identify the BSMP project site as containing any locally important mineral resource recovery site.²⁸

There are currently three active mining operations within the County. None of the active mines are within the BSMP project site. The three mining operations are located within the Sutter Buttes area, approximately 10 miles northwest of the BSMP project site.²⁹ The BSMP project site is located in an area classified as MRZ-1: which "indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence."³⁰

The County expects new applications requesting mines (borrow pits) to be filed due to the material that will be needed for future levee construction and road widening. It is anticipated that these will be located in the valley (flat areas) rather than the Sutter Buttes as many of the other mining operations are; however, none have been proposed for location within or adjacent to the BSMP project site.

Paleontological Resources

Paleontological resources are the fossilized remains or impressions of plants and animals, including vertebrates (animals with backbones; mammals, birds, fish, etc.), invertebrates (animals without backbones; starfish, clams, coral, etc.), and microscopic plants and animals (microfossils). They are valuable, nonrenewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived. Fossils can be used to determine the relative ages of the depositional layers in which they occur and of the geologic events that created those deposits. The age, abundance, and distribution of fossils depend on the geologic formation in which they occur and the topography of the area in which they are exposed. The geologic environments within which the plants or animals became fossilized usually were quite different from the present environments in which the geologic

²⁸ Sutter County, 2011. *Sutter County 2030 General Plan*. Available: https://www.co.sutter.ca.us/doc/government/depts/cs/ps/gp/gp_home. Accessed April 28, 2017.

²⁹ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. Available: <https://www.co.sutter.ca.us/contents/pdf/cs/ps/gp/tbr/tbr.pdf>. Accessed April 17, 2017.

³⁰ California Department of Conservation, 2017. CGS Information Warehouse: Mineral Land Classification. SMARA Study Area: Special Report 132. Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Yuba City-Marysville Production-Consumption Region. Available: <http://maps.conservation.ca.gov/cgs/informationwarehouse/>. Accessed April 18, 2017.

formations now exist. The fossil bearing geologic formations in the Central Valley area are relatively young, having been deposited between about 1 million and about 24 million years ago.

Unconsolidated Quaternary deposits occur in the BSMP project site (see Figure 3.6-1). Generally speaking, many of the fossils in undivided Quaternary sediments tend to be fragmented vertebrate fossils, including extinct bison, camels, boney fish, mammoths, and horses.³¹ Twenty-six fossil localities are recorded for Sutter County in the University of California Museum of Paleontology database. Most of these localities are in the Sutter Buttes and none of these are located within the BSMP project site.

In the context of CEQA, fossils of land dwelling and marine vertebrates, their environment, and associated geological, stratigraphical, taphonomical, and geographical data are considered important (i.e., significant) paleontological resources. Such fossils typically are found in river, lake, and bog deposits, although they may occur in nearly any type of sedimentary sequence.

As shown in Figure 3.6-1, according to surficial geological mapping by Wagner and Saucedo, the majority of the BSMP project site is underlain by Quaternary alluvium. Because it consists of recently deposited sediments, and few fossil specimens in institutional collections have been found near the BSMP project site, surficial exposures of Quaternary alluvium are considered to have low potential for paleontological resources.

3.6.2 Regulatory Framework

Federal

Earthquake Hazards Reduction Act of 1977

In 1977, the United States Congress passed the Earthquake Hazards Reductions Act (EHRA) (44 U.S. Code Section 7701 et seq.) to minimize the risks to lives and properties from future earthquakes and seismic activity on the national level by creating an effective earthquake hazards reduction program. To achieve this, the National Earthquake Hazards Reduction Program (NEHRP) was implemented. Congress adopted the National Earthquake Hazards Reduction Program Act (NEHRPA) to amend the NEHRP in November 1990 to refine the description of agency responsibilities, program goals, and objectives, and reauthorized the act in 2004.

The NEHRP has a mission that consists of improved understanding, characterization, and prediction of hazards vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; increased mitigation capacity; and accelerated application of research findings. The NEHRPA assigns the Federal Emergency Management Agency (FEMA) the role of lead agency of this program to assign numerous planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, the National Science Foundation, and the United States Geological Survey (USGS).

Specific structures (occupied for living or working) constructed within the BSMP project would be required to comply with the seismic code requirements within the California Building Code

³¹ Quaternary is the current period of geologic time, which began about 1.8 million years ago.

(CBC), discussed further below, as a condition of permit approval and would thus be consistent with the Earthquake Hazards Reduction Act.

State

Alquist-Priolo Earthquake Fault Zoning Act

In 1972, the Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) was passed (PRC Sections 2621-2630) to mitigate the effects of surface faulting on structures designed for human occupancy. This law was mainly intended to prevent the construction of buildings for human occupancy directly on the surface trace of active faults. This law only addresses the hazard of surface fault rupture and does not consider other seismic hazards.

Pursuant to the Alquist-Priolo Act, the State Geologist is required to establish regulatory zones, known as Earthquake Fault Zones, around the surface traces of active faults and issue maps accordingly. The maps are to be provided to all affected cities, counties, and California agencies to assist with planning decisions. If a project is within a designated Alquist-Priolo Earthquake Fault Zone, prior to approving any development the city or county must require a geologic investigation to prove that the proposed structures would not be constructed across active faults. As discussed above in the Environmental Setting, no active faults are within or near the BSMP project site. Therefore, the Alquist-Priolo Act does not apply to the proposed project because the State of California has not zoned any active faults under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The State regulations protecting the public from geoseismic hazards, other than surface faulting, are contained in PRC, Division 2, Chapter 7.8 (the Seismic Hazards Mapping Act), described here, and 2007 California Code of Regulations, Title 24, Part 2 (the CBC), described below. Both of these sets of regulations apply to public buildings, and a large percentage of private buildings, intended for human occupancy.

The Seismic Hazards Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. The Act requires the State Geologist to delineate various seismic hazard zones, and cities, counties, and other local permitting agencies to regulate certain development projects within these zones. For projects that would locate structures for human occupancy within designated Zones of Required Investigation, the Seismic Hazards Mapping Act requires project applicants to perform a site-specific geotechnical investigation to identify the potential site-specific seismic hazards and corrective measures, as appropriate, prior to receiving building permits.

The *CGS Guidelines for Evaluating and Mitigating Seismic Hazards* (Special Publication 117A) provides guidance for evaluating and mitigating seismic hazards.³² The CGS is in the process of producing official maps based on USGS topographic quadrangles, as required by the Act. To date, the CGS has not completed delineations for any of the USGS quadrangles in which project

³² California Geological Survey, 2008. *CGS Guidelines for Evaluating and Mitigating Seismic Hazards* (Special Publication 117A).

site is located. Seismic Hazard Maps have not been published for the BSMP project site; therefore, the BSMP project site does not occur in a Zone of Required Investigation.

Specific structures (occupied for living or working) constructed within the BSMP project site would be required to comply with the seismic code requirements within the California Building Code and Special Publication 117A as a condition of permit approval and would thus be consistent with the Seismic Hazards Mapping Act.

National Pollutant Discharge Elimination System Permit

Construction associated with the Proposed Project would disturb more than one acre of land surface affecting the quality of stormwater discharges into waters of the U.S. The Proposed Project would therefore be subject to the *National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a Risk Level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the receiving waters risk during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could potentially be discharged to receiving water bodies and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving waters risk level reflects the risk to the receiving waters from the sediment discharge. Depending on the risk level, the construction projects could be subject to the following requirements:

- Effluent standards
- Good site management “housekeeping”
- Non-stormwater management
- Erosion and sediment controls
- Run-on and runoff controls
- Inspection, maintenance, and repair
- Monitoring and reporting requirements

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific Best Management Practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving offsite into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring

program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

The SWPPP must be prepared before construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project area. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing and fueling. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site following construction).

In the BSMP area, the NPDES Permit is implemented and enforced by the Central Valley Regional Water Quality Control Board (RWQCB), which administers the stormwater permitting program. Dischargers are required to electronically submit a notice of intent (NOI) and permit registration documents (PRDs) in order to obtain coverage under this Construction General Permit. Dischargers are responsible for notifying the RWQCB of violations or incidents of non-compliance, as well as for submitting annual reports identifying deficiencies of the BMPs and how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a state Qualified SWPPP Developer and implementation of the SWPPP must be overseen by a state Qualified SWPPP Practitioner. A Legally Responsible Person, who is legally authorized to sign and certify PRDs, is responsible for obtaining coverage under the permit.

Construction projects of one acre or more would be required to comply with the Construction General Permit as a condition of permit approval and would thus be consistent with the Construction General Permit.

California Department of Transportation (Caltrans) Right of Way Requirements

Some of the BSMP area is located in the SR 99 right of way (ROW), and any work in this ROW is subject to Caltrans requirements governing allowable actions and modifications to the ROW. The State of California has established construction standards and design criteria for roadways to safeguard life and property. Construction standards and seismic design criteria are contained in such regulatory codes as the following:

- Caltrans Seismic Design Criteria current version available at: <http://www.dot.ca.gov/hq/esc/techpubs/manual/othermanual/other-engin-manual/seismic-design-criteria/sdc.html>

- Caltrans Highway Design Manual, Section 110.6 Earthquake Considerations and Section 113 Geotechnical Design Report (current version available at: http://www.dot.ca.gov/hq/esc/geotech/geo_manual/manual.html)
- Or similar codes adopted by a city for roadway corridor protection.

These criteria deal with pavement and subsurface utility design (flexible joints and couplings, overpass construction, etc.), slope stability (especially slumping, settling, and liquefaction in fills), alignment modification to reduce exposure to fault rupture or intense groundshaking, and ground failures such as liquefaction. Prior to construction, geotechnical studies are required to be undertaken and recommended seismic protection measures are required to be accommodated in project design. The recommendations provide the required protection from the anticipated effects of seismic groundshaking. Adherence to these standards of protection is mandatory and would reduce the risk of injury or death from earthquakes to the maximum extent technically practicable.

Chapter 8 of Caltrans' Standard Environmental Reference (SER) provides an overview of relevant laws and regulations and explains the Caltrans policies and procedures used to identify, evaluate, and, if necessary, mitigate paleontological resources. Chapter 8 describes the identification, evaluation, and if necessary, mitigation processes for addressing paleontological resources on state lands, such as the SR 99 corridor.

Projects constructed within areas under the jurisdiction of Caltrans would be required to comply with the above-listed regulations and standards as a condition of permit approval, which would make the project consistent with Caltrans regulations.

California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2016 edition of the CBC is based on the 2015 International Building Code (IBC) published by the International Code Council, which replaced the Uniform Building Code. The CBC is updated triennially, and the 2016 edition was published by the California Building Standards Commission on July 1, 2016, and took effect starting January 1, 2017. It should be noted that the City adopted the 2016 edition of the CBC.

The 2016 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, *Minimum Design Loads for Buildings and Other Structures*, provides requirements for general structural design and includes means for determining earthquake loads³³ as well as other loads (such as wind loads) for inclusion into building codes. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake. However, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Seismic design specifications are determined according to the SDC in accordance with Chapter 16 of the CBC. Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

The design of the proposed action is required to comply with CBC requirements as a condition of permit approval, which would make the proposed action consistent with the CBC.

California Public Resources Code

Several sections of the California Public Resources Code protect paleontological resources. Section 5097.5 prohibits “knowing and willful” excavation, removal, destruction, injury, and

³³ A load is the overall force to which a structure is subjected in supporting a weight or mass, or in resisting externally applied forces. Excess load or overloading may cause structural failure.

defacement of any paleontologic feature on public lands (lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted permission. Section 30244 requires reasonable mitigation for impacts on paleontological resources that occur as a result of development on public lands. The sections of the California Administrative Code pertaining to the California Department of Parks and Recreation afford protection to geological features and “paleontological materials” but grant the director of the State park system authority to issue permits for specific activities that may result in damage to such resources, if the activities are in the interest of the State park system and for State park purposes (California Administrative Code Sections 4307–4309).

California Environmental Quality Act Statute and Guidelines

CEQA requires that public agencies identify the environmental consequences of their proposed projects and project approvals and as such, paleontological resources are afforded consideration under CEQA. Appendix G of the CEQA guidelines (Title 14, Division 6, Chapter 3, California Code of Regulations: 15000 et seq.) includes as one of the questions to be answered in the Environmental Checklist (Appendix G, Section V, Part c) the following: “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” PRC Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor. Other State requirements for paleontological resource management are in California Public Resources Code Chapter 1.7, Section 5097.5 through 5097.9 (Stats. 1965, c. 1136, p. 2792), Archaeological, Paleontological, and Historical Sites. This statute defines any unauthorized disturbance or removal of a fossil site or remains on public land as a misdemeanor and specifies that State agencies may undertake surveys, excavations, or other operations as necessary on State lands to preserve or record paleontological resources. CEQA documentation prepared for projects would be required to analyze paleontological resources as a condition of the CEQA process to disclose potential impacts.

Local

City of Yuba City General Plan

The City of Yuba City General Plan presents the vision for the future of Yuba City, and outlines several guiding policies and policies relevant to geology, soils and seismicity, minerals, and paleontological resources. Because the BSMP project site would be annexed into the City of Yuba City, it must be found to be substantially compliant to the policies found within the General Plan.

The following policies from the City of Yuba City General Plan are relevant to geology and soils.

Guiding Policy 9.2-G-1 Minimize risks of property damage and personal injury posed by geologic and seismic hazards.

Implementing Policies

- 9.2-I-1 Review proposed development sites at the earliest stage of the planning process to locate any potential geologic or seismic hazards.

Following receipt of a development proposal, engineering staff shall review the plans to determine whether a geotechnical review is required. If the review is required, then the applicant shall be referred to geotechnical experts for further evaluation.

- 9.2-I-2 Prohibit structures intended for human occupancy within 50 feet of an active fault trace.

Although no active faults are located within the Planning Area, this policy would apply if a new fault was discovered. It is also the City's intent to discourage homes, offices, hospitals, public buildings, and other similar structures over the trace of an inactive fault and to allow uses within setback areas that could experience displacement without undue risk to people and property.

- 9.2-I-4 Require preparation of a soils report as part of the development review and/or building permit process for development proposed in the area depicted with expansive soils.

Chapter 6 of the proposed BSMP, Public Services and Utilities, mandates that “[b]uildout of the Plan Area is to comply with City of Yuba City policies and YCPD recommendations regarding safety and security.” In this capacity, buildout of the proposed BSMP – through development permit approvals (including conditions for approval) – would implement the above guiding policies and corresponding implementing policies related to geologic and seismic hazards, which directly impact safety of civilians.

No policies from the Yuba City General Plan are relevant to mineral resources in the BSMP area.

The following policy from the Yuba City General Plan is relevant to paleontological resources.

Guiding Policy 8.3-G-1 Identify and preserve the archaeological, paleontological, and historic resources that are found within the Yuba City Planning Area.

Development pursuant to the proposed BSMP would be required to comply with all policies set forth in the Yuba City General Plan regarding paleontological resources. As part of the CEQA review process, the lead agency is conducting due diligence to identify potential paleontological resources in the BSMP area. A records search for paleontological resources was conducted and none were found to exist within the BSMP project site. Therefore, the proposed BSMP would substantially comply with Guiding Policy 8.3-G-1.

3.6.3 Analysis, Impacts, and Mitigation

Significance Criteria

Impacts on geology, soils, seismicity, mineral resources, or paleontological resources are considered significant if development pursuant to the proposed BSMP would:

1. Expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving:

- a. Rupture of a known earthquake fault, as delineated on the most recent Alquist Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault [refer to California Geology Survey Special Publications 42];
 - b. Strong seismic groundshaking;
 - c. Seismic related ground failure, including liquefaction; or
 - d. Landslides;
2. Result in substantial soil erosion or the loss of topsoil;
 3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse;
 4. Be located on expansive or corrosive soil creating substantial risks to life or property;
 5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;
 6. Result in a loss of availability of a known mineral resource that would be of value to the region and the residents of the State;
 7. Result in a loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan; or
 8. Directly or indirectly destroy unique paleontological resource or site or unique geologic feature.

Methodology and Assumptions

Information for this assessment of impacts relative to geology, soils, mineral resources, and paleontological resources is based on a review of literature research (geologic, seismic, soils, and mineral resources reports and maps), information from seismic and paleontological databases, and the Yuba City General Plan and Sutter County General Plan. This information was used to identify potential impacts to workers, the public, or the environment.

The specific types of businesses that would locate within the BSMP project site are unknown at this time, but the general type of businesses and the range and types of uses (e.g., commercial, light industrial, and residential) that are expected to be located in the BSMP project site would be regulated by the various laws, regulations, and policies summarized in the Regulatory Framework and limited by zoning requirements. For a further discussion of land use types please refer to Section 3.10, Land Use and Planning. Compliance with applicable federal, state, and local health and safety laws and regulations by residents and businesses in the BSMP project site is assumed in this analysis, and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the regulations is a condition of permit approval.

A significant impact would occur if, after considering the features described in the Project Description and the required compliance with regulatory requirements, a significant impact would still occur. For those impacts considered to be significant, mitigation measures are proposed to reduce the identified impacts.

In addition to the laws, regulations, and policies described in the regulatory framework, the standard practice in analyzing paleontological resources includes using guidance from the Society of Vertebrate Paleontologist. Although not a law or regulation in the legal sense, these guidelines have become the standard in the industry.

CEQA requires analysis of a project's effects on the environment; consideration of the potential effects of a site's environment on a project are outside the scope of required CEQA review (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369). As stated in *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473: "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." The impacts discussed in this section related to increased exposure of people or structures to risks associated with seismic occurrences and location of people or structures on unstable geologic units are effects on users of the project and structures in the project of preexisting environmental hazards, and therefore "do not relate to environmental impacts under CEQA and cannot support an argument that the effects of the environment on the project must be analyzed in an EIR." (*Id.* at p. 474.) Nonetheless, an analysis of these impacts is provided for information purposes.

The Conformable Impact Mitigation Guidelines Committee of the Society of Vertebrate Paleontology (SVP) published Standard Guidelines in response to a recognized need to establish procedures for the investigation, collection, preservation, and cataloguing of fossil bearing sites. The Standard Guidelines are widely accepted among paleontologists, followed by most investigators, and identify the two key phases of paleontological resource protection: (1) assessment and (2) mitigation. Assessment involves identifying the potential for a project site or area to contain significant nonrenewable paleontological resources that could be damaged or destroyed by project excavation or construction. Mitigation involves formulating and applying measures to reduce such adverse effects, including pre project survey and salvage, monitoring and screen washing during excavation to salvage fossils, conservation and inventory, and final reports and specimen curation. The SVP defines the level of potential as one of four sensitivity categories for sedimentary rocks: high, undetermined, low, and no potential as listed below.

- **High Potential** – Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcanoclastic formations (e.g., ashes or tephra), and some low grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e.g., middle Holocene and older, fine grained fluvial sandstones, argillaceous and carbonate rich paleosols, cross bedded point bar sandstones, fine grained marine sandstones, etc.).

Paleontological potential consists of both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data. Rock units which contain potentially datable organic remains older than late Holocene,³⁴ including deposits associated with animal nests or middens and rock units which may contain new vertebrate deposits, traces, or trackways are also classified as having high potential.

- **Undetermined Potential** – Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.
- **Low Potential** – Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections or, based on general scientific consensus, only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e.g., basalt flows or Recent (i.e., Holocene) colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.
- **No Potential** – This designation is assigned to geologic formations that are entirely plutonic (volcanic rocks formed beneath the earth’s surface) in origin and therefore have no potential for producing fossil remains.

Issues Not Discussed in Impacts

The following significance criteria are considered to have no impact, as discussed below, and are not analyzed further.

- **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.** There are no known active faults within the BSMP project site or within the vicinity in Sutter County, and the BSMP project site is not located in an Alquist-Priolo Earthquake Fault Zone.³⁵ The nearest identified fault is approximately 25 miles to the southwest. Therefore, implementation of the proposed BSMP would not expose people or structures to potential substantial risk of loss, injury, or death involving the rupture of a known earthquake fault, and there would be no impact.

³⁴ The Holocene is the latest interval of geologic time, covering approximately the last 11,700 years of the Earth’s history.

³⁵ California Geological Survey, 2015. Alquist-Priolo Earthquake Fault Zones. Available: www.quake.ca.gov/gmaps/WH/regulatorymaps.htm. Accessed May 4, 2015.

- **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.** Earthquake-induced landslides on steep slopes can occur in either bedrock or unconsolidated deposits. However, the BSMP project site is essentially flat. Therefore, implementation of the proposed BSMP would not expose people or structures to landslides, and there would be no impact.
- **Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.** The proposed BSMP project site would be served by a municipal sewer collection system that would connect to the lines that convey wastewater to the City of Yuba City Wastewater Treatment Plant (WTP). The WTP has capacity to support 4.0 million gallons per day (mgd) per day beyond the quantity it currently processes. Buildout of the proposed BSMP would result in generation of 2.3 mgd at peak flow, which could be accommodated by the existing WTP capacity. No septic tanks or alternative wastewater disposal systems would be used as part of the buildout of the proposed BSMP. Therefore, implementation would not involve or affect septic tanks or alternative wastewater technologies, and there would be no impact.
- **Result in a loss of availability of a known mineral resource that would be of value to the region and the residents of the State.** The BSMP project site does not contain any known mineral resources that would be of value to the region and the residents of the State. The BSMP project site is located in an area classified as MRZ-1 by the State of California, which “indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.” Therefore, no loss of available known mineral resources that could be of value to the region and the residents of the State would occur, and there would be no impact.
- **Result in a loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.** The BSMP project site would be under the jurisdiction of the City of Yuba City General Plan. The City of Yuba City General Plan does not identify any locally important mineral resource recovery sites in the BSMP project site; therefore, there would be no impact.

Impacts and Mitigation Measures

Impact 3.6-1: Development pursuant to the proposed BSMP would not expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving strong seismic ground shaking or seismic related ground failure, such as liquefaction.

Sutter County is generally considered to have a low to moderate potential for seismic activity, and no active faults are known to exist within or in the vicinity of the BSMP area. Nevertheless, the BSMP project site has the potential to experience groundshaking effects of a large earthquake over the next 30 years. There is a potential for high-intensity groundshaking associated with a characteristic earthquake in this region. The intensity of such an event would depend on the fault in which the earthquake originates and the distance to the epicenter, the moment magnitude, the duration of shaking, and the nature of the geologic materials beneath the project components. Intense groundshaking and high ground accelerations could affect the entire BSMP project site, including the Newkom Ranch and Kells East Ranch sites. In the event of a large earthquake the

predictive seismic parameters estimate an MM VII intensity and a PGA of 0.300 g (Strong)³⁶ in the center of the BSMP project site, even if the earthquake epicenter is located a long distance away, such as the 24 miles to the Dunnigan Fault to the southwest. Seismic groundshaking could damage foundations and structures resulting in structural failure.

The groundshaking and high ground accelerations as the result of an earthquake could cause seismic-induced ground failures, such as liquefaction or lateral spreading, which could also damage foundations and structures, resulting in structural failure. The Technical Background Report for the Yuba City General Plan identified alluvial soils near the Feather River as having a moderate to high potential for liquefaction in the event of a strong seismic event. The potential for liquefaction could vary throughout the project site and would depend on site-specific data including depth to groundwater and composition (including densities) of underlying materials.

All new buildings and structures must be constructed in accordance with the current CBC standards, which would minimize the safety risks related to seismic hazards and general structural damage from ground shaking or liquefaction.

Yuba City would require detailed geotechnical engineering investigations for specific developments including the Newkom Ranch site and Kells East Ranch site to more accurately evaluate seismic hazards, including the potential for liquefaction, and to provide seismic design standards to withstand the anticipated level of seismic shaking prior to approval of a building permit. Chapter 16 of the CBC establishes General Design Requirements, guiding construction efforts to ensure seismically resistant construction. For work conducted within rights-of-way such as SR 99 under the jurisdiction of Caltrans, during project design, the geotechnical engineer would be required to comply with the CBC and Caltrans construction standards and design criteria. Local building officials—in this case, Yuba City and Caltrans—would be responsible for inspections and ensuring compliance with the applicable codes and standards described above.

While the BSMP area has a low to moderate potential for ground shaking, it does have a moderate to high potential to experience liquefaction if a large earthquake were to occur. Compliance with regulatory standards described above would reduce potential impacts related to strong seismic shaking and liquefaction to **less-than-significant** level, and no mitigation measures are required.

Mitigation Measure

None required.

³⁶ State of California Department of Conservation, 2008. Ground Motion Interpolator. Available: http://www.quake.ca.gov/gmaps/PSHA/psha_interpolator.html. Accessed April 18, 2017.

Impact 3.6-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.

The BSMP project site, including the Kells East Ranch and Newkom Ranch sites, is identified in the NRCS soil survey to contain soils with a moderate potential for erosion due to water. As previously noted, wind driven erosion (fugitive dust) is analyzed in Section 3.3 Air Quality. Construction activities that disturb soil would have the potential to result in erosion or the loss of topsoil.

Individual projects pursuant to the proposed BSMP that would disturb soil areas of more than one acre would be required to comply with the NPDES Construction General Permit. Smaller projects would not be expected to result in significant erosion potential. The Construction General Permit requirements were developed to ensure that stormwater is managed and erosion is controlled on construction sites. The Construction General Permit requires preparation and implementation of a SWPPP, which requires application of BMPs to control runoff of water from construction work sites. The BMPs could include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of bioinfiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during buildout of the BSMP project site. See Section 3.9, Hydrology and Water Quality, for further discussion.

Because project construction activities would be subject to requirements that would control erosion, construction pursuant to the proposed BSMP would not cause substantial increases in soil erosion. Therefore, through compliance with the Construction General Permit, these activities would have a less-than-significant impact related to soil erosion.

Upon completion of the construction stage of any individual project developed pursuant to the proposed BSMP, previously disturbed areas would be protected through placement of structures, roadways, landscaping, and other hardscaping, which would substantially minimize any long-term erosion possibilities. As discussed in Section 3.9, Hydrology and Water Quality, Yuba City implements the NPDES Phase II MS4 requirements, which involves implementation of post-construction stormwater quality improvements. As part of these drainage control requirements, the proposed project would be required to include ongoing maintenance activities to ensure long term operational stormwater management is protective of water quality objectives. While the BSMP area has a low to moderate potential for erosion or loss of topsoil, with the implementation of the SWPPP, the MS4 requirements, and dust control measures, the potential for erosion or loss of topsoil during project construction and operation would be reduced to **less-than-significant** levels.

Mitigation Measure

None required.

Impact 3.6-3: The BSMP project would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse due to being located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project.

Impacts relative to liquefaction and lateral spreading are addressed above in Impact 3.6-1 because liquefaction and lateral spreading are primarily caused by seismic events.

The BSMP project site covers a relatively large area that is underlain by alluvium and characterized by flat topography with no steep grades or abrupt changes in elevation. Development pursuant to the proposed BSMP would be required to adhere to CBC requirements that include the preparation of a site-specific geotechnical investigation by a State licensed geotechnical engineer. The required geotechnical report development would determine the susceptibility of the subject site to landslide, lateral spreading, subsidence (settlement), liquefaction and collapse. Compliance with the CBC would require prescribed engineering techniques for reducing the effects of any identified geotechnical hazards or unstable units in the BSMP project site, including the Kells East Ranch or Newkom Ranch sites. Where settlement and/or differential settlement is predicted, readily available site preparation measures—such as use of engineered fill, surcharging, wick drains, deep foundations, structural slabs, hinged slabs, flexible utility connections, and utility hangers—could be used. These measures would be evaluated and the most effective, feasible, and economical measures recommended in a geotechnical report and incorporated into site design in accordance with CBC requirements. Engineering recommendations included in the project engineering and design plans for construction of developments pursuant to the proposed BSMP would be reviewed and approved as a condition of permit approval by the City of Yuba City. With adherence to CBC requirements the potential for unstable soils to adversely affect proposed improvements would be **less than significant**.

Mitigation Measure

None required.

Impact 3.6-4: Development pursuant to the proposed BSMP could be located on expansive soil, as defined in California Building Code, creating substantial risks to life or property.

The potential for soil expansion, also referred to as linear extensibility or shrink swell potential, is related to changes in volume caused by changes in soil moisture, specifically in clayey soils. Over time, structures developed pursuant to the proposed BSMP that are constructed on expansive soils could experience foundation damage as a result of seasonal expanding and contracting of soils. According to the NRCS soil survey, the entire BSMP project site is identified as having low and moderate ratings for linear extensibility.

Building damage due to volume changes associated with expansive soils can be reduced through proper foundation design. Replacement of native soils with engineered fill, treatment of native soils, or addition of soil amendments are effective means of reducing the risk from expansive soils. As a requirement of the CBC, project applicants would be required to submit a final

geotechnical investigation that includes site-specific recommendations for the mitigation of potentially expansive soils as a condition of permit approval. The site-specific analysis of site foundation soils guides the recommended building foundation design, such that damage from expansive soils is minimized and reduced to levels that can be accommodated by the final design. Therefore, implementation of standard geotechnical engineering practices and adherence to building code requirements would reduce potential impacts from expansive soils to **less than significant**.

Mitigation Measure

None required.

Impact 3.6-5: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The BSMP project site is underlain by Quaternary alluvium and is considered to have low potential for exposure of paleontological resources or the presence of unique geologic features. The SR 99 corridor, which passes through the Kells East Ranch site, has been previously disturbed due to prior construction activities and an unknown thickness of fill, which would not yield significant paleontological resources, has been placed for the construction of the freeway. Because the BSMP project site was identified as having a low probability of discovery of paleontological resources or unique geologic features, and is underlain by a soil type which is generally considered to have a low potential for significant paleontological resources, the impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the proposed BSMP in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Geologic, soils, seismic, mineral resources, and paleontological resources impacts tend to be site-specific and depend on the local conditions. For these reasons, the geographic scope for potential cumulative impacts consists of the BSMP area and the immediate vicinity. In general, to have a cumulative impact, two or more projects would have to spatially overlap and occur at the same time. Consequently, the following impacts would not be cumulative and are not discussed further:

- **Impact 3.6-1:** Development pursuant to the proposed BSMP would not expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving strong seismic ground shaking or seismic related ground failure, such as liquefaction.

- **Impact 3.6-3:** The BSMP project would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse due to being located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project.
- **Impact 3.6-4:** Development pursuant to the proposed BSMP could be located on expansive soil, as defined in California Building Code, creating substantial risks to life or property.

The timeframe during which the proposed BSMP projects could contribute to cumulative impacts includes the construction and operations phases. For the proposed BSMP, the operations phase is permanent. However, similar to the geographic limitations discussed above, it should be noted that impacts relative to geologic, seismic, and soils impacts are generally time-specific, and could only be cumulative if two or more events occurred at the same time, as well as overlapping the same location.

Impact 3.6-6: The proposed project combined with other cumulative development would not contribute to a cumulative increase in substantial soil erosion or the loss of topsoil.

Construction activities have the potential to cause soil erosion and loss of topsoil. If cumulative projects are constructed at the same time, the erosion effects could be cumulatively considerable. However, the state Construction General Permit would require each project to prepare and implement a SWPPP. The SWPPPs would describe BMPs to control runoff and prevent erosion for each project. Through compliance with this requirement, the potential for erosion impacts would be reduced. The Construction General Permit has been developed to address cumulative conditions arising from construction throughout the state, and is intended to maintain cumulative effects of projects subject to this requirement below levels that would be considered significant. For example, two adjacent construction sites would be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites. The runoff water from both sites would be required to achieve the same action levels, measured as a maximum amount of sediment or pollutant allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations (amount of sediment or pollutants per volume of runoff water) below action levels and would not be cumulatively considerable (less than significant).

In addition, the proposed project as well as other current and future projects would be required to implement BMPs to comply with the NPDES Phase II MS4 drainage control requirements during the operational phases. With compliance with MS4 requirements, potential impacts from cumulative projects within the BSMP area would not be cumulatively considerable (**less than significant**).

Mitigation Measure

None required.

Impact 3.6-7: The proposed project could directly or indirectly destroy unique paleontological resource or site or unique geologic feature.

Paleontological resources were not identified to occur in the BSMP area, and few have been identified in Sutter County as a whole. The BSMP area contains Quaternary alluvium which is considered to have a low likelihood of containing paleontological resources. Destruction of paleontological resources is a site specific impact which would require evaluation on a case-by-case basis. In combination with the low potential for important fossils to be uncovered, with compliance with CEQA standards, potential impacts from cumulative projects within the BSMP area would not be cumulatively considerable (**less than significant**).

Mitigation Measure

None required.

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3.7 Greenhouse Gas Emissions and Energy

This section assesses the potential greenhouse gas (GHG) emissions and energy impacts associated with construction and operation of the proposed BSMP project, and where appropriate identifies potentially feasible mitigation measures.

No comments were received on the notice of preparation related to climate change, GHG emissions, or energy.

The analysis included in this section was developed based on project-specific construction and operational features, and data provided in the City of Yuba City General Plan,¹ Sutter County General Plan,² City of Yuba City Draft Resource Efficiency Plan,³ trip data provided in the transportation analysis prepared by Fehr & Peers and reported in section 3.14 of this DEIR,⁴ as well as information from Pacific Gas and Electric Company (PG&E).

3.7.1 Environmental Setting

Climate Change

“Global warming” and “global climate change” are the terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal.⁵

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing GHG concentrations resulting from human activity, such as fossil fuel burning and deforestation, are believed to be responsible for most of the observed temperature increase. Increases in GHG concentrations in the earth’s atmosphere are thought to be the main cause of human-induced climate change.

Certain gases in the atmosphere trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. This is sometimes referred to as the “greenhouse effect” and the gases that cause it are called “greenhouse gases.” Some GHGs occur naturally and are necessary for keeping the earth’s surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar

¹ City of Yuba City. 2004. *Yuba City General Plan*. April 8, 2004.

² Sutter County. 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

³ City of Yuba City. 2016. *Draft Yuba City Resource Efficiency Plan*. June 2016.

⁴ Fehr & Peers. 2016. BSMP Traffic Report. July 2017.

⁵ Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Parry, Martin L., Canziani, Osvaldo F., Palutikof, Jean P., van der Linden, Paul J., and Hanson, Clair E. (eds.)]. Cambridge University Press, Cambridge, United Kingdom. 2007. Pp. 9.

radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) are the principal GHGs. When concentrations of these gases exceed natural concentrations in the atmosphere, the greenhouse effect may be intensified. CO₂, CH₄, and N₂O occur naturally, and are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing⁶ associated with agricultural practices and landfills. Other human-generated GHGs include fluorinated gases such as SFCs, PFCs, and SF₆, which have much higher heat-absorption potential than CO₂, and are byproducts of certain industrial processes.

CO₂ is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. For example, CH₄ and N₂O are substantially more potent GHGs than CO₂, with GWPs of 21 and 310 times that of CO₂, respectively.

In emissions inventories, GHG emissions are typically reported as metric tons of CO₂ equivalents (CO₂e). CO₂e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO₂e, both from residential developments and human activity in general.

Potential Effects of Human Activity on GHG Emissions

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂ emissions (and thus substantial increases in atmospheric concentrations). In 1994, atmospheric CO₂ concentrations were found to have increased by nearly 30 percent above pre-industrial (c. 1860) concentrations.

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to loss in snow pack, sea level rise, and increases in the number of extreme heat days per year, high ozone days, large forest fires, and drought years. Secondary effects are likely to include the displacement of thousands of coastal businesses and residences (as a result of sea level rise), impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity.

As the California Air Resources Board (CARB) *Climate Change Scoping Plan* noted, the legislature in enacting Assembly Bill (AB) 32 found that global warming would cause

⁶ Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

detrimental effects to some of the state’s largest industries, including agriculture, winemaking, tourism, skiing, commercial and recreational fishing, forestry, and the adequacy of electrical power generation. The *Climate Change Scoping Plan* states:⁷

“The impacts of global warming are already being felt in California. The Sierra snowpack, an important source of water supply for the state, has shrunk 10 percent in the last 100 years. It is expected to continue to decrease by as much as 25 percent by 2050. World-wide changes are causing sea levels to rise – about 8 inches of increase has been recorded at the Golden Gate Bridge over the past 100 years – threatening low coastal areas with inundation and serious damage from storms.”

AB 32 is discussed further below under Regulatory Setting.

Impacts of Climate Change

Ecosystem and Biodiversity Impacts

Climate change is expected to have effects on diverse types of ecosystems.⁸ As temperatures and precipitation change, seasonal shifts in vegetation will occur; this could affect the distribution of associated flora and fauna species. As the range of species shifts, habitat fragmentation could occur, with acute impacts on the distribution of certain sensitive species. The IPCC states that “a large fraction of both terrestrial and freshwater species faces increased extinction risk under projected climate change during and beyond the 21st century, especially as climate change interacts with other stressors, such as habitat modifications, over exploitation, and invasive species.”⁹ Shifts in existing biomes could make ecosystems vulnerable to encroachment by invasive species. Forest dieback poses risks for carbon storage, biodiversity, wood production, water quality, and economic activity. Wildfires, which are an important control mechanism in many ecosystems, may become more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. Continued emission of GHGs will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems.¹⁰

Human Health Impacts

Climate change may increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects such as west Nile virus, malaria, dengue fever, yellow fever, and encephalitis. Cholera, which is associated with algal blooms, could also increase. While these health effects would largely affect tropical areas in other parts of the world, effects

⁷ California Air Resources Board. 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. Pp. 10.

⁸ U.S. Environmental Protection Agency. 2008. *Climate Change – Ecosystems and Biodiversity*. Available: www.epa.gov/climatechange/effects/eco.html. Accessed June 19, 2012.

⁹ Intergovernmental Panel on Climate Change. 2014. *Climate Change 2013: Impacts, Adaptation, and Vulnerability, Summary for Policymakers*. Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Pp. 14-15.

¹⁰ Intergovernmental Panel on Climate Change. 2014. *Climate Change 2014, Synthesis Report Summary for Policymakers, Fifth Assessment Report*.

would also be felt in California. Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more frequency and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply more vulnerable.¹¹

Greenhouse Gas Emissions Estimates

Global Emissions

Worldwide emissions of GHGs in 2013 were approximately 35.3 billion metric tons of CO₂e per year.¹² This includes both ongoing emissions from industrial and agricultural sources, but excludes emissions from land use changes.

U.S. Emissions

In 2014, the United States emitted about 69 million metric tons of CO₂e. Of the four major emission sectors — residential, commercial, industrial, and transportation — transportation accounts for the highest fraction of GHG emissions (approximately 33 percent); these emissions are generated from direct fossil fuel combustion.¹³

State of California Emissions

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Emissions of CO₂ are byproducts of fossil fuel combustion. Methane, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Nitrous oxide is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution, respectively, two of the most common processes of CO₂ sequestration. California produced approximately 459.3 million metric tons of CO₂e in 2013. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2013, accounting for 37 percent of total GHG emissions in the State. This sector was followed by the industrial sector (23 percent), and the electric power sector (including both in-State and out-of-State sources) (20 percent).¹⁴

City of Yuba City GHG Emissions

Based on the 2005 GHG inventory reported in the City of Yuba City Resource Efficiency Plan, the transportation sector represents the largest source of GHG emissions in Yuba City, accounting

¹¹ U.S. Environmental Protection Agency. 2008. *Climate Change – Health and Environmental Effects*. Available: www.epa.gov/climatechange/effects/health.html#climate. Accessed June 19, 2012.

¹² PBL Netherlands Environmental Assessment Agency. 2015. *Trends in Global CO₂ Emissions, 2014 Report*.

¹³ U.S. Environmental Protection Agency. 2016. *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014*; Executive Summary, Table ES-2. February 2016.

¹⁴ California Air Resources Board. 2015. *California Greenhouse Gas Inventory 2015 Edition of the GHG Emission Inventory Release (June 2015)*. Available: www.arb.ca.gov/cc/inventory/data/data.htm.

for 48 percent of the City's annual emissions of 243,333 metric tons of CO₂e. Electricity and natural gas used to operate, heat, and cool commercial, industrial, and residential buildings accounted for another 46 percent of annual CO₂e emissions. These two sectors represent 94 percent of the CO₂e emissions in Yuba City. The other CO₂e emission sectors included in the inventory (with percent contributions reported in parentheses) were waste (3 percent), wastewater treatment (1 percent), water consumption (<1 percent) and off-road sources (3 percent).¹⁵

Energy

The components of electrical transmission and distribution systems include the generating facility, switching yards and stations, primary substation, distribution substations, distribution transformers, various sized transmission lines, and the customers. In the United States there are over a quarter million miles of transmission lines, most of them capable of handling voltages between 115 kilovolt (kV) and 345 kV, and a handful of systems of up to 500 kV and 765 kV capacity. Transmission lines are rated according to the amount of power they can carry, the product of the current (rate of flow), and the voltage (electrical pressure). Generally, transmission is more efficient at higher voltages.

Generating facilities, hydro-electric dams, and power plants usually produce electrical energy at fairly low voltages, which is increased by transformers in substations. From there, the energy proceeds through switching facilities to the transmission lines. At various points in the system, the energy is "stepped down" to lower voltages for distribution to customers. Power lines are either high voltage (115, 230, 500, and 765 kV) transmission lines or low voltage (12, 24, and 60 kV) distribution lines.

PG&E is the electric and natural gas service provider in Sutter County and the City of Yuba. The electric power supply grid and natural gas distribution lines within Sutter County is part of a larger supply network operated and maintained by PG&E that encompasses the entire northern California region. PG&E produces some of its own power and purchases some of its electricity through the Independent System Operator, which in turn obtains electricity from a number of companies that operate power plants throughout the Western Grid. On average, about half of the electricity provided by PG&E to customers is from renewable sources, including non-emitting nuclear generation (21 percent), large hydroelectric facilities (11 percent), and other renewable sources (19 percent, including wind, geothermal, biomass, solar, and small hydroelectric).¹⁶ It is anticipated that natural gas distribution lines in new development will be placed underground in accordance with California Public Utilities Commission (CPUC) rules.¹⁷

¹⁵ City of Yuba City, 2016. *Yuba City Resource Efficiency Plan*. June 2016.

¹⁶ Pacific Gas & Electric, 2015. *Clean Energy Solutions*. Available: <http://www.pge.com/en/about/environment/pge/cleanenergy/index.page>. Accessed July 23, 2015.

¹⁷ Pacific Gas & Electric, 2015. *Company Profile*. Available: <http://www.pge.com/en/about/company/profile/index.page?>. Accessed December 8, 2015.

3.7.2 Regulatory Framework

Federal

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines, as well as licenses hydropower projects. Licensing of hydroelectric facilities under the authority of FERC includes input from State and federal energy and power generation, environmental protection, fish and wildlife, and water quality agencies.¹⁸

National Highway Traffic Safety Administration Standards

The National Highway Traffic Safety Administration (NHTSA) and the U.S. Environmental Protection Agency (USEPA) are taking coordinated steps to enable the production of clean energy vehicles with improved fuel efficiency. NHTSA sets the Corporate Average Fuel Economy (CAFE) levels, which are rapidly increasing over the next several years in order to improve energy security and reduce fuel consumption. The first phase of the CAFE standards (for model year 2017 to 2021) is projected to require, on an average industry fleet-wide basis, a range from 40.3 to 41.0 mpg in model year 2021. The second phase of the CAFE program (for model years 2022 to 2025) is projected to require, on an average industry fleet-wide basis, a range from 48.7 to 49.7 mpg in model year 2025. The second phase of standards has not been finalized due to the statutory requirement that the NHTSA set average fuel economy standards not more than five model years at a time.¹⁹

U.S. Department of Transportation, U.S. Department of Energy, and Environmental Protection Agency on Transportation Energy

The U.S. Department of Transportation, U.S. Department of Energy, and USEPA are three federal agencies with substantial influence over energy policies related to transportation fuels consumption. Generally, federal agencies influence transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure projects.

State

California Public Utilities Commission Requirements

The CPUC is a State agency created by a constitutional amendment to regulate privately-owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, and

¹⁸ Federal Energy Regulatory Commission. 2015. About FERC. Available: <http://www.ferc.gov/about/about.asp>. Accessed December 15, 2015.

¹⁹ National Highway Traffic Safety Administration. 2016. Corporate Average Fuel Economy. Available: <http://www.nhtsa.gov/fuel-economy>. Accessed February 25, 2016.

passenger transportation services, and in-State moving companies. The CPUC is responsible for assuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The CPUC regulates the planning and approval for the physical construction of electric generation, transmission, or distribution facilities; and local distribution pipelines of natural gas.²⁰

California Energy Commission

The California Energy Commission (CEC) is California's primary energy policy and planning agency. Created by the California Legislature in 1974, the CEC has five major responsibilities: (1) forecasting future energy needs and keeping historical energy data; (2) licensing thermal power plants 50 MW or larger; (3) promoting energy efficiency through appliance and building standards; (4) developing energy technologies and supporting renewable energy; and (5) planning for and directing State response to energy emergencies. Under the requirements of the California Public Resources Code, the CEC in conjunction with the California Department of Conservation (DOC) Division of Oil, Gas, and Geothermal Resources is required to assess electricity and natural gas resources on an annual basis or as necessary.²¹

Title 20 and Title 24, California Code of Regulations

New buildings constructed in California must comply with the standards contained in Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards, of the California Code of Regulations (CCR). Part 11 of Title 24 is the California Green Building Standards Code (CALGreen) sets minimum and mandatory sustainability requirements, in order to reduce environmental impact through better planning, design and construction practices. CALGreen works along with the mandatory construction codes of Title 24 and is enforced at the local level.²²

Title 20 contains standards ranging from power plant procedures and siting to energy efficiency standards for appliances to ensuring reliable energy sources are provided and diversified through energy efficiency and renewable energy resources. Title 24 (AB 970) contains energy efficiency standards for residential and nonresidential buildings based on a State mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating and air conditioning,

²⁰ California Public Utilities Commission. 2016. *California Public Utilities Commission*. Available: <http://www.cpuc.ca.gov/>. Accessed February 5, 2016.

²¹ California Energy Commission. 2016. "About the California Energy Commission." Available: <http://www.energy.ca.gov/commission/>. Accessed February 5, 2016.

²² California Department of Housing and Community Development. 2015. *2015 Report to the Legislature: Status of the California Green Building Standards Code*. Accessed December 18, 2015.

including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs.^{23,24}

Any project-related construction would be required to comply with the Title 24 codes currently in place, including the CALGreen code. The existing 2013 standards became effective on July 1, 2014. New codes are adopted triennially and the 2016 standards became effective July 1, 2017.²⁵ An update of Title 24 standards is expected in 2019, and will become effective July 1, 2020.

Warren-Alquist Energy Resources Conservation and Development Act

Initially passed in 1974 and amended since, the Warren-Alquist Energy Resources Conservation and Development Act (Warren-Alquist Act) created the California Energy Commission, the State's primary energy and planning agency. The seven responsibilities of the Commission are: forecasting future energy needs, promoting energy efficiency and conservation through setting standards, supporting energy related research, developing renewable energy resources, advancing alternative and renewable transportation fuels and technologies, certifying thermal power plants 50 megawatts or larger, and planning for and directing state response to energy emergencies. The State Energy Commission regulates energy resources by encouraging and coordinating research into energy supply and demand problems to reduce the rate of growth of energy consumption. Additionally, the Warren-Alquist Act acknowledges the need for renewable energy resources and encourages the Commission to explore renewable energy options that would be in line with environmental and public safety goals. (Warren-Alquist Energy Resources Conservation and Development Act Public Resources Code section 25000 *et seq.*).²⁶

Assembly Bill 1493

In 2002, Governor Gray Davis signed AB 1493. AB 1493, also known as the "Pavley" regulations (named for the bill's author, State Senator Fran Pavley), required the CARB to develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by the CARB to be vehicles whose primary use is noncommercial personal transportation in the state."

To meet the requirements of AB 1493, in 2004 the CARB approved amendments to the CCR, adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1), require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and

²³ California Energy Commission. 2015. *Title 20 Public Utilities and Energy, 2015*. Available: [https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I237B3BF0D44E11DEA95CA4428EC25FA0&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I237B3BF0D44E11DEA95CA4428EC25FA0&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)). Accessed December 15, 2015.

²⁴ California Building Standards Commission. 2013. *California 2013 Green Building Standards Code*, CALGreen California Code of Regulations, Title 24, Part 11. Available: <http://www.bsc.ca.gov/Home/Current2013Codes.aspx>. Accessed December 15, 2015.

²⁵ California Building Standards Commission. 2015. *California 2016 Green Building Standards Code*, CALGreen California Code of Regulations, Title 24, Part 11. Available: <http://www.bsc.ca.gov/>. Accessed January 30, 2016.

²⁶ California Energy Commission. 2015. Warren-Alquist Act, 2015. Available: http://www.energy.ca.gov/reports/Warren-Alquist_Act/index.html. Accessed December 15, 2015.

medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight (GVW) rating of less than 10,000 pounds and that is designed primarily for the transportation of persons), beginning with model year 2009. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for model year 2016 are approximately 37 percent lower than the limits for the first year of the regulations, model year 2009. For light-duty trucks with an LVW of 3,751 pounds to a GVW of 8,500 pounds, as well as for medium-duty passenger vehicles, GHG emissions were reduced approximately 24 percent between 2009 and 2016.

Because the Pavley regulations would impose stricter standards than those under the CAA, California applied to the USEPA for a waiver under the CAA; this waiver was initially denied in 2008. In 2009, however, the USEPA granted the waiver and it was later extended in 2017 by the Trump Administration.

Senate Bills 1078 and 107 and Executive Orders S-14-08 and S-21-09

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expanded the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the CARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020.

The 33-percent-by-2020 goal was codified in April 2011 with Senate Bill X1-2, which was signed by Governor Edmund G. Brown, Jr. This new Renewable Portfolio Standard (RPS) preempts the CARB 33 percent Renewable Electricity Standard and applies to all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. Consequently, PG&E, who would be the electricity provider for the proposed projects, must meet the 33 percent goal by 2020. All of these entities must adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013 and 25 percent by the end of 2016, with the 33 percent requirement being met by the end of 2020.

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, then-Governor Arnold Schwarzenegger established Executive Order S-3-05, which set forth the following target dates by which statewide GHG emissions would be progressively reduced: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32 and the California Climate Change Scoping Plan

Assembly Bill 32 Requirements

In 2006, the California legislature passed Assembly Bill 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires the CARB to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. The CARB has identified a GHG reduction target of 15 percent from current levels for local governments (municipal and community-wide) and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.

Scoping Plan Provisions

Pursuant to AB 32, the CARB adopted a *Climate Change Scoping Plan* in December 2008 (re-approved by CARB on August 24, 2011²⁷) outlining measures to meet the 2020 GHG reduction goals. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures that are worth studying further, and that the State of California may implement, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO₂e (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and other sources could be achieved should the state implement all of the measures in the Scoping Plan. The Scoping Plan relies on the requirements of Senate Bill (SB) 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

In May 2014, CARB published its First Update to the Scoping Plan.²⁸ This update builds upon the initial Scoping Plan with new strategies and recommendations. The update defines ARB's climate change priorities over the next five years and sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 and B-16-2012.

CARB is currently updating its Scoping Plan to reflect the 2030 target of 40 percent below 1990 GHG emissions required by SB32. This updated Scoping Plan is expected to be approved by the CARB in 2017.

Cap-and-Trade Program

The Scoping Plan identifies cap-and-trade as a key strategy for helping California reduce its GHG emissions.²⁹ A cap-and-trade program sets the total amount of GHG emissions allowable for facilities under the cap and allows covered sources, including producers and consumers of

²⁷ California Air Resources Board. 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by CARB August 24, 2011. Pp. ES-1 and 17.

²⁸ California Air Resources Board. 2012. *First Update to the Climate Change Scoping Plan*. Adopted May 28, 2014.

²⁹ California Air Resources Board. 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. Pp. 18-20.

energy, to determine the least expensive strategies to comply. AB 32 required the CARB to adopt the cap-and-trade regulation by January 1, 2011, and the program itself began in November 2012. The recently approved (July 2017) Assembly Bill 398 will ensure that California's cap-and-trade program will continue through 2030.

Carbon offset credits are created through the development of projects, such as renewable energy generation or carbon sequestration projects, that achieve the reduction of emissions from activities not otherwise regulated, covered under an emissions cap, or resulting from government incentives. Offsets are verified reductions of emissions whose ownership can be transferred to others. As required by AB 32, any reduction of GHG emissions used for compliance purposes must be real, permanent, quantifiable, verifiable, enforceable, and additional. Offsets used to meet regulatory requirements must be quantified according to the CARB-adopted methodologies, and the CARB must adopt a regulation to verify and enforce the reductions. The criteria developed will ensure that the reductions are quantified accurately and are not double-counted within the system.³⁰

Executive Order S-1-07

Executive Order S-1-07, signed by then-Governor Arnold Schwarzenegger in 2007, proclaimed that the transportation sector is the main source of GHG emissions in California, at over 40 percent of statewide emissions. The order established a goal of reducing the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020. It also directed the CARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete, early-action measure after meeting the mandates in AB 32. The CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Senate Bill 1368

SB 1368 is the companion bill to AB 32 and was signed by then-Governor Schwarzenegger in September 2006. SB 1368 requires the CPUC to establish a GHG emission performance standard for baseload generation from investor-owned utilities by February 1, 2007. The CEC was also required to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

Senate Bill 375

In addition to policy directly guided by AB 32, the legislature in 2008 passed SB 375, which provides for regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 aligns regional transportation planning efforts, regional GHG emissions reduction targets, and land use and housing allocations. SB 375 requires

³⁰ California Air Resources Board. 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. Pp. 36-38.

Regional Transportation Plans (RTPs) developed by the State’s 18 metropolitan planning organizations to incorporate a “sustainable communities strategy” that will achieve GHG emission reduction targets set by the CARB. SB 375 also includes provisions for streamlined CEQA review for qualifying infill projects, such as transit-oriented development. SB375 would be implemented over the next several years. The Sacramento Area Council of Government’s (SACOG) 2016 *Metropolitan Transportation Plan/Sustainable Communities Strategy* was adopted on February 18, 2016. SACOG’s *Strategy* calls for meeting and exceeding the CARB GHG reduction goals from passenger vehicles and light-duty trucks of 7.6 percent by 2020 and 15.6 percent by 2035, where 2005 is the baseline year for comparison.³¹

Senate Bill 350

SB 350 (Clean Energy and Pollution Reduction Act of 2015) was signed into law on October 7, 2015, establishing new goals for clean energy, clean air, and GHG reduction goals for 2030 and beyond. SB 350 requires the following:

- Increase California’s renewable electricity procurement goal under the RPS from 33 percent by 2020 to 50 percent by 2030;
- Double existing building energy efficiency by 2030; and
- Facilitate the growth of renewable energy markets within the western U.S. by reorganizing the California Independent System Operator (CAISO).

Green Building Standards Code

In January 2010, the State of California adopted CALGreen that establishes mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels. This Code went into effect as part of local jurisdictions’ building codes on January 1, 2011 and was most recently updated as the 2013 CALGreen (effective January 1, 2014).³²

Executive Order B-16-12

In 2012, Governor Brown issued Executive Order B-16-12, ordering “that California’s state vehicle fleet increase the number of zero-emission vehicles through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles be zero-emission by 2015 and 25 percent of fleet purchases of light-duty vehicles be zero-emission by 2020. The executive order also requires that California target for 2050 a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels.

³¹ Sacramento Area Council of Governments. 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy*. Adopted February 18, 2016. Pp. 173.

³² California Building Standards Commission. 2013. *California 2013 Green Building Standards Code*, CALGreen California Code of Regulations, Title 24, Part 11. Effective Date: January 1, 2014.

Executive Order B-30-15

In 2015, Governor Brown issued Executive Order B-30-15, establishing a GHG reduction target of 40 percent below 1990 levels by 2030. This goal was set to make it possible to reach the ultimate goal of AB 32 to reduce GHG emissions 80 percent under 1990 levels by 2050.

California Environmental Quality Act (CEQA) and Senate Bill 97

Under CEQA, lead agencies are required to disclose the reasonably foreseeable adverse physical environmental effects of projects they are considering for approval. GHG emissions have the potential to adversely affect the environment because they contribute to global climate change. In turn, global climate change has the potential to raise sea levels, alter rainfall and snowfall, and affect habitat.

Senate Bill 97

SB 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The California Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted amendments to the State CEQA Guidelines, as required by SB 97. These State CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

State CEQA Guidelines

The State CEQA Guidelines are embodied in the California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387. State CEQA Guidelines section 15064.4 specifically addresses the significance of GHG emissions, requiring a lead agency to make a “good-faith effort” to “describe, calculate or estimate” GHG emissions in CEQA environmental documents. Section 15064.4 further states that the analysis of GHG impacts should include consideration of (1) the extent to which the project may increase or reduce GHG emissions; (2) whether the project emissions would exceed a locally applicable threshold of significance; and (3) the extent to which the project would comply with “regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.” The CEQA Guidelines also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (State CEQA Guidelines section 15064(h)(3)). The State CEQA Guidelines do not, however, set a numerical threshold of significance for GHG emissions.

The CEQA Guidelines also include the following direction on measures to mitigate GHG emissions, when such emissions are found to be significant:

Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester greenhouse gases; and
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.³³

California Supreme Court Ruling in Cleveland National Forest v. San Diego Association of Governments

The Supreme Court reviewed the adequacy of the GHG analysis in an EIR for a 40-year (2010–2050) Regional Transportation Plan/Sustainable Communities Strategy. The specific issue in the case was whether SANDAG properly declined to adopt a significance threshold for GHG emissions in 2050 based on Governor Schwarzenegger's Executive Order No. S-3-05 that set a GHG emissions-reduction goal of 80 percent below 1990 levels by 2050. The Court held that SANDAG's decision not to use such a significance threshold was not an abuse of discretion. Further, the Court held that the EIR's discussion of the RTP's GHG emissions in 2050 satisfied CEQA's information and disclosure requirements.

The Court ruled that SANDAG was not required to use the Executive Order's 2050 goal as a significance threshold for GHG impacts because (1) it is not an "adopted" target within the meaning of CEQA Guidelines section 15064.4(b)(2); (2) the Executive Order does not specify any plan or implementation measures to achieve its goal; and (3) there is no regulatory guidance on how the Executive Order's goal translates into a regional target for a land use and transportation plan such as the RTP.

³³ State CEQA Guidelines section 15126.4(a).

Local

Feather River Air Quality Management District

The Feather River Air Quality Management District (FRAQMD) regulates local air policy in Sutter and Yuba Counties. Currently, the FRAQMD has not adopted rules or regulations establishing limits on GHG emissions from specific projects or thresholds of significance for GHG emissions at the project level. Although the FRAQMD has not adopted any limits for construction and operational GHG emissions, the air district has prepared the FRAQMD CEQA Handbook, which requires preliminary documents to address whether a project would (1) “generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment” and (2) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.³⁴

City of Yuba Climate Action Plan

The City of Yuba developed a Resource Efficiency Plan (REP), which was adopted on September 6, 2016.³⁵ As stated in the REP, the City has adopted a community-wide emission reduction target of 15 percent below its 2005 baseline by the year 2020 and 49 percent below its 2005 baseline by the year 2035. The REP outlines 10 goals to meeting the City’s GHG reduction goals. These goals include:

- Goal 1 Increase Energy Efficiency in Existing Residential Units;**
- Goal 2 Increase Energy Efficiency in New Residential Development;**
- Goal 3 Increase Energy Efficiency in Existing Commercial Units;**
- Goal 4 Increase Energy Efficiency in New Commercial Development;**
- Goal 5 Increase Energy Efficiency through Water Efficiency;**
- Goal 6 Decrease Energy Demand through reducing Urban Heat Island Effect;**
- Goal 7 Decrease GHG Emissions through Reducing Vehicle Miles Traveled;**
- Goal 8 Decrease GHG Emissions through Reducing Solid Waste Generation;**
- Goal 9 Decrease GHG Emissions through Increasing Clean Energy Use; and**
- Goal 10 Decrease GHG Emissions from New Development through Performance Standards.**

For each of the 10 goals listed above, the REP includes measures and actions that the City will use to reduce GHG emissions and adapt to climate change. Measures organize the specific

³⁴ Feather River Air Quality Management District. 2010. *Indirect Source Review Guidelines*. June 7, 2010.

³⁵ City of Yuba City, 2016. *Draft Yuba City Resource Efficiency Plan*. June 2016.

programs, policies, and actions that the City will carry out to achieve its climate action strategies. Within each measure are the detailed actions that the City will take to implement the measures.

To determine a project's consistency with the REP, the City developed screening tables for developers to fill out during applications of new development projects. Screening tables are a menu of options of energy efficiency improvements, renewable energy options, water conservation measures, and other options that provide predictable GHG reductions. Each option within the screening tables includes point values based upon the GHG reduction that option will provide to a development project. For mixed used developments that score 19.5 and 18 points for residential and commercial developments, respectively, are consistent with the reduction quantities in the REP and are considered less than significant under CEQA. As discussed under Impact 4.7-1, with the implementations of Mitigation Measure 3.7-1(a) and Mitigation Measure 3.7-1(b) the BSMP is consistent with the City's REP.

3.7.3 Analysis, Impacts, and Mitigation

Greenhouse Gas Significance Criteria

GHG emissions relate to an inherently a cumulative climate change impact because no single project makes a significant or measureable contribution to global climate change. The State CEQA Guidelines require the analysis of GHG emissions from new development. Under section 15183.5 of the State CEQA Guidelines:

[p]ublic agencies may choose to analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions or similar document. A plan to reduce greenhouse gas emissions may be used in a cumulative impacts analysis as set forth below. Pursuant to sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.

The City of Yuba REP qualifies under section 15183.5 of the State CEQA Guidelines as a plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. Thus, for purposes of this EIR, the proposed BSMP project would result in a significant impact to global climate change if it would conflict with the City's REP.

Energy Significance Criteria

Based on Appendix F of the CEQA Guidelines, the proposed BSMP project would result in a significant impact on energy demand and conservation if it would:

1. Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
2. Result in the wasteful, inefficient, or unnecessary consumption of energy for project construction or operation, including transportation energy.

Methodology and Assumptions

Greenhouse Gases

As discussed above, the City has developed a REP Consistency Screening Table. This Screening Table is designed to streamline the GHG emissions review process for new development projects subject to CEQA. The screening tables are a menu of options of energy efficiency improvements, renewable energy options, water conservation measures, and other options that provide predictable GHG reductions. Each option within the screening tables includes point values based upon the GHG reduction that option will provide to a development project. For mixed used developments that score 19.5 and 18.0 points for residential and commercial developments, respectively, are consistent with the reduction quantities in the REP and are considered less than significant under CEQA.

Electricity

Electrical service and infrastructure in the area is provided by PG&E. Operational-related electricity annual consumption rates for the proposed BSMP were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1. CalEEMod is a statewide land use emission computer model designed to estimate criteria pollutant and GHG emissions associated with both construction and operation from a variety of land use projects. In addition to estimating pollutant and GHG emissions, CalEEMod can provide annual energy (i.e., electricity and natural gas) consumption estimates for non-residential and residential developments. **Table 3.7-1** and **Table 3.7-2** shows the estimated amount of electricity that would be consumed by all of the components of the proposed BSMP. CalEEMod assumptions and modeling details can be found in **Appendix E**.

**TABLE 3.7-1
 FULL MASTER PLAN OPERATIONAL ENERGY USE**

Land Use	Proposed BSMP	Units	Electricity ¹ Megawatt-hours/year	Natural Gas ¹ Million Btu/year
Multi-Family Residential	758	Dwellings	3,672	12,070
Active Park	59	Acres	0	0
Elementary School	615	Students	371	1,297
Light Industrial	230	KSF	2,068	4,819
Office	224	KSF	2,083	2,932
Manufacturing	230	KSF	2,068	4,819
Community Commercial	391	KSF	3,265	4,199
Single-Family Residential	1,754	Dwellings	16,518	56,313
Neighborhood Commercial	82	KSF	687	884
Total			30,732	87,333

NOTE:

1. Electricity and natural gas consumption estimates generated using CalEEMod 2013.2.1 model. See Appendix C.1 for model outputs and additional details.

SOURCE: ESA, 2017

**TABLE 3.7-2
 NEWKOM/KELLS EAST RANCH OPERATIONAL ENERGY USE**

Land Use	Proposed Project	Units	Electricity¹ Megawatt-hours/year	Natural Gas¹ Million Btu/year
Multi-Family Residential	338	Dwellings	1,638	5,382
Active Park	59	Acres	0	0
Office	109	KSF	1,011	1,424
Community Commercial	391	KSF	3,265	4,199
Single-Family Residential	574	Dwellings	5,405	18,429
Total			11,319	29,434

NOTE:

1. Electricity and natural gas consumption estimates generated using CalEEMod 2013.2.1 model. See Appendix C.1 for model outputs and additional details.

SOURCE: ESA, 2017

Natural Gas

Natural gas is provided to the BSMP site by PG&E. It is anticipated that PG&E would plan and construct the infrastructure to provide service to development under the proposed BSMP. Gas infrastructure serving the proposed BSMP development is assumed to be constructed along BSMP site roads concurrently with development.

Operational-related electricity annual consumption rates for the proposed BSMP were calculated using CalEEMod 2016.3.1. Table 3.7-1 and Table 3.7-2 estimate the amount of natural gas that would be consumed by all of the components of the proposed BSMP. CalEEMod assumptions and modeling details can be found in Appendix E.

Transportation

Transportation fuel consumption for construction and operation are a key element of project energy consumption. For construction, this includes fuel use (diesel and/or gas) associated with construction equipment and vehicles. For operations, this includes fuel use associated with on-road vehicles.

Operational Fuel Use

Operational-related fuel use was back-calculated based on GHG emissions estimated using the CalEEMod 2016.3.1 and unit volume fuel factors for gasoline and diesel provided by the U.S. Energy Information Administration.³⁶ **Table 3.7-3** presents estimated annual fuel use for project operations, categorized by the proposed BSMP. CalEEMod assumptions and modeling details can be found in Appendix E.

³⁶ U.S. Energy Information Administration. 2017. Frequently Asked Questions. Available: <https://www.eia.gov/tools/faqs/faq.php?id=307&t=11>. Accessed June 29, 2017.

**TABLE 3.7-3
 BSMP ANNUAL OPERATIONAL FUEL USE**

Category	Diesel Fuel (gallons) ^{1,2}	Gasoline (gallons) ^{1,2}
Full Master Plan	37,342	4,211,333
Newkom and Kells East Ranch	14,555	1,979,778

NOTES:
 1. Operational fuel use based on the CalEEMod 2016.3.1 model and the methodology described above. See Appendix E for model outputs.
 2. Unit volume fuel factors (kg CO₂/gallon) for gasoline and diesel are from the U.S. Energy Information Administration Frequently Asked Questions, located here: <https://www.eia.gov/tools/faqs/faq.php?id=307&t=11>.

SOURCE: ESA, 2017

Construction Fuel Use

For construction, diesel and gasoline fuel use were estimated using CalEEMod as follows. First, total GHG emissions estimated were split into diesel- and gasoline-generated emissions. This split was based on the percentage of diesel and gasoline vehicles typically operated during construction projects. These percentages are heavily weighted towards diesel vehicles. Then, diesel and gasoline GHG emissions were converted to gallons using standard conversion factors provided by the U.S. Energy Information Administration.³⁷ **Table 3.7-4** estimates the fuel use for construction, categorized by the proposed BSMP. These estimates have been calculated using CalEEMod 2016.3.1 model. CalEEMod assumptions and modeling details can be found in Appendix E.

**TABLE 3.7-4
 BSMP CONSTRUCTION FUEL USE**

Category	Diesel Fuel ^{1,2} (gallons)	Gasoline ^{1,2} (gallons)
Full Master Plan	627,562	37,626
Newkom and Kells East Ranch	430,448	25,808

NOTES:
 1. Assumes worst-case construction fuel use based on the CalEEMod 2016.3.1 model and the methodology described above. See Appendix E for model outputs.
 2. Unit volume fuel factors (kg CO₂/gallon) for gasoline and diesel are from the U.S. Energy Information Administration Frequently Asked Questions, Available: <https://www.eia.gov/tools/faqs/faq.php?id=307&t=11>.

SOURCE: ESA, 2017

³⁷ U.S. Energy Information Administration. 2017. Frequently Asked Questions. Available: www.eia.gov/tools/faqs/faq.php?id=307&t=11. Accessed August 8, 2017.

Impacts and Mitigation Measures

Impact 3.7-1: Implementation of the proposed BSMP could conflict with the City of Yuba's Climate Action Plan.

Full Master Plan

Since the proposed BSMP would be annexed into the City of Yuba, the proposed development must demonstrate consistency with the City's REP. The REP was adopted by the City of Yuba in June 2016³⁸ and provides goals and measures to achieve a community-wide emission reduction target of 15 percent below its 2005 baseline by the year 2020 and 49 percent below its 2005 baseline by the year 2035. Within each measure are the detailed actions that the City will take to implement the measures. To determine if a project is consistent with the REP, the City developed Consistency Screening Table for developers to fill out during applications of new development projects.

The Consistency Screening Table assigns points to specific project design figure, such as USEPA Energy Star for homes, upgraded water heaters and heating/cooling distribution systems, and building design (e.g., insulation, winds, roofing and air infiltration specifications). Mixed used developments that score 19.5 and 18 points for residential and commercial developments, respectively, are consistent with the reduction quantities in the REP.

Since the final layout and building design of the residential and commercial developments proposed under the proposed BSMP project have not yet been finalized, it is not yet possible to demonstrate that the proposed BSMP as a whole would achieve the required points in the Consistency Screening Table to demonstrate consistency with the REP. Therefore, the buildout of the proposed BSMP could potentially conflict with the adopted REP and result in a **potentially significant** impact.

Newkom Ranch/Kells East Ranch

The development proposed on the Newkom Ranch and Kells East Ranch properties would result in the same impacts discussed for the proposed BSMP project as a whole. While the final layout of the residential development has been submitted with the tentative map for Newkom Ranch and Kells East Ranch, the commercial development is to be determined. Because of this, it is not yet possible to demonstrate that either the Newkom Ranch or Kells East Ranch would achieve the required points in the Consistency Screening Table to demonstrate consistency with the REP. Therefore, the buildout of the Newkom Ranch or Kells East Ranch properties could potentially conflict with the adopted REP and result in a **potentially significant** impact.

Summary

Since the final layout and design of the residential and commercial developments pursuant to the proposed BSMP have not yet been finalized, it is not yet possible to demonstrate that any development under the proposed BSMP would achieve the required points in the Consistency

³⁸ City of Yuba City. 2016. *Draft Yuba City Resource Efficiency Plan*. June 2016.

Screening Table to demonstrate consistency with the REP. Therefore, the proposed BSMP project could potentially conflict with the adopted REP and result in a **potentially significant** impact.

Mitigation Measure

Mitigation Measure 3.7-1(a): Residential Building Insulation (BSMP/NR/KER)

Prior to building construction, individual project applicants shall submit to the City building plans demonstrating how all proposed residential buildings include greatly enhanced building insulation materials such as spray foam wall insulated walls R-15 or greater, roof/attic R-38 or higher. The individual project applicants shall also demonstrate how all proposed residential buildings include modestly enhanced window insulation such as 0.4 U-Factor or 0.32 SHGC.

Mitigation Measure 3.7-1(b): Commercial Building Insulation (BSMP/NR/KER)

Prior to building construction, individual project applicants shall submit to the City building plans demonstrating how all proposed commercial buildings include enhanced building insulation materials (e.g., rigid wall installation, roof/attic R-38).

Significance after Mitigation: As previously discussed, to be consistent with the REP, mixed-used projects must achieve a score of 19.5 for residential uses and 18.0 for commercial uses in the REP Consistency Screening Table. According to the REP Consistency Screening Table, implementation of **Mitigation Measure 3.7-1(a)** would achieve a score of 24 points, which would exceed the required 19.5 points for residential developments. Implementation of **Mitigation Measure 3.7-1(b)** would achieve a score of 18 points, which would meet the required 18 points for commercial developments in the REP Consistency Screening Table. Therefore, implementation of **Mitigation Measure 3.7-1(a)** and **Mitigation Measure 3.7-1(b)** demonstrate that the mixed-used development proposed under the proposed BSMP is consistent with the REP. As established in CEQA Guidelines section 15183.5(b), because the City has determined that these measures would create consistency with the City's REP, the proposed BSMP contribution to cumulative GHG emissions is considered less than considerable, and the impact would be mitigated to a **less-than-significant** level.

Impact 3.7-2: Development pursuant to the proposed BSMP would increase demand for energy, specifically electricity and natural gas, which could cause significant environmental effects.

Full Master Plan

Electricity

As previously discussed, PG&E would provide electricity and upgraded infrastructure to the development under the proposed BSMP. Table 3.7-1 summarizes the anticipated demand from the proposed BSMP as whole, which is estimated to result in demand for 30,732 MWh/year of electricity. Currently, the Bogue substation distributes to electricity to the existing buildings within the BSMP site. The Bogue substation contains two 12-kilovolt (kV) electric distribution circuits that serve the site with three-megawatt (MW) capability. If necessary, circuit capacity

would be increased to serve buildout of the proposed BSMP. However, construction of new substations or other such infrastructure is not anticipated. All electrical distribution lines are anticipated to be buried in-street and would be constructed as the proposed BSMP project is developed over time.

Given that there are approximately 6,000 megawatts of pending power plant projects in the State,³⁹ the increase in electrical demand from development proposed under the proposed BSMP project would not have a substantial impact on the local or regional electrical supplies or require additional capacity to be constructed. It is anticipated that PG&E would be able to serve the development proposed under the proposed BSMP. Since the proposed BSMP would be built-out incrementally from 2020 to 2040, PG&E would have sufficient time to install additional facilities within the project site to meet the increase in electricity demand.⁴⁰ The physical environmental effects of adding electrical facilities within the BSMP site are considered in the resource evaluations in this EIR; no additional effects would be created. This impact is considered **less than significant**.

Natural Gas

Natural gas is provided to the BSMP site by PG&E. Table 3.7-1, above, summarizes the anticipated demand from the proposed BSMP and estimates a natural gas demand of 87,333 million Btu/year. In comparison, it is projected that natural gas demand in California would decrease in 2030 to 2.23 trillion Btu/year.⁴¹ Ninety percent of the State's natural gas is imported from the Rocky Mountain region, the Southwest, and Canadian basins. The United States produces 20 trillion cubic feet per year and had 340 trillion cubic feet of proven reserves in 2014.⁴² It is anticipated that PG&E would plan and construct the infrastructure to provide service to the BSMP site. Gas infrastructure serving proposed BSMP development is assumed to be constructed along roadways within the BSMP site concurrently with those developments. Consequently, given the ample regional natural gas supplies available, the proposed BSMP project would not have a significant impact on regional natural gas supply or require additional capacity to be constructed.

Development would occur under the proposed BSMP based on market demand, which is expected to occur at a pace in excess of the pace of development over the recent decades. If additional infrastructure (e.g., distribution lines) were needed to support the proposed Full Master Plan development, PG&E would have sufficient time to construct new infrastructure within the

³⁹ California Energy Commission. 2017. Status of All Projects, Power Plant Projects since 1996, Available: http://www.energy.ca.gov/sitingcases/all_projects.html Accessed July 2017.

⁴⁰ Rodriguez, Arnoldo, Development Service Director, City of Yuba City Development Services, email communication, November 3, 2016.

⁴¹ California Energy Commission. 2015. *Draft Staff Report: 2015 Natural Gas Outlook*. Available: http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-03/TN206501_20151103T100153_Draft_Staff_Report_2015_Natural_Gas_Outlook.pdf. Accessed July 2017.

⁴² U.S. Energy Information Administration. 2016. California State Profile and Energy Estimates: Profile Analysis. Available: <https://www.eia.gov/state/analysis.cfm?sid=CA>. Accessed July 7, 2017.

BSMP area to meet future natural gas demands. Therefore, potential effects on energy related facilities would be limited, and this impact is considered **less than significant**.

Operational Transportation Fuel Use

Operational transportation would require the use of fuels (primarily gasoline and diesel) for the operation of passenger vehicles and light trucks associated with new development within the BSMP site. The estimated demand for operational diesel fuel and gasoline provided for in the proposed BSMP is shown in Table 3.7-3. For the operation of uses developed pursuant to the proposed BSMP, it is estimated that annually there would be approximately 4,211,333 gallons of gasoline and 37,342 gallons of diesel fuel consumed.

The proposed BSMP includes an interconnected internal street system that connects and improves on the existing roadway infrastructure including State Route 99, Garden Highway, and the surrounding roads (Bogue Road, Walton Avenue, Railroad Avenue, and Stewart Road). The proposed circulation system is designed to integrate “Complete Streets” concepts, which entails the integration of multimodal transportation choices including a mix of pedestrians, bicycle, transit, and automobiles facilities. Mixed-use developments, like the proposed BSMP, provide an opportunity for people to live, work, shop and find recreation activities in one community. This allows people to travel shorter distances between their origins and destinations. These shorter travel distances reduce vehicle trip lengths and make walking and bicycling more viable travel options. Furthermore, the addition of retail, office, and commercial uses to the BSMP site would provide services and employment opportunities close to Yuba City residents, who would otherwise have to travel longer distances for these services and jobs.

The increased use of fuel as a result of the proposed BSMP would not result in the requirement for additional facilities, and thus would not create new significant impacts not otherwise addressed in this EIR. Therefore, the impact is considered **less than significant**.

Construction Transportation Fuel Use

Construction of the new development anticipated under the proposed BSMP would require the use of fuels (primarily gasoline and diesel) for operation of construction equipment (e.g., dozers, excavators, generators, and trenchers), construction vehicles (e.g., dump and delivery trucks), and construction worker vehicles. Direct energy use would also include the use of electricity required to power construction equipment (e.g., welding machines and electric power tools). The estimated quantity of diesel fuel and gasoline use to support construction of all development anticipated under the proposed BSMP is shown in Table 3.7-4. It is estimated there would be approximately 627,562 gallons of diesel fuel and 37,626 gallons of gasoline consumed.

Construction activities are temporary and would not result in a long-term increase in demand for fuel, and would not be of sufficient magnitude to require new infrastructure to be constructed to supply construction activities. Therefore, the impact is considered **less than significant**.

Newkom Ranch/Kells East Ranch

Electricity

As with the proposed BSMP as a whole, PG&E would provide electricity and upgraded infrastructure to the development proposed on the Newkom Ranch and Kells East Ranch properties. Table 3.7-2, above, summarizes the anticipated demand from the Newkom Ranch and Kells East Ranch properties and estimates an electricity demand of 11,319 MWh/year.

It is anticipated that PG&E would be able to serve the development proposed within the Newkom Ranch and Kells East Ranch properties. Since these developments would be built-out incrementally over the 20 plus years, PG&E would have sufficient time to install additional facilities in the area to meet the increase in electricity demand. The physical environmental effects of adding electrical facilities within the Newkom Ranch and Kells East Ranch properties area are considered in the resource evaluations in this EIR; no additional effects would be created. This impact is considered **less than significant**.

Natural Gas

As with the proposed BSMP already discussed above, natural gas would be provided to the developments proposed on the Newkom Ranch and Kells East Ranch properties. Table 3.7-2, above, summarizes the anticipated demand from these developments and estimates a natural gas demand of 29,434 million Btu/year. Development would occur based on market demand, which is expected to occur at a pace in excess of the pace of development over the recent decades. If additional infrastructure (e.g., distribution lines) were needed to support the proposed BSMP development, PG&E would have sufficient time to construct new infrastructure within the BSMP site to meet future natural gas demands. Therefore, potential effects on energy related facilities would be limited, and this impact is considered **less than significant**.

Operational Transportation Fuel Use

The estimated demand for operational diesel fuel and gasoline provided for the development proposed under within the Newkom Ranch and Kells East Ranch properties is shown in Table 3.7-3. For the operation of the proposed BSMP as a whole, it is estimated that annually there would be approximately 1,979,778 gallons of gasoline and 17,555 gallons of diesel fuel consumed.

The street system within the Newkom Ranch and Kells East Ranch properties would have the same street design as discussed under the proposed BSMP as a whole, which includes an interconnected internal street system that connects and improves on the existing roadway infrastructure. As the proposed mixed-used developments are built-out within the Newkom Ranch and Kells East Ranch properties, people will have the convenience of living near where they work, shop and find recreation activities in one community. This allows people to travel shorter distances between their origins and destinations. These shorter travel distances reduce vehicle trip lengths and make walking and bicycling more viable travel options. Furthermore, the addition of retail, office, and commercial uses to the BSMP site would provide services and

employment opportunities close to Yuba City residents, who would otherwise have to travel longer distances for these services and jobs.

The increased use of fuel as a result of the build-out of the Newkom Ranch and Kells East Ranch properties would not result in the requirement for additional facilities, and thus would not create new significant impacts not otherwise addressed in this EIR. Therefore, the impact is considered **less than significant**.

Construction Transportation Fuel Use

The estimated quantity of diesel fuel and gasoline use to support construction of all development anticipated within the Newkom Ranch and Kells East Ranch properties is shown in Table 3.7-4. It is estimated there would be approximately 430,448 gallons of diesel fuel and 25,808 gallons of gasoline consumed. Construction activities are temporary and would not result in a long-term increase in demand for fuel, and would not be of sufficient magnitude to require new infrastructure to be constructed to supply construction activities. Therefore, the impact is considered **less than significant**.

Summary

Energy consumption, including electricity, natural gas, and fuel, for construction and operation of development pursuant to the proposed BSMP, including the Newkom Ranch and Kells East Ranch properties, would be accomplished without the addition of energy infrastructure that could result in adverse environmental effects. In view of the above, impacts related to energy consumption would be **less than significant**.

Mitigation Measure

None required.

Impact 3.7-3: The proposed BSMP could result in the wasteful, inefficient, or unnecessary use of energy.

Full Master Plan

Electricity and Natural Gas

Buildings and infrastructure constructed pursuant to the proposed BSMP would comply with the versions of CCR Titles 20 and 24, including CALGreen, that are applicable at the time that building permits are issued. In addition, the City's REP includes goals and measures that seek to reduce energy consumption. In particular, Measure 2.1 and Measure 4.1 of the City's REP encourage or require energy standards to exceed state requirements for new residential and commercial developments. The REP suggests that the City promote Tier 1, Tier 2, Green Building Ratings such as LEED, Build it Green/Green Point Rating System or Energy Star Certified buildings. By meeting the City's REP increased energy efficiency goals, projects can avoid the wasteful, inefficient or unnecessary use of energy.

Since development pursuant to the proposed BSMP would be required to comply with the latest CCR Titles 20 and 24 energy standards, but would not be required to exceed those requirements, the proposed BSMP may not be consistent with REP Measure 2.1 and Measure 4.1. Therefore, the energy consumed by the development proposed under the proposed BSMP could result in wasteful, inefficient or unnecessary use of energy and be considered a **potentially significant** impact.

Operational and Construction Transportation

Based on Table 3.7-3, it is estimated that 37,342 gallons of diesel fuel and 4,211,333 gallons of gasoline would be consumed for transportation related to operation of uses developed pursuant to the proposed BSMP. Transportation energy would be used efficiently due to the location, density, and mix of planned uses in the BSMP site. As previously discussed, the proposed BSMP includes an interconnected internal street system that connects and improves on the existing roadway infrastructure. The proposed circulation system is designed to integrate “Complete Streets” concepts, which entails the integration of multimodal transportation choices including a mix of pedestrians, bicycle, transit, and automobiles facilities. Mixed-use developments, like the proposed BSMP, provide an opportunity for people to live, work, shop and find recreation activities in one community. This allows people to travel shorter distances between their origins and destinations. These shorter travel distances reduce vehicle trip lengths and make walking and bicycling more viable travel options. This reduction in trip making and trip lengths would have a commensurate reduction in transportation fuel consumption.

As explained above in Impact 3.7-2, construction of development and infrastructure pursuant to the proposed BSMP would require the use of fuels for operation of construction equipment, construction vehicles, and construction worker vehicles. Direct energy use would also include the use of electricity required to power construction equipment. As shown in Table 3.7-4, for the construction of the proposed BSMP, it is estimated there would be approximately 627,562 gallons of diesel fuel and 37,626 gallons of gasoline consumed. Notably, construction activities are temporary and would be spread over a period ranging from 2020 to 2040. Since the use would be temporary, it would not result in a long-term increase in demand for fuel. Thus, construction and operation of development undertaken pursuant to the proposed BSMP would not result in a wasteful or unnecessary use of energy and would be considered a **less-than-significant** impact.

Newkom Ranch/Kells East Ranch

Electricity and Natural Gas

Just like the proposed BSMP as a whole, buildings and infrastructure constructed pursuant to the developments proposed on the Newkom Ranch and Kells East Ranch properties would comply with the versions of CCR Titles 20 and 24, including CALGreen, that are applicable at the time that building permits are issued. Since development pursuant to the proposed BSMP as a whole would only comply with the latest CCR Titles 20 and 24 energy standards, the proposed Newkom Ranch and Kells Ranch East would not be consistent with REP Measure 2.1 and Measure 4.1. Therefore, the energy consumed by the development could result in wasteful, inefficient or unnecessary use of energy and be considered a **potentially significant** impact.

Operational and Construction Transportation

Based on Table 3.7-3, it is estimated that 17,555 gallons of diesel fuel and 1,979,778 gallons of gasoline would be consumed by the development proposed on the Newkom Ranch and Kells East Ranch properties. The developments proposed under the Newkom Ranch and Kells East Ranch properties would have the same street system discussed under the proposed BSMP as a whole. The proposed circulation system is designed to integrate “Complete Streets” concepts, which entails the integration of multimodal transportation choices including a mix of pedestrians, bicycle, transit, and automobiles facilities. As the mixed-used developments proposed within the Newkom and Kells East Ranch properties are built-out, people living near the BSMP would have the convenience of having retail and commercial establishments closer to their homes. People living within and near the BSMP would be closer to schools, worker places and recreational areas resulting in shorter travel distances and making walking and bicycling more viable travel options. This reduction in trip making and trip lengths would have a commensurate reduction in transportation fuel consumption.

As explained above in Impact 3.7-2, construction of development and infrastructure pursuant to the developments proposed within the Newkom Ranch and Kells East Ranch properties would require the use of fuels for operation of construction equipment, construction vehicles, and construction worker vehicles. Direct energy use would also include the use of electricity required to power construction equipment. As shown in Table 3.7-4, for the construction of the developments proposed within the Newkom Ranch and Kells East Ranch properties, it is estimated there would be approximately 430,448 gallons of diesel fuel and 25,808 gallons of gasoline consumed. Notably, construction activities are temporary and would be spread over a period of two decades or more. Since the use would be temporary, it would not result in a long-term increase in demand for fuel. Thus, construction and operation of development undertaken pursuant to developments proposed within the Newkom Ranch and Kells East Ranch properties would not result in a wasteful or unnecessary use of energy and would be considered a **less-than-significant** impact.

Summary

The proposed BSMP would be designed and operated to minimize the use of electrical, natural gas, and transportation fuel energy to the extent feasible. However, since proposed BSMP would only comply with the latest California Code of Regulations Titles 20 and 24 energy standards, and would not require additional energy conservation measures required in the REP, the proposed BSMP, including the Newkom Ranch and Kells East Ranch projects, would not be consistent with REP Measure 2.1 and Measure 4.1. Therefore, the energy consumed by the development proposed under the BSMP, including the Newkom Ranch and Kells East Ranch projects, could result in wasteful, inefficient or unnecessary use of energy and be considered a **potentially significant** impact.

Mitigation Measures

Mitigation Measure 3.7-3: Compliance with Yuba City REP (BSMP/NR/KER)

Implement Mitigation Measure 3.7-1(a) and Mitigation Measure 3.7-1(b).

Significance After Mitigation: Implementation of **Mitigation Measure 3.7-1** would insure that development under the proposed BSMP, including the Newkom Ranch and Kells East Ranch projects, would be consistent with City's REP Measure 2.1 and Measure 4.1. The applicant would be required to use enhanced building insulation materials during construction of commercial and residential buildings (e.g., rigid wall installation, roof/attic R-38, 0.4 U-Factor or 0.32 SHGC windows). By demonstrating consistency with the City's REP, the project would not result in a wasteful or unnecessary use of energy. Therefore, after mitigation this impact would be **less than significant**.

Cumulative Impacts

As discussed above, GHG emissions relate to an inherently a cumulative climate change impact because no single project makes a significant or measureable contribution to global climate change. Therefore, the analysis of GHG emission presented above under Impact 3.7-1 provides a full consideration of the cumulative contribution of the proposed BSMP project, including the Newkom Ranch and Kells East Ranch projects, and there is no need for further consideration of cumulative impacts of GHG emissions. The cumulative impacts regarding the wasteful, inefficient, or unnecessary consumption of energy during construction (Impact 3.7-3) would be the same as the BSMP-specific context.

Impact 3.7-4: The proposed BSMP, in combination with other cumulative development, would contribute to cumulative increases in demand for energy.

Continued growth throughout PG&E's service areas could contribute to ongoing increases in demand for electricity and natural gas. PG&E sources electricity and natural gas from a combination of producers and suppliers located in Canada and the U.S. Southwest. The utility maintains contracts with producers and suppliers over daily, monthly, and longer-term agreements. PG&E also maintains gas storage facilities and a network of conveyance and distribution pipelines within its service area. The latest California Gas Report indicates that predicted demand for Northern California during a high demand wintertime scenario in 2035 of 2,463 million cubic feet per day will be 79 percent of available capacity.⁴³

In order to address future increases in demand, PG&E maintains an active planning process to identify and deploy additional conservation measures to minimize increases in demand, to secure continued natural gas supply, and to maintain sufficient distribution system capacity within its service area. With respect to the proposed BSMP and vicinity, existing and planned infrastructure

⁴³ California Gas and Electric Utilities. 2016. *2016 California Gas Report*. Pp. 59. Available: http://docketpublic.energy.ca.gov/PublicDocuments/16-BSTD-06/TN212364_20160720T111050_2016_California_Gas_Report.pdf. Accessed July 7, 2017.

is anticipated to be sufficient to maintain service to the proposed plan and other cumulative scenario projects. Therefore, cumulative scenario impact on electricity and natural gas supply would not be cumulatively considerable.⁴⁴

Additionally, conservation policies encouraged by the City, including those set forth in the City's REP are expected to support increased energy conservation in new development, including that which would occur pursuant to the proposed BSMP, could result in an overall increase in energy demand on suppliers, anticipated increases would be affected positively by these requirements. Cumulative impacts on energy production and transmission facilities therefore are not significant and the project's contribution is not cumulatively considerable. As such, this impact is considered **less than significant**.

Mitigation Measure

None required.

⁴⁴ Pacific Gas & Electric. 2017. Operating Data. Available: http://www.pge.com/pipeline/operations/cgt_pipeline_status.page#flows. Accessed June 29, 2017.

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3.8 Hazards and Hazardous Materials

This section provides an assessment of potential impacts related to hazards and hazardous materials that could be present in the vicinity of the BSMP project site. Potential hazards addressed in this section include exposure to hazardous materials in soil and groundwater during construction, releases of hazardous materials during construction and operation, and risk of wildfires. The section also addresses the potential impacts relating to airport safety and the potential for impacts on emergency access and response plans. Possible hazards involving toxic air contaminant emissions and odors are discussed in Section 3.3, Air Quality. The National Pollutant Discharge Elimination System (NPDES) Construction General Permit and the required Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs) that would control runoff from construction sites are discussed in Section 3.6, Geology, Soils, Mineral Resources, and Paleontological Resources.

The City received comments on the notice of preparation related to hazards and hazardous materials from the Central Valley Regional Water Quality Control Board (RWQCB), Sacramento Area Council of Governments/Airport Land Use Commission (SACOG/ACLU), and one individual (Renton). The regulatory agency comment letters identified regulations and permits that may apply to the BSMP and determined that the BSMP project site is outside of the noise and safety zone of the Comprehensive Land Use Plan (CLUP) for Sutter County Airport. The Renton comment letter describes concerns regarding the impacts pesticide use from farming activities could have on additional residents. These comments have been addressed in this section.

The analysis included in this section was developed based on BSMP-related construction and operational features, and data provided in the City of Yuba City General Plan,¹ Yuba City General Plan Final Environmental Impact Report (SCH No. 2001072105),² Sutter County General Plan,³ and a search of government databases for listings of known contaminated sites located within or in the vicinity of the BSMP project site.

3.8.1 Environmental Setting

Hazardous Materials in Soil and Groundwater

This section assesses the potential for hazardous materials to be present in site soils or groundwater as a result of past and present land uses and land use activities in the BSMP project site, or as a result of documented releases of hazardous materials in the project vicinity. Historical land uses were determined based on a review of the Cultural Resources Survey Report. Documented hazardous materials releases in the project vicinity were identified by searching environmental databases for hazardous materials sites with a 0.25-mile radius of the BSMP project site.

¹ City of Yuba City. 2004. *Yuba City General Plan*. April 8, 2004.

² City of Yuba City. 2004. *Yuba City General Plan Final Environmental Impact Report (SCH No. 2001072105)*. February 2004.

³ Sutter County. 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

Past and Present Land Uses and Hazardous Materials Usage in the Project Vicinity

- **Agricultural Uses.** Since at least 1953, much of the BSMP project site has been planted in orchards. Although suburban residential and commercial developments have encroached on the area, orchards still dominate much of the BSMP project site today. Though specific information regarding historical agricultural practices in the areas within the vicinity of the BSMP project site is not available, it is assumed that chemical fertilizers and pesticides have been and continue to be used.
- **Commercial/Industrial Uses.** Commercial and industrial land uses include a current gasoline service station in the BSMP project site (southwest corner of 1332 Bogue Road and State Route [SR] 99), which typically involves the use and storage of fuel, lubricants and oil, solvents, and other hazardous materials. The database search noted below indicated this service station is not listed on any of the regulatory agency lists, indicating that this station has no history of any releases.

Environmental Database Search and Regulatory File Review

A search of relevant environmental databases in the California Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Site List – Site Cleanup (Cortese List), which includes the State Water Resources Control Board’s (SWRCB) GeoTracker, the DTSC EnviroStor, landfills, and other lists, was conducted to identify sites that could potentially affect soil and groundwater in the BSMP project site. Closed sites were not considered since closure of a site by a regulatory agency indicates the site no longer has the potential to affect the area.

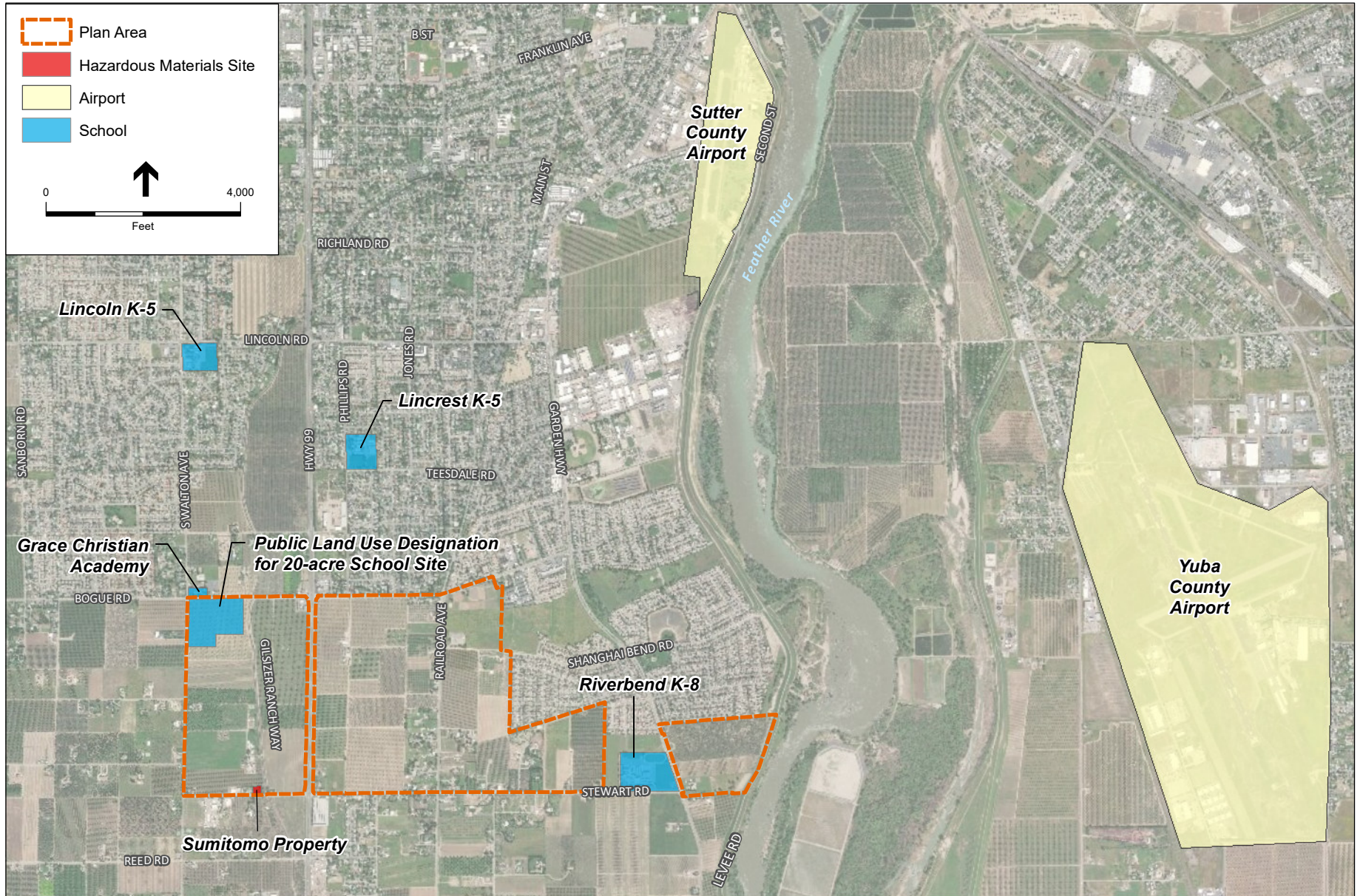
Results

The database search identified the Sumitomo Property (Untemoto Ranch) as the only active site with the potential to affect the BSMP project site, as discussed further below.⁴ The former Sumitomo Property (Untemoto Ranch) at 1427 Stewart Road is located in the southwestern portion of the BSMP project site, as show in **Figure 3.8-1**. The former Sumitomo Property is on the Cortese List (specifically the SWRCB’s GeoTracker database⁵) and was listed as containing abandoned agricultural chemical and lubricant containers. The site is now occupied by a residence. The case has been inactive since 1986 and uncertainties remain regarding the completion of an on-site investigation as requested by the RWQCB or the status of any remedial activities. Correspondence with the property’s caseworker at the RWQCB further confirms this uncertainty.⁶

⁴ Central Valley Regional Water Quality Control Board. 2016. *Inactive Case Review, Sumitomo Property (Untemoto Ranch) 1427 Stewart Road, Yuba City, Sutter County*. June 28, 2016.

⁵ State Water Resource Control Board. 2017. GeoTracker Database. Available: <http://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=yuba+city>. Accessed March 22, 2017.

⁶ Mello, Joe, Site Caseworker, Central Valley Regional Water Quality Control Board, personal communication with Tessa Verhoef, Analyst, Environmental Science Associates, April 4, 2017.



SOURCE: ESRI, 2015; City of Yuba City, 2019; ESA, 2019

Bogue Stewart Master Plan . 140720

Figure 3.8-1
Hazardous Materials Sites, Airports,
and Schools in Project Vicinity

Hazardous Building Materials Associated with Demolition and Renovation

Various buildings and structures are located throughout the BSMP project site. Because of the age of some of the buildings and structures, the potential exists for the structures to contain hazardous building materials. Older buildings and structures can contain building materials that include hazardous components such as lead-based paint (LBP), asbestos-containing materials (ACMs), mercury, polychlorinated biphenyls (PCBs in transformer oil), and termiticides.

Among its numerous uses and sources, lead can be found in paint, water pipes, solder in plumbing systems, and in soils around buildings and structures painted with LBP. Old peeling paint can contaminate near surface soil, and exposure to residual lead has resulted in illness in children. LBP was phased out in the United States beginning with the passage of the Lead-Based Paint Poisoning Prevention Act in the 1971. Prior to the U.S. Environmental Protection Agency (USEPA) ban in 1978, LBP was commonly used on interior and exterior surfaces of buildings. Structures built prior to 1978 may have LBP and some paints manufactured after 1978 for industrial or marine uses legally contain more than 0.06 percent lead. Exposure to lead can result in the accumulation of lead in the blood, soft tissues, and bones. Children are particularly susceptible to potential lead-related health problems because it is easily absorbed into developing systems and organs.

Asbestos, a naturally-occurring fibrous material, was used as a fireproofing and insulating agent in building construction before such uses were terminated due to liability concerns in the late 1970s. From 1973 through 1990, several laws were passed banning the manufacture and use of ACM.⁷ Some materials are still allowed to contain asbestos. The demolition of structures with ACM can result in airborne fibers. Inhalation of the tiny asbestos fibers can lead to lung disease. Structures that predate 1981 and structural materials installed before 1981 are presumed to potentially contain asbestos.

Because it was widely used prior to the discovery of its health effects, asbestos can be found in a variety of building materials and components such as insulation, walls and ceilings, floor tiles, and pipe insulation. Friable (easily crumbled) materials are particularly hazardous because inhalation of airborne fibers is the primary mode of asbestos entry into the body. Nonfriable asbestos is generally bound to other materials such that it does not become airborne under normal conditions. Non-friable asbestos and encapsulated friable asbestos do not pose substantial health risks. Asbestos exposure is a human respiratory hazard. Asbestos-related health problems include lung cancer and asbestosis. Any activity that involves cutting, grinding, or drilling during building renovation or demolition or relocation of underground utilities could release friable asbestos fibers unless proper precautions are taken. Inhalation of airborne fibers is the primary mode of asbestos entry into the body, making friable materials the greatest potential health risk.

Spent fluorescent light tubes commonly contain mercury vapors. In February 2004, regulations took effect in California that classified all fluorescent lamps and tubes as hazardous waste. When these lamps or tubes are broken, mercury is released to the environment. Mercury can be

⁷ U.S. Environmental Protection Agency. 2016. *U.S. Federal Bans on Asbestos*, December 19, 2016.

absorbed through the lungs into the bloodstream, and can be washed by rain water into waterways. Mercury switches may also be present in some buildings. A mercury switch (also known as a mercury tilt switch) is a switch which opens and closes an electrical circuit through a small amount of liquid mercury.

PCBs are organic oils that were formerly used primarily as insulators in many types of electrical equipment such as transformers and capacitors. After PCBs were determined to be carcinogenic in the mid-to-late 1970s, the USEPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment. Fluorescent lighting ballasts manufactured after January 1, 1978, do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit. PCBs are highly persistent in the environment, and exposure to PCBs has been demonstrated to cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system.

Chlordane was a pesticide used as a termiticide from 1948 until 1988 when the USEPA banned the manufacture and use of chlordane.⁸ The risk from chlordane is from ingestion and inhalation. The acute (short-term) effects of chlordane in humans consist of gastrointestinal distress and neurological symptoms, such as tremors and convulsions. Chronic (long-term) inhalation exposure of humans to chlordane results in effects on the nervous system. Chlordane is persistent in soil and is slow to degrade.

Nearby Airports

The portion of the BSMP project site east of the Garden Highway (i.e., lots 47, 48, 49, and 50) would be located within 1.4 to 1.9 miles of the Yuba County Airport, which is north of the intersection of Arboga Road and Skyway in the community of Olivehurst (see Figure 3.8-1). Part of the BSMP project site (i.e., lots 27a-h, 28b, 28c, 33-39 and portions of lots 28, 40a, 41a, 45a, and 46a in the BSMP plan area; portions of Lots 24, 25 and 26 in the Newkom Ranch area) is also located within 1.5 to 2.0 miles of the Sutter County Airport which is located south of the intersection of Second Street and the Garden Highway in Yuba City. No private airstrips are within 2 miles of the BSMP project site.

Nearby Schools

Schools are considered sensitive receptors for hazardous materials because children are more susceptible than adults to the effects of hazardous materials. The CEQA Guidelines Appendix G Initial Study Checklist considers it a potentially significant impact if a project would emit hazardous emissions of handle hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Two schools are located within 0.25 mile of the BSMP project site including Riverbend Elementary School K-8 located at 301 Stewart Road and Grace Christian Academy located at 1980 South Walton Avenue (see Figure 3.8-1). Lincrest School Elementary School K-5 located at 1400 Phillips Road is 0.5-mile north of the BSMP and Lincoln Elementary K-5 School at 1582 Lincoln Road is 0.9-mile north of the BSMP. Grace Christian Academy is also located within 0.15 miles of Kells East Ranch and directly across the street from the BSMP.

⁸ U.S. Environmental Protection Agency, 2000. *Chlordane*. January 2000.

In addition, there is a proposed 20-acre school site on the southeast corner of South Walton Avenue and Bogue Road. This land area is set aside for a K-8 combined elementary and middle school with adjoining playgrounds.

Wildfire Hazards

The project vicinity has a Mediterranean climate, characterized by long, dry, hot summers and cool, rainy winters. The majority of measurable rainfall occurs from mid-October to mid-April, and in most years this precipitation results in abundant grass growth. May to October is the main fire season, and July is the time of the highest fire danger. During this period the grasses dry provide a fuel source for fires, with fire conditions exacerbated by warm temperatures and lack of precipitation.

The California Department of Forestry and Fire Protection (CAL FIRE) has created a severity system to rank fire hazards and examine wildland fire potential across the state. These zones found on CAL FIRE maps account for the speed and intensity of potential fires, ability of embers to spread and multiply, loading of fuel, topographic conditions, and local climate (e.g. temperature and likelihood of strong winds). In total, there are three CAL FIRE designations for fire hazards, which are moderate, high, and very high. Typically, homes that are located within high or very high CAL FIRE zones are considered lacking in adequate wildland or structural fire protection. CAL FIRE has not designated the BSMP project site as a Very High or High Hazard Severity Zone.⁹

Emergency Response

In the event of a spill that releases hazardous materials, a coordinated response would occur at the local level, with participation from state and federal agencies, if the released materials and/or volume warrant. The Yuba City Fire Department has in-house hazardous materials (HazMat) response capabilities and is also a member of the Yuba-Sutter HazMat Response Team.

The Yuba-Sutter Hazardous Materials Response Team covers Yuba and Sutter counties under a Letter of Understanding between the Yuba City Fire Department, Sutter County Fire, Marysville Fire, Linda Fire Protection District, Olivehurst Fire, Wheatland Fire Authority and the County of Yuba Environmental Health Department. Beale Air Force Base Fire Department, though not a signatory to the MOU, is an active participant to the Team. Beale Air Force Base response capabilities include radiological, biological, nuclear and explosives response, which enhances the regional team's response.

The Yuba-Sutter Hazardous Materials Response Team is comprised of approximately 50 technicians and specialists. The team's response vehicles include two unstaffed vehicles (one with Sutter County Fire Station No. 8 (Oswald-Tudor station, 1280 Barry Road, Yuba City) and another with Yuba City Fire Station No.1 (824 Clark Avenue, Yuba City), plus a former State HazMat response trailer hosted by Marysville Fire (107 9th Street, Marysville).

⁹ California Department of Forestry and Fire Protection. 2008. Sutter County, Wildland Hazard & Building Codes updated by CAL FIRE in June 2008. Available: http://www.fire.ca.gov/fire_prevention/fhsz_maps_sutter. Accessed March 31, 2017.

Each participating agency maintains its own hazardous materials response capability, but conducts joint training, standardized purchasing of equipment, standardized dispatching of the regional team, and administration of the team.

Yuba City Fire has been selected by the state to host one of 12 state-sponsored Type 2 HazMat response vehicles, which are to provide HazMat surge capacity response within the state. This vehicle and response equipment is expected to join the Yuba City Fire fleet by the end of 2017. Yuba City Fire could be called upon to respond to transportation-related hazardous materials incidents anywhere within the 13 counties that make up LEPC-Region 3, or in the event of a major hazardous materials incident, anywhere within the state. This same vehicle would be used by Yuba City Fire and the Yuba-Sutter Regional HazMat Team for local response to hazardous materials incidents.

The Yuba-Sutter HazMat Response Team can be requested through any of the Yuba-Sutter public safety dispatch centers. Team members are dispatched by text messaging and phone call alerts using the Rapid Notify notification system, which includes standby, routing directions, and/or special instructions. Yuba County Department of Environmental Health handles the financial restitution of response related costs with the individual/company involved in the response, on behalf of the team.¹⁰

3.8.2 Regulatory Framework

Definition of Hazardous Materials

A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (State Health and Safety Code Chapter 6.95, Section 25501(o)). The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases).

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been spent, discarded, discharged, spilled, contaminated, or are being stored until they can be disposed of properly (California Code of Regulations (CCR) Title 22, Division 4.5, Chapter 11, Article 2, Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific criteria for ignitability, corrosivity, reactivity, and toxicity (CCR Title 22, Division 4.5, Chapter 11, Article 3, Sections 66261.20 through 66261.24). While hazardous substances are regulated by multiple agencies, as described in the Regulatory Setting below, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

¹⁰ Rodriguez, Arnaldo, Development Service Director, City of Yuba City Development Services, email to H. Ross, Environmental Science Associates. September 22, 2017.

Federal

The primary federal agencies with responsibility for hazardous materials management include the USEPA, U.S. Department of Labor Occupational Safety and Health Administration (Fed/OSHA), and the U.S. Department of Transportation (USDOT). Federal laws, regulations, and responsible agencies are summarized in **Table 3.8-1**.

**TABLE 3.8-1
 FEDERAL LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Management	Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA))	Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.
Hazardous Waste Handling	Resource Conservation and Recovery Act of 1976 (RCRA)	Under RCRA, the U.S. Environmental Protection Agency (USEPA) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from "cradle to grave."
	Hazardous and Solid Waste Act	Amended RCRA in 1984, affirming and extending the "cradle to grave" system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.
Hazardous Materials Transportation	U.S. Department of Transportation (USDOT)	USDOT has the regulatory responsibility for the safe transportation of hazardous materials. The USDOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	U.S. Postal Service (USPS)	USPS regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	The U.S. Department of Labor Occupational Safety and Health Administration sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR).
Structural and Building Components (Lead-based paint, polychlorinated biphenyls, and asbestos)	Toxic Substances Control Act	Regulates the use and management of polychlorinated biphenyls in electrical equipment, and sets forth detailed safeguards to be followed during the disposal of such items.
	USEPA	The USEPA monitors and regulates hazardous materials used in structural and building components and their effects on human health.

State and local agencies often have either parallel or more stringent rules than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the State or local agency section.

Airspace Safety

Part 77 of the Federal Aviation Regulations, "Safe, Efficient Use and Preservation of the Navigable Airspace" has been adopted as a means of monitoring and protecting the airspace required for safe operation of aircraft and airports. Objects that exceed certain specified height limits constitute airspace obstructions. Federal Aviation Regulations Section 77.13 requires that

the Federal Aviation Administration (FAA) be notified of proposed construction or alteration of certain objects within a specified vicinity of an airport, including:

1. Any construction or alteration of more than 200 feet in height above the ground level at its site.
2. Any construction or alteration of greater height than an imaginary surface extending outward and upward at [a slope of] 100 to 1 for horizontal distance of 20,000 feet from the nearest point of the nearest runway of each [public-use airport, public-use airport under construction, or military airport] with at least one runway more than 3,200 feet in actual length, excluding heliports.

The FAA is responsible for enforcement of 14 CFR 139, which prescribes rules regarding operation of airports used by aircraft with seating capacity of more than 30 passengers.

The FAA roles and responsibilities relating to wildlife hazards and their associated human health and safety concerns are addressed in 14 CFR 139.337, “Wildlife Hazard Management.” An ecological study must be prepared by the certificate holder and submitted to the FAA when multiple birds or other wildlife are struck by aircraft or ingested into aircraft engines, or if sufficient birds or other wildlife are present in an airport flight pattern as to result in such hazards. The FAA determines whether a wildlife hazard management plan is needed. The FAA’s Office of Airport Safety and Standards has published Advisory Circulars and Program Policy and Guidance Directives that further clarify this information. An Advisory Circular dated August 28, 2007, titled “Hazardous Wildlife Attractants on or Near Airports,” provides guidance on locating certain land uses having the potential to attract hazardous wildlife to or in the vicinity of public-use airports.¹¹ The FAA recommends the following separations when siting wildlife attractants (e.g., waste disposal operations, wastewater treatment facilities, wetlands):

- 5,000 feet from airports serving piston-powered aircraft,
- 10,000 feet from airports serving turbine-powered aircraft, and
- 5 statute miles from airports where the wildlife attractant may cause hazardous wildlife movement into or across the approach or departure airspace.¹²

Wildlife species or groups that could potentially present hazards to operating aircraft include rock pigeon, blackbirds, European starling, sparrows, hawks, geese, and egrets. These are common and ubiquitous bird species, many of which could reasonably be expected to be present in the BSMP project site and surrounding area. These species and groups have been identified by FAA as among those that present the highest risk for aircraft-wildlife strikes in the United States.¹³ Other hazardous wildlife species could also be present on-site. Species considered hazardous are expected to be present throughout the year, but the diversity and abundance of hazardous wildlife is likely to be highest between October and April, when the inactive agricultural fields,

¹¹ Federal Aviation Administration. 2007. FAA Advisory Circular 150/5200-33B, “Hazardous Wildlife Attractants on or Near Airports.” August 28, 2007.

¹² Federal Aviation Administration. 2007. FAA Advisory Circular 150/5200-33B, “Hazardous Wildlife Attractants on or Near Airports.” August 28, 2007.

¹³ Federal Aviation Administration. 2007. FAA Advisory Circular 150/5200-33B, “Hazardous Wildlife Attractants on or Near Airports.” August 28, 2007.

grasslands, and wetlands within the BSMP project site provide foraging habitat for a wide diversity of resident and migratory birds.

State

The primary State agencies with responsibility for hazardous materials management in the region include the DTSC and the RWQCB within the California Environmental Protection Agency (Cal EPA), California Occupational Safety and Health Administration (Cal/OSHA), California Department of Health Services (CDHS), California Highway Patrol (CHP), and the California Department of Transportation (Caltrans). State laws, regulations, and responsible agencies are summarized in **Table 3.8-2**.

**TABLE 3.8-2
 STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible State Agency	Description
Hazardous Materials Management	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program); CUPA	In January 1996, Cal EPA adopted regulations, which implemented a Unified Program. The plan is implemented at the local level and the agency responsible for implementation of the Unified Program is called the Certified Unified Program Agency (CUPA), which for Sutter County, is the Sutter County Environmental Health Division (SC EHD).
	State Hazardous Waste and Substances List ("Cortese List"); DTSC, RWQCB, SC EHD.	The BSMP project site includes one hazardous materials site on the "Cortese List" compiled pursuant to Government Code section 65962.5 and referenced in Public Resources Code 21092.6. The oversight of hazardous materials sites often involves several different agencies that may have overlapping authority and jurisdiction. DTSC is the lead agency coordinating with the RWQCB, SC EHD, and other agencies regarding issues pertaining to hazardous materials.
Hazardous Waste Handling	California Hazardous Materials Release Response Plan and Inventory Law of 1985; CUPA	The California Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act) requires that businesses that store hazardous materials onsite prepare a Hazardous Materials Business Plan (HMBP) and submit it to the local CUPA.
	California Hazardous Waste Control Act; DTSC	Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq., DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code, Division 20, Chapter 6.8, Sections 25300 et seq., also known as the State Superfund law, providing for the investigation and remediation of hazardous substances pursuant to State law.
	Part 9 of the California Building Standards Code; Fire Departments	Part 9 the California Fire Code regulates the operation, placement, and use of emergency generators.

**TABLE 3.8-2
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible State Agency	Description
Hazardous Materials Transportation	Title 26 of the California Code of Regulations	Regulates the transportation of hazardous waste originating in the state and passing through the state through Caltrans (26 CCR).
	CHP and Caltrans	These two state agencies are primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies.
Occupational Safety	Cal/OSHA	Cal/OSHA has primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the Code of Federal Regulations (CFR). Cal/OSHA standards are generally more stringent than federal regulations.
	Cal/OSHA regulations (8 CCR)	Concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.
	California Office of Statewide Health Planning and Development	The Office of Statewide Health Planning and Development serves as the regulatory building agency for all hospitals and nursing homes in California. Its primary goal in this regard is to ensure that patients in these facilities are safe in the event of an earthquake or other disaster, and to ensure that the facilities remain functional after such an event in order to meet the needs of the community affected by the disaster.
Construction Storm Water General Permit (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ)	RWQCB	Dischargers whose project disturbs one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the <i>NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities</i> (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). Construction activity subject to this permit includes clearing, grading, grubbing, and other disturbances to the ground such as excavation and stockpiling, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific Best Management Practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving offsite into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area.
Municipal Separate Storm Sewer System (MS4) Permit NPDES No. CAS082597 and Order No. R5-2008-0142	RWQCB	The MS4 permit requires permittees (in this case, the City of Yuba City) to reduce pollutants and runoff flows from new development and redevelopment using BMPs to the maximum extent practical. The MS4 permittee also has its own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification element. The MS4 permit requires specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

**TABLE 3.8-2
 STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible State Agency	Description
Industrial Storm Water General Permit Order No. 2014-0057-DWQ	RWQCB	Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ (IGP). The IGP regulates discharges associated with certain defined categories of industrial activities including manufacturing facilities; hazardous waste treatment, storage, or disposal facilities; landfills, land application sites, and open dumps; cement manufacturing; fertilizer manufacturing; petroleum refining; phosphate manufacturing; recycling facilities; steam electric power generating facilities; transportation facilities; and sewage or wastewater treatment works. The IGP requires the implementation of best management practices, a site-specific SWPPP, and monitoring plan. The IGP also includes criteria for demonstrating no exposure of industrial activities or materials to storm water, and no discharges to waters of the United States.
Dewatering Permit	RWQCB	If a proposed project includes construction of groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) No. 2003-0003 or the Central Valley RWQCB Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a notice of intent with the Central Valley RWQCB prior to beginning discharge.
Medical Waste	Medical Waste Management Act	Within the regulatory framework of the Medical Waste Management Act, the Medical Waste Management Program of the CDHS ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste offsite treatment facilities and transfer stations throughout the state. The CDHS also oversees all medical waste transporters.
Underground Infrastructure	California Government Code Section 4216-4216.9	Section 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

Within the above-listed regulations, citations to specific hazardous materials relevant to disposal and renovations of existing structures are listed below.

- **ACM:** California Code of Regulations (CCR) Title 8, Division 1, Chapter 4, Article 4, Sections 1529 and 5208
- **LBP:** CCR Title 8, Division 1, Chapter 4, Article 4, Section 1532.1

- **PCBs:** RCRA: 4 CFR 761; TSCA: 15 USC 2695; California: CCR Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24
- **Mercury and/or PCBs in light tubes and switches:** CCR Title 22, Division 4.5, Chapter 12, Article 1, Sections 66262.11; 66273 et sec; and CCR Title 22, Division 4.5, Chapter 42, Sections 67426.1 through 67428.1

California State Aeronautics Act

The State Aeronautics Act, Public Utilities Code Section 21001, et seq., is the foundation for the Caltrans' Division of Aeronautics aviation policies. The Division issues permits for, and annually inspects, hospital heliports and public-use airports, makes recommendations regarding proposed school sites within two miles of an airport runway, and authorizes helicopter landing sites at or near schools. Aviation system planning provides for the integration of aviation into transportation system planning on a regional, statewide, and national basis. The Division of Aeronautics administers noise regulation and land use planning laws that foster compatible land use around airports and encourages environmental mitigation measures to lessen noise, air pollution, and other impacts caused by aviation. The Division of Aeronautics also provides grants and loans for safety, maintenance, and capital improvement projects at airports.

Local

The BSMP area is currently in unincorporated Sutter County and under jurisdiction of its General Plan goals, policies, and ordinances. As a result of the implementation of the BSMP, this area would be annexed into the City of Yuba City and development resulting from plan implementation must be found to be substantially compliant with its General Plan goals, policies, and ordinances. Although within the City, adjacent areas to the west and south would remain unincorporated; therefore, BSMP development would still need to consider the County's goals, policies, and ordinances at those adjacent areas. The following presents those goals, policies, and ordinances of both the Yuba City General Plan and the Sutter County General Plan that address a project's effect to hydrology, water quality, and water resources.

Sutter County Environmental Health Division

The Sutter County Environmental Health Division (SCEHD) is the designated Certified United Program Agency (CUPA) for Sutter County and is responsible for implementing six statewide environmental programs for Sutter County, including:

- Underground storage of hazardous substances (USTs);
- Hazardous Materials Business Plan (HMBP) requirements;
- Hazardous Waste Management;
- California Accidental Release Prevention program;
- Article 80 Uniform Fire Code hazardous materials management plan; and
- Above Ground Storage Tanks (Spill Prevention Control and Countermeasures Plan).

City of Yuba City General Plan

The following guiding and implementing policies from the City of Yuba City General Plan are relevant to hazards and hazardous materials.

Guiding Policy 9.5-G-1 Minimize the risk of property damage and personal injury resulting from the production, use, storage, disposal, or transportation of hazardous materials.

Implementing Policies

- 9.5-I-1 Promote the reduction, recycling, and safe disposal of household hazardous wastes through public education and awareness. Expand collection programs in conjunction with new growth in the city.
- 9.5-I-2 Continue to pursue funding to conduct pre-plan visits to hazardous materials sites within the city, as well as major roadway and rail corridors used for hazardous materials transport.
- 9.5-I-3 Require the clean-up of sites contaminated with hazardous materials.
- The California Environmental Protection Agency publishes the Hazardous Waste Substances Sites List, which identifies properties in the City that have the potential for hazardous materials contamination. Contaminated sites are threats to the quality of groundwater and shall be cleaned through decontamination of soils and filtration of groundwater. Clean-up shall be required in conjunction with new development, reconstruction, property transfer of ownership, and/or the continued operation after the discovery of contamination. Continual business operation may be permitted during clean-up or remediation of the contamination, as long as the clean-up proceeds in accordance with an approved clean-up plan.
- 9.5-I-4 Implement policies contained in the Sutter County Hazardous Waste Management Plan that encourage and assist the reduction of hazardous waste from businesses and homes.
- 9.5-I-5 Require businesses generating hazardous waste to pay necessary costs for local implementation of programs specified in the County Hazardous Waste Management Plan, as well as the costs associated with emergency response services for a hazardous materials release.
- 9.5-I-6 Specify routes for transporting hazardous materials, taking into account areas of projected new growth.

These routes should not pass through residential areas or other sensitive areas. Specific time periods for transport should be established *to reduce the impact and accident risk during peak travel periods.*

As described in the following impact analyses, the proposed BSMP development would minimize risks from the production, use, storage, disposal, or transportation of hazardous materials through compliance with existing hazardous materials regulations and the implementation of a mitigation

measure (Impacts 3.8-1, 3.8-2, 3.8-3, 3.8-4, and 3.8-5). Therefore, the BSMP would be consistent with the City of Yuba City General Plan.

Sutter County General Plan

The following goals and policies from the Sutter County General Plan are relevant to hazards and hazardous materials. The Sutter County General Plan goals and policies are retained because the County is the CUPA.

Goal PHS 3 Protect health, safety, property, and the environment from the use, transport, disposal, and release/discharge of hazardous materials and waste.

Policies

- PHS 3.1 **Use and Disposal.** Ensure that the use and disposal of hazardous materials and waste complies with appropriate federal, state, and local requirements.
- PHS 3.2 **Hazardous Materials Area Plan.** Maintain and implement a Sutter County Hazardous Materials Area Plan consistent with the requirements of state law.
- PHS 3.3 **Project Review.** Coordinate with appropriate state and federal agencies to review all proposed development projects that manufacture, use, or transport hazardous materials and waste.
- PHS 3.4 **Hazardous Materials Business Plan (HMBP).** Require the owner or operator of a facility to complete a HMBP if the facility handles hazardous materials or a mixture containing hazardous materials that has a quantity equal to or great than 55 gallons for liquid, 500 gallons for solids, or 200 cubic feet for compressed gas. Provide a copy of the HMBP to Sutter County Environmental Health Division (as a Certified Unified Program Agency).
- PHS 3.5 **Remediation of Known Sites.** Require that businesses and property owners of known hazardous materials contamination and waste sites coordinate with the County, state, and/or appropriate federal agencies to develop and implement a plan to investigate, facilitate, and manage the remediation of the known sites.
- PHS 3.6 **New Development.** Ensure buildings and sites are investigated for the presence of hazardous materials and/or waste contamination before development for which County discretionary approval is required.
- PHS 3.7 **Siting of New Development.** Ensure that the siting of facilities that transfer, treat, store, or dispose of hazardous materials is compatible with surrounding land uses.

Emergency Response

In the event of a spill that releases hazardous materials in the vicinity of the BSMP area, a coordinated response would occur at the local level, with support from state and federal agencies, if needed. The Yuba City Fire Department has in-house hazardous materials (HazMat) response capabilities, but is also a member of the Yuba-Sutter HazMat Response Team. As noted above in Section 3.8.1, the Yuba-Sutter Hazardous Materials Response Team covers Yuba and Sutter

counties under a Letter of Understanding between Yuba City Fire, Sutter County Fire, Marysville Fire, Linda Fire Protection District, Olivehurst Fire, Wheatland Fire Authority and the County of Yuba (Environmental Health Department). Beale Air Force Base Fire Department, though not a signatory to the MOU, is an active participant to the team. Each participating agency maintains its own hazardous materials response capability but conducts joint training, standardized purchasing of equipment, standardized dispatching of the regional team, and administration of the team.¹⁴

Sutter County and Yuba County Airport Land Use Compatibility Plans

Sutter County Airport is located in Yuba City, adjacent to the west bank of the Feather River, approximately 1.5 miles north east of the BSMP project site. The Sutter County Airport CLUP¹⁵ was adopted on April, 1994 to contain the compatibility plan for Sutter County Airport. All projects that occur within the airport influence area (AIA) require evaluation from the Airport Land Use Commission (ALUC) to determine the Sutter County CLUP compatibility.

Yuba County Airport is located approximately 1.4 miles east of the BSMP project site, near Olivehurst on the east side of the Feather River. The Yuba County Airport Land Use Compatibility Plan (Compatibility Plan)¹⁶ was adopted on March 17, 2011 to contain the compatibility plan for Yuba County Airport. All projects that occur within the AIA require evaluation from the ALUC to determine consistency with the Compatibility Plan.

3.8.3 Analysis, Impacts, and Mitigation

Significance Criteria

Significance criteria for hazards and hazardous materials are drawn from Appendix G of the CEQA Guidelines. Significance criteria were added to address hazardous building materials in existing structures and encountering hazardous materials from unknown hazardous materials release sites during construction.

Impacts related to hazards and hazardous materials are considered significant if the proposed project would:

- Create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials;
- Encounter hazardous materials from unknown hazardous materials release sites during construction;
- Expose people to asbestos-containing materials, lead-containing paint, PCBs, or other hazardous building materials or situations during demolition activities;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

¹⁴ Rodriguez, Arnoldo, Development Service Director, City of Yuba City Development Services. email to H. Ross, Environmental Science Associates, September 22, 2017.

¹⁵ Airport Land Use Commission. 1994. Sutter County Airport Comprehensive Land Use Plan. April, 1994.

¹⁶ Airport Land Use Commission for Sacramento, Sutter, Yola, and Yuba Counties. 2011. Yuba County Airport Land Use Compatibility Plan. Adopted March 17, 2011.

- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Methodology and Assumptions

Existing land uses and publicly available environmental database resources were reviewed to identify known contaminated soil and/or groundwater sites in the BSMP project site. This information was used to determine if the construction activities (i.e., activities associated with implementation of the proposed BSMP) could encounter known subsurface contamination.

The analysis also considers the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from the proposed project and identifies the primary ways that these hazardous materials could expose individuals or the environment to health and safety risks. The specific types of businesses that would locate within the BSMP project site are unknown at this time, but the general type of businesses and the range and types of uses (e.g., commercial, light industrial, and residential) that are expected to be located in the BSMP project site would be regulated by the various laws, regulations, and policies summarized in the Regulatory Framework and limited by zoning requirements.

Compliance with applicable federal, state, and local health and safety laws and regulations by residents and businesses in the BSMP project site is assumed in this analysis, and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now.

Issues Not Discussed in Impacts

As discussed in the Environmental Setting, there are no private airstrips within 2 miles of the BSMP project site and it is not located within a very high of high fire hazard severity zone. Therefore, there would be **no impacts** relative to proximity to private airstrips and location within a wildfire hazard zone, and the impacts are not analyzed further.

Impacts and Mitigation Measures

Impact 3.8-1: Development pursuant to the proposed BSMP could create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.

Full Master Plan, Newkom Ranch, and Kells East Ranch

Construction

Implementation of the proposed BSMP would involve the construction of residential, commercial, and public facilities on a largely agricultural and undeveloped project site to the south of the existing city limits of Yuba City. During the construction phase, construction equipment and materials could include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, and asphalt mixtures, which are all commonly used in construction. The routine use or reasonably foreseeable upset and accident conditions could result in inadvertent releases of small quantities of hazardous materials, which could adversely affect construction workers, the public, and the environment.

Construction activities would be required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies.

Contractors would be required to prepare and implement HMBPs that would require that hazardous materials used for construction would be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code would also require measures for the safe storage and handling of hazardous materials.

As discussed in Section 3.6, Geology, Soils, Mineral Resources, and Paleontological Resources, and Section 3.9, Hydrology and Water Quality, construction contractors would be required to prepare a SWPPP for construction activities according to the NPDES General Construction Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff.

In addition, the transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release.

In the event of a hazardous materials spill within the BSMP area, the Yuba City Police Department and Yuba City Fire Department/Yuba-Sutter HazMat Response Team would be sent to the scene to respond and assess the situation. If a spill occurs on the SR 99, CHP would call upon these resources in identifying, isolating, and if necessary, evacuating the area. In cases of hazardous materials spills/incidents occurring within Sutter County, the Sutter County

Environmental Health Division would be contacted and in some cases, would be consulted on containment and mitigation.¹⁷

Operation

Operation of the proposed BSMP development would involve a mixture of residential, commercial, office and office park, industrial, and public facilities. The operations of future projects and land uses would include the transport, use, and disposal of chemicals and hazardous materials similar to the construction phase and could include fuels, oils and lubricants, paints and thinners, solvents and cleansers, cements and adhesives, degreasers, pesticides, and herbicides. The routine use or reasonably foreseeable upset and accident conditions could result in inadvertent releases of small quantities of hazardous materials, which could adversely affect the public and the environment.

Similar to construction, operating commercial, industrial, and other businesses that use hazardous materials would be required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of operations-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies.

As required by the SCEHD and the Hazardous Materials Management Program, any businesses that would store hazardous materials and/or waste at its business site would be required to submit business information and hazardous materials inventory forms contained in a Hazardous Materials Management Plan and prepare and implement HMBPs. The City requires all new commercial and other users to follow applicable regulations and guidelines regarding storage and handling of hazardous waste. All hazardous materials are required to be stored and handled according to manufacturer's directions and local, state and federal regulations. The California Fire Code would also require measures for the safe storage and handling of hazardous materials.

The transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release.

Finally, as previously discussed, in the event of a spill that releases hazardous materials in the vicinity of the BSMP area, a coordinated response would occur at the federal, state, and local levels, including the Region III Hazardous Materials Response Team.

Summary

Compliance with the numerous laws and regulations that govern the transportation and management of hazardous materials to reduce the potential hazards, along with the existing Hazardous Materials Response Team, would limit the potential for creation of hazardous

¹⁷ Rodriguez, Arnaldo, Development Service Director, City of Yuba City Development Services, email to H. Ross, Environmental Science Associates, September 22, 2017.

conditions due to accidental release of hazardous materials, and would render this impact **less than significant**.

Mitigation Measure

None required.

Impact 3.8-2: Construction activities related to development pursuant to the proposed BSMP could encounter hazardous materials from unknown hazardous materials release sites resulting in exposure to construction workers, nearby residents and other members of the public, and nearby environmental resources.

Full Master Plan, Newkom Ranch, and Kells East Ranch

Implementation of the proposed BSMP would involve the construction of residential, commercial, office and office park, and public facilities, along with utilities as well as road, pedestrian, and bicycle infrastructure, on a currently largely agricultural and undeveloped area to the south of Yuba City that may contain unknown contaminated soil and/or groundwater as a result of previous land uses. During construction, there is the potential to encounter previously unknown contaminated soil, and, if dewatering is needed, groundwater. Construction workers, the public, and the environment could be exposed to hazardous materials and the impact could be **potentially significant**. This impact would be reduced to less than significant with the implementation of **Mitigation Measure 3.8-2**, described below.

Mitigation Measure

Mitigation Measure 3.8-2: Conduct Phase I Environmental Site Assessments (BSMP/NR/KER)

- a) Prior to final project design of any individual project pursuant to the BSMP that includes any earth-disturbing activities, the applicant shall submit to the City a Phase I Environmental Site Assessment (Phase I ESA). The Phase I ESA shall be prepared in general accordance with ASTM Standard E1527-13, *Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process* (or most current edition that is in force at the time of final project design), which is the current industry standard. The Phase I ESA shall include a records review of appropriate federal, State, and local databases within ASTM-listed search distances regarding hazardous materials use, storage, or disposal at the given site, a review of historical topographic maps and aerial photographs, a site reconnaissance, interviews with persons knowledgeable about the sites historical uses, and review of other relevant existing information that could identify the potential existence of Recognized Environmental Conditions,¹⁸ including hazardous materials, or

¹⁸ The term Recognized Environmental Conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

contaminated soil or groundwater. If no Recognized Environmental Conditions are identified, then no further action would be required.

- b) If Recognized Environmental Conditions are identified and the Phase I ESA recommends further action, the applicant shall conduct the appropriate follow-up actions, which may include further records review, sampling of potentially hazardous materials, and possibly site cleanup. In the event that site cleanup is required, the project shall not proceed until the site has been cleaned up to the satisfaction of the appropriate regulatory agency (e.g., DTSC, RWQCB, or SC EHD) such that the regulatory agency issues a No Further Action letter or equivalent.

Significance after Mitigation: Mitigation Measure 3.8-2 would ensure that site assessment and, if needed, site cleanup, would occur prior to any earth-disturbing activities within the BSMP project site. This would reduce the potential for an unanticipated discovery during project construction, and reduce the potential effects on construction workers, the public, and the environment. With the implementation of this mitigation measure, this impact would be reduced to a **less-than-significant** level.

Impact 3.8-3: Demolition or renovation activities related to implementation of the proposed BSMP could expose people to asbestos-containing materials (ACM), lead-containing paint (LBP), polychlorinated biphenyls (PCBs), or other hazardous building materials.

Full Master Plan, Newkom Ranch, and Kells East Ranch

Buildings and structures in the BSMP project site may include ACM, LBP, or other hazardous building materials. Removal or renovation of structures that currently contain hazardous materials could expose workers and the public to hazardous materials. Once designated structures on a site have been removed or renovated, there would be no further exposure during operations. Therefore, only construction impacts are analyzed below.

Various existing regulations require that demolition and renovation activities that may disturb or require the removal of materials that consist of, contain, or are coated with ACM, LBP, PCBs, mercury, and other hazardous materials must be inspected and/or tested for the presence of hazardous materials. If present, the hazardous materials must be managed and disposed of in accordance with applicable laws and regulations.

In the case of ACM and LBP, the identification, removal, and disposal is regulated under CCR Title 8, Division 1, Chapter 4, Article 4, Section 1529 and 5208 for ACM and CCR Title 8, Division 1, Chapter 4, Article 4, Section 1532.1 for LBP. All work must be conducted by a State-certified professional which would ensure compliance with all applicable regulations. If ACM and/or LBP are determined to exist onsite, a site-specific hazard control plan must be prepared detailing removal methods and specific instructions for providing protective clothing and equipment for abatement personnel. If necessary, a State-certified lead-based paint and an asbestos removal contractor would be retained to conduct the appropriate abatement measures as required by the plan. Wastes from abatement and demolition activities would be disposed of at a landfill licensed to accept such waste. Once all abatement measures have been implemented, the contractor would conduct a clearance examination and provide written documentation to the

Feather River Air Quality Management District that testing and abatement have been completed in accordance with all federal, state, and local laws and regulations.

In the case of PCBs, the identification, removal, and disposal is regulated under RCRA (4 CFR 7610, TSCA (15 USC 2695) and California regulations (CCR Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24). Electrical transformers and older fluorescent light ballasts not previously tested and verified to not contain PCBs must be tested. If PCBs are detected above action levels, the materials must be disposed of at a licensed facility permitted to accept the materials.

In the case of mercury in fluorescent light tubes and switches, the identification, removal, and disposal is regulated under CCR Title 22, Division 4.5, Chapter 42, Section 67426.1 – 67428.1 and CCR Title 22, Division 4.5, Chapter 11, Article 4.1, Section 66261.50. Under these regulations, the light tubes must be removed without breakage and disposed of at a licensed facility permitted to accept the materials.

Summary

Compliance with all applicable federal, State, and local laws and regulations would prevent the exposure of individuals and the environment to the hazards by ensuring that all abatement regulations are carried out prior to and during demolition. Therefore, exposure to ACM, LBP, and/or other hazardous building materials would be **less than significant**.

Mitigation Measure

None required.

Impact 3.8-4: Construction and operation of development pursuant to the proposed BSMP could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Full Master Plan, Newkom Ranch, and Kells East Ranch

Construction

Construction activities would likely require use of limited quantities of hazardous materials such as fuels, oils, and lubricants; paints and thinners; and solvents and cleaners. These materials would be transported to and from the BSMP project site, including Newkom Ranch and Kells East Ranch, and could pass near schools, or a future site that uses hazardous materials during construction may be located within one-quarter mile of a school (see Figure 3.8-1 for existing and proposed school locations). The improper handling and transport of hazardous materials could result in accidental release of hazardous materials near schools, thereby exposing school occupants to hazardous materials.

As previously discussed in Impact 3.8-1, construction activities would be required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner and to reduce the

potential for a release of construction-related fuels or other hazardous materials into the environment, including nearby schools.

Contractors would be required to prepare and implement HMBPs that would require that hazardous materials used for construction be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code would also require measures for the safe storage and handling of hazardous materials. Construction contractors would be required to prepare a SWPPP for construction activities according to the NPDES General Construction Permit requirements, which would include spill prevention measures; equipment inspections; equipment and fuel storage requirements; protocols for responding immediately to spills; and BMPs for controlling site runoff. The transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. In the event of a spill that releases hazardous materials in the vicinity of a school, the Region III Hazardous Materials Response Team would respond and implement spill control and cleanup.

In addition, Section 17213 of the California Education Code establishes the regulatory framework for school districts to expand existing schools and construct future schools, notably highlighting that schools must be located away from current or former hazardous waste or solid waste disposal sites, hazardous substance release sites, or sites containing pipelines that contain hazardous materials (apart from a natural gas supply to the surrounding community). Section 17213.1 of the Education Code requires that a Phase I ESA be conducted for the site of the proposed school site prior to construction.

Operation

Operation of facilities near schools within the BSMP vicinity could involve the use of fuels, oils, and lubricants; paints and thinners, cleaning solvents and degreasers, and other chemicals. As previously discussed in Impact 3.8-1, operating commercial, industrial, and agricultural businesses that use hazardous materials would be required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials near schools. Businesses that would store hazardous materials and/or waste at its business site would be required to prepare and implement an HMBP, which would require all hazardous materials to be stored and handled according to manufacturer's directions and local, state and federal regulations. The California Fire Code would also require measures for the safe storage and handling of hazardous materials. The transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. Finally, and as previously discussed, in the event of a spill that releases hazardous materials in the vicinity of a school, the Region III Hazardous Materials Response Team would respond and implement spill control and cleanup.

Summary

With compliance with the numerous laws and regulations that govern the transportation and management of hazardous materials to reduce the potential hazards, long with the existing Hazardous Materials Response Team, this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 3.8-5: The proposed project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.

Full Master Plan, Newkom Ranch, Kells East Ranch

As discussed above in the Environmental Setting, the project site includes the former Sumitomo Property (Untemoto Ranch) located at 1427 Stewart Road within the BSMP area which is now occupied by a residence. The Sumitomo Property is on the Cortese List as having abandoned agricultural chemical and lubricant containers. Construction activities within this area have the potential to encounter undiscovered chemical contamination, which, if not identified and properly handled, could cause injury to construction workers.

The status of investigations and remedial actions conducted for the former Sumitomo Property are uncertain.¹⁹ As a result, hazardous materials may be present in soil or other hazardous materials releases may have occurred that have not been accounted for that could expose people to associated health risks. This is considered a **potential significant** impact.

To reduce the impact to less than significant, redevelopment of this property would require the implementation of Mitigation Measure 3.8-2, previously described in Impact 3.8-2.

Mitigation Measure

Mitigation Measure 3.8-5: Conduct Phase I Environmental Site Assessment (BSMP)

Implement Mitigation Measure 3.8-2.

Significance after Mitigation: With the implementation of **Mitigation Measure 3.8-2**, a Phase I ESA would identify the presence of potential or actual hazardous materials, which if identified, would then require further investigation and cleanup in compliance with applicable regulations. Implementation of **Mitigation Measure 3.8-2** would reduce this impact to **less than significant**.

¹⁹ Mello, Joe, Site Caseworker, Central Valley Regional Water Quality Control Board, personal communication with Tessa Verhoef, Analyst, Environmental Science Associates, April 4, 2017.

Impact 3.8-6: Development pursuant to the proposed BSMP would be located within two miles of a public airport or public use airport, and could result in a safety hazard for people residing or working in the project area.

Full Master Plan, Newkom Ranch, and Kells East Ranch

A portion (i.e., lots 27a-h, 28c, 33-39, and portions of lots 24, 25, 26, 28, 40a, 45a 46a, 47, 48, 49) of the BSMP project site would be located within 2 miles of Yuba County and Sutter County airports. The ALUC reviewed the BSMP project site and compared the project footprint with the CLUP for Sutter County Airport. The ALUC determined that the BSMP project site is outside of the noise and safety zones of the CLUP and, therefore, the proposed BSMP would be compatible with the CLUP.^{20-21,22} The Federal Aviation Regulation Part 77 for Airspace Protection Surfaces applies to runways more than 3,200 feet long and thus does not apply to the Sutter County Airport whose longest runway is 3,062 feet long. Therefore, **no impact** would occur.

The proposed BSMP was evaluated with the Yuba County Airport Land Use Compatibility Plan and the BSMP project site was determined to be outside of the noise impact and safety zones. Eastern portions of the BSMP project site are located within the Airspace Protection Surfaces zones for the FAA Height Notification and Airspace Compatibility Areas. The eastern portion of the proposed BSMP would be required to comply with building height restrictions ranging from 212 to 412 feet per Federal Aviation Regulation Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace and Policy 1.4.3(b) as described in Section 3.10, Land Use and Planning.²³ Therefore, this impact would be **less than significant**.

The proposed BSMP would include the use of detention ponds as a drainage feature for flood management purposes for Kells East Ranch and Newkom Ranch. They would be located adjacent to both banks of Glisizer Slough and adjacent to both sides of SR 99. The ponds would fill during wet weather events, but would not stay filled for prolonged periods of time nor would any pond be within 2 miles of either airport. Therefore, this impact would be **less than significant**.

The proposed BSMP would be compatible with the Sutter County Airport CLUP and Yuba County Airport Compatibility Plan and, therefore, this impact would be **less than significant**.

Mitigation Measure

None required.

²⁰ Chew, Greg, Sacramento Area Council of Governments/Airport Land Use Commission, Senior Planner, personal communication with Edwin Palmeri. January 31, 2017.

²¹ Airport Land Use Commission. 1994. *Sutter County Airport Comprehensive Land Use Plan*. April 1994.

²² Airport Land Use Commission. 2003. *Sutter County Airport Comprehensive Land Use Plan*. September 2003.

²³ Airport Land Use Commission. 2011. *Yuba County Airport Land Use Compatibility Plan*. Adopted March 17, 2011.

Impact 3.8-7: Construction of new development pursuant to the proposed BSMP could impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Full Master Plan, Newkom Ranch and Kells East Ranch

Construction

SR 99 could be used in the event of an emergency or disaster and runs through the BSMP project site. Development pursuant to the proposed BSMP could interfere with emergency response services or an emergency evacuation if construction activities involve the complete or partial closure of roadways, otherwise restricted access for emergency response vehicles, or restrict access to critical facilities such as hospitals or fire stations. Construction within the BSMP project site could result in temporary lane closures on certain roads, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services. This is considered a **potentially significant** impact.

Mitigation Measure

Mitigation Measure 3.8-7: Traffic Control Plan (BSMP/NR/KER)

Prior to construction, the applicant for an individual project, or its construction contractor(s), shall prepare and implement a traffic control plan to minimize traffic impacts on all roadways at and near the work site affected by construction activities. The traffic control plan shall reduce potential traffic safety hazards and ensure adequate access for emergency responders. The applicant and construction contractor(s) shall coordinate preparation and implementation of this traffic control plan with the City of Yuba City Fire Department and Police Department, the CHP, and/or CAL FIRE, as appropriate. To the extent applicable, this traffic control plan shall conform to the 2014 California Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control).²⁴ The traffic control plan shall provide, but not be limited to, the following elements:

- Circulation and detour plans to minimize impacts on local road circulation during road and lane closures. Flaggers and/or signage shall be used to guide vehicles through and/or around the construction zone;
- Identifying truck routes designated by Sutter County, where applicable. Haul routes that minimize truck traffic on local roadways shall be utilized to the extent possible;
- Sufficient staging areas for trucks accessing construction zones to minimize the disruption of access to adjacent existing public rights-of-way;
- Controlling and monitoring construction vehicle movement through the enforcement of standard construction specifications by onsite inspectors;
- Scheduling truck trips outside the peak morning and evening commute hours to the extent possible;
- Limiting the duration of road and lane closures to the extent possible;

²⁴ California Department of Transportation. 2014. *California Manual on Uniform Traffic Control Devices: 2014 Edition*. November 7, 2014.

- Storing all equipment and materials in designated contractor staging areas on or adjacent to the worksite, such that traffic obstruction is minimized;
- Implementing roadside safety protocols. Advance “Road Work Ahead” warning and speed control signs (including those informing drivers of State legislated double fines for speed infractions in a construction zone) shall be posted to reduce speeds and provide safe traffic flow through the work zone;
- Coordinating construction administrators of police and fire stations (including all fire protection agencies). Operators shall be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures, where applicable; and
- Repairing and restoring affected roadway rights-of way to their original condition after construction is completed.

Significance after Mitigation: With the implementation of **Mitigation Measure 3.8-7**, the risk of interference with emergency vehicle access during the construction within the BSMP project site would be minimized by requiring all construction work to adhere to the aforementioned traffic control plan. The specified elements outlined in this mitigation measure would ensure that construction within the BSMP project site would not impose a significant amount of interference or impairment with emergency response mechanisms or emergency vehicle access. This mitigation measure would additionally ensure that the traffic control plan would be in conformance with the 2014 California MUTCD, Part 6 (Temporary Traffic Control). Based on these actions and requirements listed above, this impact would be reduced to a **less-than-significant** level.

Operation

For a discussion of operational carrying capacity of roads within and nearby the BSMP and any potential need for road re-sizing, please refer to Section 3.14, Transportation and Traffic.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the proposed BSMP in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts.

As previously discussed, the proposed project would have no impact with respect to being located within 2 miles of a private airstrip or wildland fire hazards. Accordingly, the proposed project could not contribute to cumulative impacts related to these topics and are not discussed further.

The geographic area affected by the proposed BSMP and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. The geographic scope of analysis for cumulative hazardous materials impacts encompasses and is limited to the BSMP project site. Impacts relative to hazardous materials are generally site-specific and depend on the nature and extent of the hazardous materials release, and existing and future soil and groundwater conditions. For example, hazardous materials incidents tend to be limited to a smaller more localized area surrounding the immediate location and extent of the release, and could only be

cumulative if two or more hazardous materials releases spatially overlapped. Consequently, the following impacts would not be cumulative and are not discussed further:

- **Impact 3.8-2:** Construction activities related to development pursuant to the proposed BSMP could encounter hazardous materials from unknown hazardous materials release sites resulting in exposure to construction workers, nearby residents and other members of the public, and nearby environmental resources.
- **Impact 3.8-3:** Demolition or renovation activities related to implementation of the proposed BSMP could expose people to asbestos-containing materials, lead-containing paint, PCBs, or other hazardous building materials.
- **Impact 3.8-5:** The proposed project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.

The timeframe during which proposed BSMP projects could contribute to cumulative hazards and hazardous materials effects includes the construction and operations phases. For the proposed BSMP, the operations phase is permanent. However, similar to the geographic limitations discussed above, it should be noted that impacts relative to hazardous materials are generally time-specific. Hazardous materials events could only be cumulative if two or more hazardous materials releases occurred at the same time, as well as overlapping the same location.

There are a number of cumulative projects occurring either within the same general area of the BSMP or within the same timeframe. The substantial cumulative projects (i.e., involving development of multiple lots or 1.0 acre or much in area) are primarily residential or other master planned developments, such as BSMP. These projects would be expected to adhere to the same regulatory requirements as the BSMP, which would also ameliorate potentially significant impacts. As these regulatory requirements are developed to address impacts in a cumulative sense (i.e., region-wide), it is reasonably expected that cumulative impacts would be less than significant. A discussion of applicable potential cumulatively considerable impacts relative to hazards and hazardous materials follows.

Impact 3.8-8: Implementation of the proposed project, in combination with other cumulative development, could contribute to cumulative impacts by creating a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.

As discussed in Impact 3.8-1, construction and operation of development pursuant to the proposed BSMP could involve the limited transport, use, and disposal of hazardous materials during both the construction and operation phases. Cumulative impacts could only occur if one or more other cumulative projects were to routinely transport, use, dispose, or accidentally release hazardous materials.

USDOT, Caltrans, and the CHP oversee the regulation of the roadways used for the transport of hazardous materials, and DTSC regulates the use of hazardous materials. Construction activities would be required to comply with numerous hazardous materials and stormwater regulations

designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies.

Contractors would be required to prepare and implement HMBPs that would require that hazardous materials used for construction would be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code would also require measures for the safe storage and handling of hazardous materials.

Contractors would also be required to prepare a SWPPP for construction activities according to the NPDES General Construction Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff.

In the event of a hazardous materials spill within the BSMP area, the Yuba City Police Department and Yuba City Fire Department/Yuba-Sutter HazMat Response Team would be sent to the scene to respond and assess the situation. If a spill occurs on the SR 99, CHP would call upon these resources in identifying, isolating, and if necessary, evacuating the area. In cases of hazardous materials spills/incidents occurring within Sutter County, the Sutter County Environmental Health Division would be contacted and in some cases, would be consulted on containment and mitigation.²⁵

Cumulative projects could involve the limited transport, use, and disposal of hazardous materials during both the construction and operation phases, but all BSMP projects would be required to adhere to the same regulatory requirements for the safe transport, use, and disposal of hazardous materials during both the construction and operation periods, and subsequently obtain the proper permitting from the appropriate regulatory agencies. Thus, the impacts would not be cumulatively considerable (**less-than-significant** cumulative impact).

Mitigation Measure

None required.

Impact 3.8-9: Implementation of the proposed BSMP, in combination with other cumulative development, could contribute to cumulative impacts by emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

As discussed above in the Regulatory Setting and Impact 3.8-4, construction and operations activities would likely require the use of limited quantities of hazardous materials such as fuels,

²⁵ Rodriguez, Arnaldo, City of Yuba City Development Services, email to H. Ross, Environmental Science Associates, September 22, 2017.

oils, and lubricants for construction and operations equipment; paints and thinners; and solvents and cleaners, and other chemicals. These materials would be transported to and from the BSMP project site near schools. The improper handling and transport of hazardous materials could result in accidental release of hazardous materials, thereby exposing school occupants to hazardous materials. In the event that two or more emissions incidents occur at the same time and within one quarter-mile of a school, the emissions could be cumulatively considerable.

As previously discussed in Impact 3.8-1, construction activities would be required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including nearby schools.

Contractors would be required to prepare and implement HMBPs that would require that hazardous materials used for construction would be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code would also require measures for the safe storage and handling of hazardous materials. Construction contractors would be required to prepare a SWPPP for construction activities according to the NPDES General Construction Permit requirements, which would include spill prevention measures; equipment inspections; equipment and fuel storage requirements; protocols for responding immediately to spills; and BMPs for controlling site runoff. The transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. In the event of a spill that releases hazardous materials in the vicinity of a school, the Region III Hazardous Materials Response Team would respond and implement spill control and cleanup.

Similar to construction and as previously discussed in Impact 3.8-1, operating commercial, industrial, and agricultural businesses that use hazardous materials would be required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of operations-related fuels or other hazardous materials near schools. Businesses that would store hazardous materials and/or waste at its business site would be required to prepare and implement an HMBP, which would require all hazardous materials to be stored and handled according to manufacturer's directions and local, state and federal regulations. The California Fire Code would also require measures for the safe storage and handling of hazardous materials. The transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. Finally, and as previously discussed, in the event of a spill that releases hazardous materials in the vicinity of a school, the Region III Hazardous Materials Response Team would respond and implement spill control and cleanup.

All cumulative projects and operations would be required to comply with the same regulations. Because numerous laws and regulations govern the transportation and management of hazardous materials to reduce the potential hazards, this impact would not be cumulatively considerable (**less-than-significant** cumulative impact).

Mitigation Measure

None required.

Impact 3.8-10: Implementation of the proposed BSMP, in combination with other cumulative development, could contribute to cumulative impacts by being located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and could result in a safety hazard for people residing or working in the project area.

As discussed in Impact 3.8-6, portions of the BSMP are located within 2 miles of Yuba County and Sutter County airports, but are outside of noise impact and safety zones for both airports. The proposed use of detention ponds for Kells East Ranch and Newkom Ranch would not serve as a bird attractant that could interfere with airspace navigation. While, a portion of the BSMP area is within the Airspace Protection Compatibility areas for both airports, the BSMP and other cumulative projects would comply with the same aviation regulations such as building height restrictions as set forth by Federal Aviation Regulation Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace. Therefore, this would not be considered cumulatively considerable (**less-than-significant** cumulative impact).

Mitigation Measure

None required.

Impact 3.8-11: Implementation of the proposed BSMP, in combination with other cumulative development, could contribute to cumulative impacts by impairing with implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.

Construction

Construction of the BSMP would generate additional traffic and could cause limited road closures in the BSMP project site. Cumulative projects in the adjacent vicinity of the BSMP project site could also require temporary road closures that would restrict the movement of vehicular traffic. The duration and extent of closures would depend on the duration of construction, number of trucks, truck routing, and a variety of other construction-related activities that are unknown at this time. While construction schedules would ensure that short-term transportation impediments are temporary and minimal in nature, with appropriate detouring and alternatives for site access to be in place throughout the construction period, emergency vehicle access could still be precluded in certain portions of the BSMP project site and cumulative projects. The limitation of emergency vehicle access is considered a significant cumulative impact. Due to the size of the BSMP, the potential obstruction of emergency vehicle access near the BSMP project site would be cumulatively considerable (**potentially significant** impact).

Mitigation Measure

Mitigation Measure 3.8-11: Traffic Control Plan (BSMP/NR/KER)

Implement Mitigation Measure 3.8-7.

Significance after Mitigation: With the implementation of **Mitigation Measure 3.8-7**, the risk of interference with emergency vehicle access during the construction within the BSMP project site would be minimized by requiring all construction work to adhere to the aforementioned traffic control plan. The specified elements outlined in this mitigation measure would ensure that construction within the BSMP project site would minimize interference or impairment with emergency response mechanisms or emergency vehicle access, thereby ensuring safe access in concert with other cumulative projects in or near the BSMP project site. This mitigation measure would additionally ensure that all areas of the BSMP project site, during construction, would be in conformance with the 2014 California MUTCD, Part 6 (Temporary Traffic Control). See Section 3.14, Transportation and Traffic, for specific transportation and circulation issues relating to BSMP implementation, and a traffic control measures for the construction and operation. Based on these actions and requirements listed above, the BSMP's contribution to the impact would be mitigated to a less-than-significant level and would not be cumulatively considerable (**less-than-significant** impact).

Operation

For a discussion of operational carrying capacity of roads within and nearby the BSMP and any potential need for road re-sizing as a result of the BSMP and cumulative projects, please refer to Section 3.15, Transportation and Traffic.

3.9 Hydrology and Water Quality

This section of the EIR evaluates potential environmental effects related to hydrology, drainage, and water quality that would result with implementation of the BSMP, as well as project-specific impacts related to the Newkom Ranch (Phase 1) and Kells East Ranch (Phase 2) components. The analysis addresses surface water, groundwater, flooding, stormwater, and water quality.

Several comment letters received in response to the notice of preparation address hydrology, drainage, and/or water quality. The Central Valley Regional Water Quality Control Board (CVRWQCB) commented that the project would require coverage under the following permits: the Construction Stormwater General Permit; Phase II Small Municipal Separate Storm Sewer System (MS4) Permit; the Industrial Stormwater General Permit; a Clean Water Act (CWA) Section 404 Permit; a CWA Section 401 Permit—Water Quality Certification; a Waste Discharge Requirement Permit;¹ Dewatering Permit; Irrigated Lands Regulatory Program; a Low or Limited Threat General National Pollutant Discharge Elimination System (NPDES) Permit. The Central Valley Flood Protection Board (CVFPB) submitted a letter stating that the project is located within their jurisdiction and requires a permit related to potential flooding impacts to the Feather River. Local residents expressed concern over adequate concern for sufficient drainage following implementation of the BSMP. Each of the issues raised in these comment letters is addressed in this section to the extent applicable under CEQA.

The analysis included in this section was developed based on anticipated construction and operational characteristics of the BSMP, and data provided in the City of Yuba City General Plan,² Yuba City General Plan Final Environmental Impact Report (SCH No. 2001072105),³ Sutter County General Plan Technical Background Report, California Department of Water Resources Groundwater Bulletin 118,⁴ the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin,⁵ the Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis,⁶ and Federal Emergency Management Agency flood maps.

¹ This would apply only if a jurisdictional wetland delineation report determines that the site only contains non-jurisdictional waters. If so, then the project would be required to obtain a Waste Discharge Requirement permit from the Regional Water Quality Control Board.

² City of Yuba City, 2004. *City of Yuba General Plan*. Adopted April 8, 2004.

³ City of Yuba City, 2004. *Yuba City General Plan Final Environmental Impact Report (SCH No. 2001072105)*. February 2004.

⁴ California Department of Water Resources, 2006. *California's Groundwater Bulletin 118*, Sacramento Valley Groundwater Basin, Sutter Subbasin, January 2006.

⁵ California Regional Water Quality Control Board Central Valley Region, 2016. *The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region*, Fourth Edition. Revised April 2016.

⁶ MHM Incorporated, 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*, October 14, 2016.

3.9.1 Environmental Setting

The BSMP site is located immediately south of the City of Yuba City, in unincorporated Sutter County. Sutter County is located north of Sacramento on the eastern side of California's Central Valley. The topography of the area is generally flat except for the Sutter Buttes approximately 10 miles to the northwest. Sutter County has a Mediterranean climate generally characterized by hot, dry summers, with relatively moderate, wet winters.

Surface Water

The BSMP site lies within the Sacramento River Basin. The basin covers a 27,210 square mile area that includes all watersheds tributary to the Sacramento River. The Sacramento River Basin is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Sacramento–San Joaquin Delta (Delta) to the southeast. The Sacramento River Basin is the largest river basin in California, with an annual outflow, on average, of approximately 22 million acre-feet. The Sacramento River is approximately 327 miles long, and its major tributaries are the Pit and McCloud Rivers, which join the Sacramento River from the north, and the Feather and American Rivers, which are tributaries from the east. The Yuba River is a tributary to the Feather River. Numerous additional tributary streams and creeks flow from the east and west. River flows are regulated by Shasta Dam and several dams on the major tributaries, including Oroville Dam on the Feather River and Folsom Dam on the American River, which provide power generation, flood control, water supply, recreation, fisheries, and wildlife management.⁷

Within the Sacramento River Basin, the BSMP site lies within the Lower Feather River watershed which begins downstream of Lake Oroville and continues south until the Feather River enters the Sacramento River encompassing approximately 800 square miles. The dam creates Lake Oroville, generates electricity, and provides drinking and irrigation water for central and southern California. The dam, lake, and other facilities are owned and operated by the Department of Water Resources (DWR) and are part of the State Water Project. There are approximately 190 miles of major creeks and rivers, 695 miles of minor streams, and 1,266 miles of agricultural water delivery canals in the Lower Feather River Watershed. Hydrology also is influenced by operation of the Sutter Bypass, which brings Sacramento River water through Butte Slough and into the Lower Feather River. This system is designed, in part, to relieve flood flows in the Sacramento River. The USGS gaging station at Oroville shows daily flows in the Lower Feather River (post–Oroville Dam) are held at about 300 cubic feet per second (cfs). Periodic high flow releases from Lake Oroville are in the 50,000 to 100,000 cfs range with an all-time high of 150,000 cfs in 1986.⁸ In February 2017, damage occurred to the main spillway which led to erosion of the adjacent hillside. Water releases were then slowed which resulted in water

⁷ California Regional Water Quality Control Board Central Valley Region, 2016. *The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region*, Fourth Edition. Revised April 2016.

⁸ Sacramento River Watershed Program, 2010. *A Roadmap to Watershed Management; Lower Feather River Watershed*. October 2010.

flowing over the emergency spillway and erosion downstream of the emergency spillway. In addition, due to high inflows to Lake Oroville, the main spillway continued to be used which resulted in additional damage to the hillside.

The Feather River is the main surface hydrologic feature adjacent to the eastern portion of the BSMP site. It forms the eastern boundary of the City of Yuba City, along with the confluence with the Yuba River, and eventually joins the Sacramento River approximately 30 miles south of the BSMP site.

In addition, the main drainage feature within the project site is Gilsizer Slough that runs north to south in the western portion of the BSMP site. This slough drains south into the State Drain and then into the Sutter Bypass.

Groundwater

The BSMP site is located within the Sutter Subbasin (Basin Number 5-21.62) in the eastern central portion of the Sacramento Valley Groundwater Basin, as delineated in DWR Bulletin 118 (2006 Update).⁹ It is bounded on the north by the confluence of Butte Creek and the Sacramento River and Sutter Buttes, on the west by the Sacramento River, on the south by the confluence of the Sacramento River and the Sutter Bypass, and on the east by the Feather River.

The geologic formations of the Sutter Subbasin include pre-Cretaceous metamorphic and igneous rocks of the Sierra Nevada block, which extends beneath the valley fill overlain principally by Tertiary sedimentary formations derived from these and other rocks which are exposed in the Sierra Nevada to the east. The sedimentary rocks are of both marine and continental origin and are frequently interbedded with tuff-breccias. Volcanic rocks are also represented in the area in and around Sutter Buttes, which are erosional remnants of an extinct Pliocene volcano. Only the sedimentary rocks can be considered as being water bearing to any considerable degree.

Groundwater within the Sutter Subbasin is used for water supplies for agricultural irrigation and domestic drinking water.¹⁰ The groundwater level trends are reported to be relatively constant within the Sutter Subbasin and most groundwater levels in the subbasin tend to be within about 10 feet below the ground surface; however, groundwater levels in the project vicinity are between 15 to 20 feet below the ground surface.¹¹ DWR indicates stream percolation, deep percolation of rainwater, and percolation of irrigation water are the principal sources of groundwater recharge in the Sacramento Valley.¹²

⁹ California Department of Water Resources, 2006. *California's Groundwater Bulletin 118*, Sacramento Valley Groundwater Basin, Sutter Subbasin. January 2006.

¹⁰ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February 2008.

¹¹ California Department of Water Resources, 2017. *Groundwater Information Center Interactive Map Application*, Updated June 2017. Available: <https://gis.water.ca.gov/app/gicima/>. Accessed July 23, 2017.

¹² California Department of Water Resources, 2006. *California's Groundwater Bulletin 118*, Sacramento Valley Groundwater Basin, Sutter Subbasin. January 2006.

Major surface water sources are the primary sources of groundwater recharge within Sutter County. Other sources of groundwater recharge are from percolation of rainwater, percolation of irrigation water, and subsurface inflow from adjacent groundwater.¹³

Water Quality

Surface Water

Water quality in the Lower Feather River Watershed is heavily influenced by agricultural and municipal land and water use in the watershed.¹⁴ Sutter County is dominated by agricultural production of numerous fruits, vegetables, and row crops. Crops produced in the County include rice, hay, safflower, almonds, walnuts, plums, and peaches. Farmers in the county use a large variety of herbicides and pesticides during the growing season to control a variety of plant diseases and pests. In addition, farmers use fertilizers to ensure successful crop production. Use of these compounds results in residual concentrations of herbicides, pesticides, and fertilizers entering stormwater runoff or irrigation return water ditches. Some stormwater runoff and return water from agricultural irrigation discharge into local streams and rivers affecting water quality. The SWRCB has identified agricultural runoff as a major factor affecting water quality in local drainages and the Sacramento, Feather, and Bear rivers.¹⁵

Constituents found in urban runoff vary as a result of differences in rainfall intensity and occurrence, geographic features, the land use of a site, as well as vehicle traffic and percent of impervious surface. In the Sutter County region, there is a natural weather pattern of a long dry period from May to October. During this seasonal dry period, pollutants contributed by vehicle exhaust, vehicle and tire wear, crankcase drippings, spills, and atmospheric fallout accumulate within the urban watershed. Precipitation during the early portion of the wet season (November to April) washes these pollutants into the stormwater runoff, which can result in elevated pollutant concentrations in the initial wet weather runoff. This initial runoff with peak pollutant levels is referred to as the "first flush" of a storm event or events. Concentrations of heavy metals present in dry weather runoff (e.g., runoff during the dry season is generated by landscape irrigation, street washing, etc.) are typically lower than concentrations measured in wet weather runoff (runoff generated during the rainy season primarily by precipitation).¹⁶

The Lower Feather River is listed on the Clean Water Act Section 303(d) list of impaired water bodies for chlorpyrifos, Group A pesticides, mercury, poly-chlorinated biphenyls (PCBs), unknown toxicity. Constituents of concern for groundwater are total dissolved solids, nitrate, and several other individual chemical constituents. Surface and groundwater quality is a concern for both fisheries and agricultural supply use. In October 2003, the CVRWQCB established total maximum daily load (TMDL) regulations for diazinon in the Lower Feather River. That

¹³ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February 2008.

¹⁴ Sacramento River Watershed Program, 2010. *A Roadmap to Watershed Management; Lower Feather River Watershed*. October 2010.

¹⁵ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February 2008.

¹⁶ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February 2008.

document recommended three strategies for reducing diazinon loading: (1) reducing diazinon use; (2) reducing surface water runoff from sprayed orchards; and (3) delaying and/or filtering orchard runoff containing diazinon.¹⁷ Recent monitoring (2006 and 2007) indicated diazinon loading to the Lower Feather has been reduced significantly and in 2006, the CVRWQCB staff concluded diazinon should be removed from the 303(d) list because applicable water quality standards for the pollutant were not being exceeded.¹⁸

The Feather River, which would receive stormwater runoff from the BSMP site, has designated beneficial uses that include: agricultural supply, municipal supply for Yuba City, contact and noncontact recreation, cold water and warm water fish habitat, fish migration and spawning, and wildlife habitat.¹⁹

Groundwater

Groundwater quality in Sutter County is monitored by DWR, the State Department of Health Services (DHS), and Sutter County. The primary groundwater chemistry in the subbasin is calcium, magnesium, sodium, chloride, sulfate and bicarbonate, which may occur in any combination. DWR maintains data for 38 water quality wells in the Sutter Subbasin. Data collected from these wells indicate a total dissolved solids range of 133 to 1,660 milligrams per liter. Groundwater containing calcium magnesium bicarbonate or magnesium calcium bicarbonate can be found in the northwest portion of the subbasin.²⁰ Recent groundwater quality data collected indicates some wells drilled to various depths contain chemical elements and compounds in amounts that exceed drinking water quality safety and aesthetic standards.²¹

Groundwater resources in some portions of the County have naturally occurring levels of minerals.²² Groundwater quality is influenced by the amount of contaminants that exist in the ground and are applied to the ground. Steps also must be taken to decrease the ability of wells and other excavations to transmit contaminants from upper regions of the ground to lower regions that provide well water.²³ No major areas of groundwater contamination have been reported in Sutter County or in the BSMP site.²⁴

¹⁷ Sacramento River Watershed Program, 2010. *A Roadmap to Watershed Management; Lower Feather River Watershed*. October 2010.

¹⁸ California Regional Water Quality Control Board Central Valley Region, *Final California 2010 Integrated Report (303(d) List/305(b) Report)*; Supporting Information. Available: www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/01204.shtml#18323. Accessed April 13, 2017.

¹⁹ California Regional Water Quality Control Board Central Valley Region, 2016. *The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region*, Fourth Edition. Revised April 2016.

²⁰ California Department of Water Resources, 2006. *California's Groundwater Bulletin 118*, Sacramento Valley Groundwater Basin, Sutter Subbasin. January 2006.

²¹ California Department of Water Resources, 2006. *California's Groundwater Bulletin 118*, Sacramento Valley Groundwater Basin, Sutter Subbasin. January 2006.

²² California Department of Water Resources, 2006. *California's Groundwater Bulletin 118*, Sacramento Valley Groundwater Basin, Sutter Subbasin. January 2006.

²³ California Department of Water Resources, 2006. *California's Groundwater Bulletin 118*, Sacramento Valley Groundwater Basin, Sutter Subbasin. January 2006.

²⁴ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February 2008.

Floodplain Management

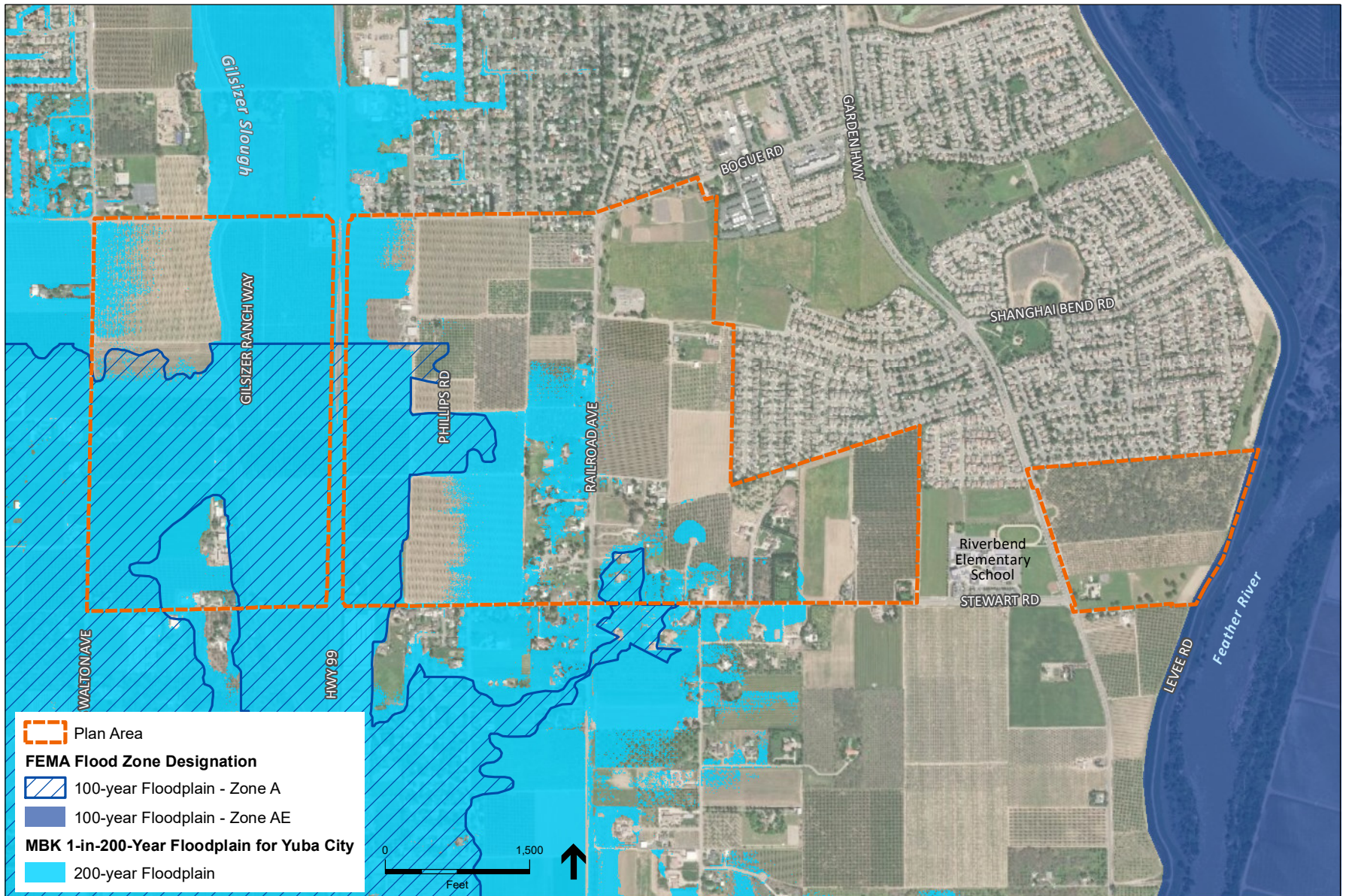
The BSMP site is located near the Feather River. The proposed BSMP would include development adjacent to the Feather River as part of the Final Phase. Other areas of the BSMP site would be further away such as Newkom Ranch (approximately 1.3 miles west of the Feather River) and Kells East (approximately 1.8 miles west of the Feather River). Flood management in Sutter County is provided by approximately 280 miles of levees, reservoirs, and bypasses; approximately 70 miles of which protect Yuba City and the BSMP site.

The CVFPB owns and oversees all levees developed as part of the federally funded Sacramento River Flood Control Project (SRFCP). The U.S. Army Corps of Engineers (Corps) shares regulatory oversight with the CVFPB. State Maintenance Areas and local maintaining agencies are responsible for maintaining the levees in the SRFCP. The Sutter Bypass is a major outfall for urban storm drainage from Yuba City and is located approximately 5 miles west of Yuba City.

The Federal Emergency Management Agency (FEMA) requires that levees be constructed and maintained to a height and strength that would withstand a 100-year flood, which is an event that has a one percent chance of happening in any one year. FEMA is responsible for publishing maps that show where flood hazards exist. FEMA produces maps that designate areas by risk factors such as A, AE, AR, and X. “A” represents the highest risk. Insurance companies use these designations to establish flood insurance premium rates. The federal government is the insurance carrier and sets the rates for the premiums, allowing for a small commission to private brokers. In July of 2015 FEMA issued an updated Flood Insurance Study (FIS) for Sutter County (Unincorporated Areas). Because of current design and construction progress on Sutter County levee systems the County does not anticipate any more FEMA remapping efforts within the next three years (i.e., by 2020). The FIS reflected that the levees in some areas of Sutter County have not been demonstrated by the community or levee owners to meet the requirements of Section 65.10 of the National Flood Insurance Program (NFIP) regulations in 44 CFR as it relates to the levees’ ability to provide one (1) percent annual chance flood protection. The BSMP site is not located within these areas.²⁵

Portions of BSMP site are within the 100-year floodplain Zone A. Zone A includes areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply. Both the Kells East and Newkom Ranch project sites include development within Zone A designated areas. See **Figure 3.9-1** for the BSMP site and designated flood zones.

²⁵ Federal Emergency Management Agency, 2015. *Flood Insurance Study—Sutter County, California (Unincorporated Areas)*. Revised June 16, 2015.



SOURCE: ESRI, 2015; City of Yuba City, 2016; FEMA, 2018; MBK, 2015; ESA, 2019

Bogue Stewart Master Plan . 140720

Figure 3.9-1
Floodplains

Due to the aging levee system and floods in other areas of the country involving levee breaks, increased federal standards have been established to ensure the stability of levees during storm and high water events. Needed improvements along the Feather River are being financed Sutter Butte Flood Control Agency (SBFCA), a joint powers authority made of the levee maintaining agencies and cities within the Sutter Basin (both Sutter and Butte Counties), including Yuba City. One of the projects undertaken by SBFCA is the Feather River West Levee Project, and when completed, will provide 200- year flood protection to Yuba City. Construction began in 2013 Levee repairs and will be completed in two separate phases. Phase I, the Feather River West Levee Project, includes work from Thermalito Afterbay to Starr Bend Road, about 6.4 miles south of Yuba City. Phase I covers approximately 37 miles of levee rehabilitation, of which 33 of the miles had been completed as of August 2018.²⁶ As of the latest publicly-available information, all of Phase I construction is scheduled to be completed such that an ULOP certification is expected in 2020.²⁷

In addition to levee failure or overtopping of the levees, flooding can occur as a result of a dam failure. There is currently only one dam located within Sutter County that is under the jurisdiction of the DWR Division of Safety of Dams (DSOD). The Steidlmayer #3 Dam is located in the northwest interior of the Sutter Buttes. It is relatively small in size and any failure of this dam would result in minimal property damage.²⁸ There are, however, 10 larger dams outside the county, all under the jurisdiction of the DSOD, that have the potential to cause significant flooding in Sutter County if any were to fail. These dams are operated under a variety of goals and regulations including flood control, water supply, fisheries, and other beneficial uses.

The dams closest to the BSMP site are Englebright Dam on the Yuba River (approximately 20 miles northwest) and the Thermalito Afterbay Dam on the Feather River (approximately 25 miles north). Five of the larger dams—Shasta, Oroville, Englebright Dam, New Bullards Bar, and Camp Far West—are major dams of concern. Although these dams are further from the BSMP site, according to the draft Sutter County Local Hazard Mitigation Plan Update,²⁹ a catastrophic failure of any of these five dams could result in significant impacts in and along the river bottoms and up the banks several hundred feet above normal river levels at a point from the dams themselves down river to near the ocean where the rivers widen.

Stormwater drainage throughout much of Sutter County is provided by piped storm drain conveyance systems (in the cities of Yuba City and Live Oak) and open channel systems. Stormwater flowing in these systems is either pumped or gravity drains into the Sacramento River, the Sutter Bypass, or the Feather River. These stormwater systems are owned and operated

²⁶ Sutter Butte Flood Control Agency, 2018. *Urban Level of Protection Adequate Progress Report*. August 8, 2018.

²⁷ Sutter Butte Flood Control Agency, 2018 (August 8). *Urban Level of Protection 2019 Annual Adequate Progress Report Update*.

²⁸ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February 2008.

²⁹ Sutter County, 2013. *Sutter County Local Hazard Mitigation Plan*, August 2013.

by a variety of agencies including reclamation districts, cities, Sutter County, and the State of California.³⁰

3.9.2 Regulatory Framework

This section provides a discussion of applicable federal, State, and local regulations. The BSMP site is under the jurisdiction of Sutter County and their plans and ordinances, but would also be analyzed under a proposed amendment to the City of Yuba City Sphere of Influence (SOI). A brief summary of each applicable regulation is provided.

Federal

Clean Water Act

The CWA established the basic structure for regulating discharges of pollutants into “waters of the United States.” The act specifies a variety of regulatory and administrative tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff.

Clean Water Act Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point-source dischargers (municipalities and industries). Section 303(d) requires that the states develop a TMDL for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL can also act as a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. The TMDL prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows the linkage between loading reductions and the attainment of water quality objectives. The U.S. Environmental Protection Agency (USEPA) must either approve a TMDL prepared by the state or, if it disapproves the state’s TMDL, issue its own. NPDES permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. After implementation of the TMDL, it is anticipated that the problems that led to placement of a given pollutant on the Section 303(d) list would be remediated. In California, preparation and management of the Section 303(d) list are administered by the RWQCBs.

California’s 303(d) list is updated periodically to reflect changing conditions in the State’s waterways. In November 2010, the USEPA approved the most recent update to California’s Section 303(d) list of impaired waters requiring TMDLs (2008–2010). **Table 3.9-1** shows the current (2010) 303(d) list of impaired waters within the BSMP site.

³⁰ Sutter County, 2008. *Sutter County General Plan Update Technical Background Report*. February 2008.

**TABLE 3.9-1
 303(d) LIST OF IMPAIRED SURFACE WATER BODIES IN THE VICINITY OF THE BSMP SITE**

River	River Reach	Impairments
Feather River, Lower	Lake Oroville Dam to Confluence with Sacramento River	Chlorpyrifos, Diazinon, Group A Pesticides, Mercury, PCBs, Unknown Toxicity
Gilsizer Slough	Yuba City to downstream of Township Road, Sutter County	Diazinon, Oxyfluorfen, pH,

SOURCE: State Water Resources Control Board, 2010. 2010 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report). Available: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml. Accessed April 10, 2017.

National Pollutant Discharge Elimination System

The NPDES permit system was established in the CWA to regulate municipal and industrial point discharges to surface waters of the U.S. Each NPDES permit for point discharges contains limits on allowable concentrations of pollutants contained in discharges. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the USEPA must consider in setting effluent limits for priority pollutants. The CWA was amended in 1987 to require NPDES permits for non-point source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the “maximum extent practicable” through the use of structural and non-structural Best Management Practices (BMPs). BMPs can include the development and implementation of various practices including educational measures (workshops informing public of what impacts results when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures, and structural measures (filter strips, grass swales and detention ponds).

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, as revised in December 2007, provides for protection of the quality of all waters of the State of California for use and enjoyment by the people of California. It provides that all activities that may affect the quality of waters of the State shall be regulated to obtain the highest water quality that is reasonable, considering all present and future demands being on those waters. It further establishes provisions for a statewide program for the control of water quality, recognizing that waters of the state are increasingly influenced by inter-basin water development projects and other statewide considerations, and that factors such as precipitation, topography, population, recreation, agriculture, industry, and economic development vary regionally within the State. Within this framework, the Porter-Cologne Water Quality Control Act authorizes the State Water Resources Control Board (SWRCB) and regional boards to oversee responsibility for the coordination and control of water quality within California, including those responsibilities under the CWA that have been delegated to the State.

Construction

The SWRCB adopted a statewide *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ), commonly referred to as the Construction General Permit. Every construction project that disturbs one or more acres of land surface or that are part of a common plan of development or sale that disturbs more than one acre of land surface would require coverage under the Construction General Permit.

Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation. Further details on the Construction General Permit are provided in Section 3.6, Geology, Soils, Mineral Resources, and Paleontological Resources. Individual projects within the BSMP site would be required to implement the construction permit requirements.

Post-Construction

Pursuant to the CWA Section 402(p), stormwater permits are required for discharges from MS4s serving a population of 100,000 or more. The Municipal Stormwater Program manages the Phase I Permit Program (serving municipalities over 100,000 people), the Phase II Permit Program (for municipalities less than 100,000), and the Statewide Stormwater Permit for the State of California Department of Transportation. The SWRCB and RWQCBs implement and enforce the Municipal Stormwater Program. The BSMP site is subject to the Phase II regulations as adopted in July 2013. Discharges from MS4s are regulated because of concern over the high concentration of pollutants found in those discharges. The MS4 permits require the discharger to develop and implement a Stormwater Management Plan/Program (SWMP) with the goal of reducing the discharge of pollutants. The Yuba City Phase II General Permit calls for slowing runoff and decreasing impervious surfaces for new development. The goal encourages the use of “Low Impact Development” (LID) and “Natural Drainage Systems” (NDS) concepts.

Water Quality Control Plan for the Sacramento River and San Joaquin River Basins

The Porter-Cologne Water Quality Control Act provides for the development and periodic review of water quality control plans (basin plans) that are prepared by the RWQCBs. Basin plans designate beneficial uses of California’s major rivers and groundwater basins, and establish narrative and numerical water quality objectives for those waters. The term “beneficial uses” represents the services and qualities of a water body (i.e., the reasons why the water body is considered valuable), while the water quality objectives represent the standards necessary to protect and support those beneficial uses. Basin plans are primarily implemented through the NPDES permitting system and by issuing waste discharge regulations to ensure that water quality objectives are met.

Basin plans provide the technical basis for determining waste discharge requirements and taking regulatory enforcement actions if deemed necessary. A basin plan has been adopted for the Sacramento and San Joaquin River Basin (“Basin Plan”), which encompasses the BSMP site.

The Basin Plan sets water quality objectives for the surface waters in its region for the following substances and parameters: ammonia, bacteria, biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, radioactivity, salinity, sediment, settleable material, suspended material, taste and odor, temperature, toxicity, turbidity, and pesticides. For groundwater, water quality objectives applicable to all groundwater have been set for bacteria, chemical constituents, radioactivity, taste, odors, and toxicity.

State law defines beneficial uses of California's waters that may be protected against quality degradation to include (and not be limited to) "...domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050(f)). Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning. The basin plans designate the beneficial uses and establish an implementation program to achieve the water quality objectives and protect the beneficial uses. The implementation program describes how the RWQCB will coordinate its regulatory and non-regulatory programs to address specific water quality concerns. Specific objectives for concentrations of chemical constituents are also applied to major water bodies based on their designated beneficial uses. In the vicinity of the BSMP site, beneficial uses for the Feather River are designated as shown in **Table 3.9-2**.

**TABLE 3.9-2
 DEFINED BENEFICIAL USES FOR THE LOWER FEATHER RIVER**

Beneficial Uses	Lower Feather River
Municipal and Domestic Supply	E
Irrigation	E
Stock Waters	—
Process	—
Service Supply	—
Contact Recreation	E
Noncontact Recreation	E
Warm Freshwater Habitat	E
Cold Freshwater Habitat	E
Warm-water Migration	E
Cold-water Migration	E
Warm-water Spawning	E
Wildlife Habitat	E
Navigation	—

NOTES:
 E = Existing Beneficial uses
 P = Potential Beneficial Uses

SOURCE: California Regional Water Quality Control Board Central Valley Region, 2016. *The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region; Fourth Edition*. Revised April 2016.

Central Valley Flood Protection Board

The CVFPB works in close partnership with local agencies, DWR, and USACE to reduce the risk of catastrophic flooding in California’s Central Valley. The geographic extent of CVFPB jurisdiction includes the Central Valley and all tributaries and distributaries of the Sacramento and San Joaquin rivers and the Tulare and Buena Vista basins. Under California law, any modification to the federal/State flood control system, encroachment, or project on or near the Sacramento and San Joaquin Rivers or their tributaries must be approved by the CVFPB. The CVFPB and its staff make sure that there are no negative hydraulic, geotechnical, or other structural impacts associated with the approved alterations, encroachments, or projects. Title 23, Waters, Division 1, Central Valley Flood Protection Board, of the California Code of Regulations contain the regulations enforced by the CVFPB.³¹ Within the BSMP site, the Feather River is within CVFPB jurisdiction, while Gilsizer Slough is not.

Central Valley Flood Management Program

The Central Valley Flood Management Planning (CVFMP) Program was launched by DWR in 2008 to guide, manage, and implement integrated flood management actions for the Sacramento and San Joaquin valleys as required by Senate Bill (SB) 5, which was passed in 2007 (California Water Code Sections 9600 to 9651). Currently, the CVFMP is supporting the planning and coordination of major implementation actions of the 2012 Central Valley Flood Protection Plan (CVFPP), including State-led Basin-wide Feasibility Studies, locally-led Regional Flood Management Planning, and the Central Valley Flood System Conservation Strategy. Each of these planning efforts will be incorporated into the next update of the CVFPP, which was released for public comment on December 30, 2016 and is scheduled for submittal to the CVFPB in mid-2017. Implementation of CVFPP actions have already begun and will be expanded after the 2017 Plan is adopted.

The passage of SB 5 effectively set a higher flood protection threshold for urban areas by requiring a minimum of 200-year protection by 2025.³² Accordingly, the City of Yuba City adopted municipal code revisions and general plan amendments to achieve 200-year protection in 2016. Beginning in July 2016, the City must also make an Urban Level of Flood Protection finding (ULOP finding) on projects when conditions outlined in the ULOP Criteria document are met.³³ The term urban level of flood protection is defined in California Government Code Section 65007(n):

“Urban level of flood protection” means the level of protection that is necessary to withstand flooding that has a 1-in-200 chance of occurring in any given year using criteria consistent with, or developed by, the Department of Water Resources. “Urban level of flood protection” shall not mean shallow flooding or flooding from local drainage that meets the criteria of the national Federal Emergency Management Agency standard of flood protection.

³¹ California Code of Regulations, Title 23, Waters, Division 1, Central Valley Flood Protection Board.

³² California Water Code, Central Valley Flood Protection, Sections 9600–9651.

³³ California Department of Water Resources, 2013. *Urban Level of Flood Protection Criteria*. November 2013.

DWR developed the ULOP Criteria. For affected land use decisions, cities and counties in specific locations within the Sacramento and San Joaquin river basins need to make a finding related to an urban level of flood protection based on substantial evidence in the record. The BSMP falls under this requirement.

Local

The BSMP site is currently in unincorporated Sutter County and under jurisdiction of its General Plan goals, policies, and ordinances. As a result of the implementation of the proposed BSMP, the BSMP site would be annexed into the City of Yuba City and development pursuant to the proposed BSMP must be found to be substantially compliant with the City's General Plan goals and policies, and with City ordinances. The following presents those goals, policies, and ordinances of both the Yuba City General Plan and the Sutter County General Plan that would address the proposed project's effects on hydrology, water quality, and water resources.

Yuba City Municipal Code

The Yuba City Municipal Code includes the following sections that pertain to the control of erosion and water quality of stormwater runoff during construction and post-construction:

1. Section 4-21.63—NPDES stormwater discharge general permits. This section of the municipal code mandates proof of compliance with the NPDES Construction General Permit conditions by providing the City with copies of an NOI and SWPPP approved by the RWQCB.
2. Section 4-21.64—Requirement to prevent, control, and reduce stormwater pollutants. This section of the municipal code mandates the implementation of BMPs for activities, operations, or facilities that could be potential sources of polluted runoff or discharge into the City's storm drain system or surface waters.
3. Section 4-21.65—Best management practices for construction and ground disturbing activities. This section of the municipal code requires an erosion and sediment control plan and implementation of BMPs during ground disturbing activities.
4. Section 4-21.66—Best management practices for new development and redevelopment. This section of the municipal code requires project applicants to implement post-construction BMPs to control the volume, rate, and potential pollutant load of stormwater runoff, including, but not limited to, requirements to minimize the generation, transport, and discharge of pollutants.
5. Section 7-16.11—Conditions of grading approval. This section of the municipal code provides requirements of grading plans, including environmental mitigation.
6. Section 7-16.13—Water obstruction. This section of the municipal code prohibits grading from obstructing or interfering with natural stormwater flow in such a manner that could cause flooding where it would not otherwise occur.
7. Section 7-16.22—Required plans. This section of the municipal code provides requirements of grading plans, including runoff control plan.

The Yuba City Municipal Code includes the following sections that pertain to flood protection:

1. Section 6-9.601—Development agreements. This section of the municipal code prohibits the City Council from approving a development agreement for property that is located within a flood hazard zone, unless there is substantial evidence in the record that the property will meet the ULOP Criteria and/or FEMA standard of flood protection.
2. Section 6-9.902—Permits and entitlements. This section of the municipal code prohibits the City from approving a discretionary permit or entitlement for construction for a project located in a flood hazard zone, unless there is substantial evidence in the record that the property will meet the ULOP Criteria and/or FEMA standard of flood protection.
3. Section 6-9.903—Maps. This section of the municipal code prohibits the City from approving tentative or parcel maps for development of subdivision located within a flood hazard zone, unless there is substantial evidence in the record that the property will meet the ULOP Criteria and/or FEMA standard of flood protection.

City of Yuba City General Plan

The following guiding and implementing policies from the City of Yuba City General Plan are relevant to hydrology and water quality.

Noise and Safety Element

Guiding Policy 9.3-G-1 Protect the community from risks to lives and property posed by flooding and stormwater runoff.

Guiding Policy 9.3-G-2 Collect and dispose of storm water in a safe and efficient manner.

Guiding Policy 9.3-G-3 Ensure that dams and levees are properly maintained for long-term flood protection.

Implementing Policies

- 9.3-I-3 When necessary, require new development to prepare hydrologic studies to assess storm runoff impacts on the local and subregional storm drainage systems and, if warranted, require new development to provide adequate drainage facilities and to mitigate increases in storm water flows and/or volume to avoid cumulative increases in downstream flows.
- 9.3-I-4 Restrict new development in areas subject to 100 year flooding.
- 9.3-I-6 As new development occurs, work with Sutter County to establish drainage areas that serve the entire Planning Area.
- 9.3-I-7 Utilize parks for the secondary purpose of storm water storage.

Environmental Conservation Element

Guiding Policy 8.5-G-1 Enhance the quality of surface water and groundwater resources and prevent their contamination.

Implementing Policies

- 8.5-I-2 Require new development to preserve areas that provide important groundwater recharge, stormwater management, and water quality benefits such as open spaces, river corridors, natural habitat, wetlands, and natural drainage areas.
- 8.5-I-4 Comply with the Central Valley Regional Water Quality Control Board's regulation and standards to maintain and improve the quality of both surface water and groundwater resources.
- 8.5-I-5 Continue to control stormwater pollution and protect the quality of the City's waterways, by preventing oil and sediment from entering the river.
- 8.5-I-6 Encourage State and regional agencies to monitor groundwater supplies and take steps to prevent contamination.
- 8.5-I-7 Continue to regularly monitor water quality to maintain high levels of water quality for human consumption and ecosystem health.
- 8.5-I-8 Protect waterways by prohibiting the dumping of debris and refuse in and near waterways and storm drains.
- 8.5-I-9 Require new construction to utilize best management practices such as site preparation, grading, and foundation designs for erosion control to prevent sediment runoff into waterways, specifically the Feather River.

Best management practices include:

- Requiring that low berms or other temporary facilities be built between a construction site and drainage area to prevent sheet-flooding stormwater from entering storm drains and waterways;
- Requiring installation of storm drains or other facilities to collect stormwater runoff during construction; and
- Requiring onsite retention where appropriate.

As described in the following impact analyses, the proposed BSMP would preserve areas that provide groundwater recharge, stormwater management, and water quality benefits such as open spaces, river corridors, natural habitat, wetlands, and natural drainage areas. Further, the proposed BSMP would comply with local and State regulations to protect and monitor water quality and prevent flooding. Therefore, the proposed BSMP would be consistent with the City of Yuba City General Plan.

3.9.3 Analysis, Impacts, and Mitigation

Significance Criteria

For the purposes of this EIR, impacts on hydrology, water quality, and water resources are considered significant if the proposed project would:

- Violate any water quality standards or waste discharge requirements;

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map or within a 200-year floodplain;
- Place within a 100-year flood hazard area or 200-year floodplain structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Result in inundation by seiche, tsunami, or mudflow.

Methodology and Assumptions

This document provides an analysis of the proposed BSMP, which characterizes the potential impacts in the areas of hydrology, water quality, and water resources. In support of this analysis, relevant information was gathered from the Yuba City General Plan, as well as other local, State, and federal water management agencies. Potential effects of the proposed BSMP were assessed in comparison to a baseline of existing conditions, in accordance with CEQA, and impacts were identified in terms of relative significance, as discussed below. Mitigation measures were applied in order to minimize the effects of these impacts, as warranted.

Issues Not Discussed in Impacts

A seiche is a wave within a large, closed water body, such as a lake or large pond. A seiche may be caused by seismic movements, or by a landslide into the water body or other mass movement that temporarily displaces a substantial volume of water. No large, enclosed water bodies are located in the BSMP site. The proposed BSMP would not be located in areas subject to seiche, or alter existing water bodies such that the chances of seiche could increase. Tsunami refers to a large scale ocean wave that is generated by an earthquake. Because the BSMP site is located over

90 miles from the Pacific Ocean, the proposed BSMP would not increase the risk of inundation by a tsunami. Mudflows occur in steep terrain with unstable soils, or in areas where seismic or volcanic activity may induce the mass movement of water-saturated surface sediments. The BSMP site has relatively flat topography and no potential sources of mudflow nearby. Therefore, impacts related to inundation by seiche, tsunami, or mudflow are not analyzed below.

Impacts and Mitigation Measures

Impact 3.9-1: Development pursuant to the BSMP could substantially degrade water quality.

Full Master Plan

Construction

Construction activities associated with development pursuant to the proposed BSMP would involve the delivery, handling, and storage of construction materials and wastes, as well as the use of construction equipment, which could result in stormwater contamination and degradation of water quality. The use of heavy equipment during construction of development under the proposed BSMP would include, but not be limited to, excavation, grading, earthmoving, installation of underground utilities, and construction of development consistent with the proposed BSMP. Spills or leaks from heavy equipment and machinery could result in oil and grease contamination of receiving waters. Staging areas or building sites could also be the source of pollution because of the use of paints, solvents, cleaning agents, and metals during construction. Impacts associated with metals in stormwater include toxicity to aquatic organisms, such as bioaccumulation, and the potential contamination of drinking water supplies. Pesticide use (including herbicides and fungicides) during site preparation work (as opposed to pesticide use for landscaping) is another potential source of stormwater contamination toxic to aquatic species and bioaccumulation in larger species. Larger pollutants, such as trash, debris, and organic matter, are additional pollutants that could result in potential impacts on human health and aquatic ecosystem.

During construction there is the potential for contaminants to migrate to groundwater, thereby affecting groundwater quality. Primary sources of groundwater recharge in the BSMP site are percolation of streamflow into underlying permeable materials and direct infiltration of precipitation falling on permeable soils. As discussed in Chapter 3.6 Geology, Soils, Mineral Resources and Paleontological Resources, the NRCS soil survey identified soils in the BSMP site with a moderate potential for infiltration and low erosion potential. Also, groundwater levels are between 15 to 20 feet below ground surface (bgs). These factors would increase the potential for contaminants to migrate to groundwater within the BSMP site. However, mandatory compliance with the requirements of the Construction General Permit would minimize the potential release of hazardous materials into the Gilsizer Slough and the Feather River where groundwater recharge occurs.

In addition, earthmoving construction activities would temporarily disturb soils and alter existing drainage patterns. Disturbed soils are susceptible to high rates of erosion from wind and rain,

resulting in sediment transport from the site. Erosion and sedimentation affects water quality through interference with photosynthesis, oxygen exchange, and the respiration, growth, and reproduction of aquatic species. Additionally, the pollutants mentioned previously can bind to sediment and be transported in runoff leaving the project site and affect water quality.

As described above under Regulatory Framework, the goal of the NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the “maximum extent practicable” through the use of BMPs. Construction activities in California are regulated under the NPDES through compliance with the Construction General Permit. The applicant would be required to file a NOI to obtain and comply with the requirements of the NPDES Construction General Permit prior to building permit approval to minimize the potential erosion of soils and release of sediment and hazardous materials into Gilsizer Slough and the Feather River. Requirements of the Construction General Permit and the City include development of a stormwater pollution prevention plan (SWPPP) and implementing BMPs that would (1) reduce water turbidity, (2) reduce surface erosion; (3) control stormwater flows, (4) retain sediment within the construction site, and (5) restore vegetation. Conditions of the permit would include:

- Preparation of hazardous material spill control and countermeasure programs;
- Stormwater quality sampling, monitoring, and compliance reporting;
- Development and adherence to a Rain Event Action Plan;
- Mandatory training under a specific curriculum; and
- Mandatory implementation of BMPs.

BMPs could include, but not be limited to (1) conducting major construction activities involving excavation and spoils haulage during the dry season, to the extent possible; (2) use of straw bales, sandbags, gravel traps and filters; (3) erosion control measures such as vegetation and physical stabilization; and (4) sediment control measure such as fences, dams, barriers, berms, traps, and basins. The specific BMPs to be implemented would be determined prior to issuance of the Construction General Permit, as determined by the CVRWQCB, the granting agency, and any additional conditions of approval by the City.

As required pursuant to CVRWQCB standards, compliance with Construction General Permit requirements during project construction would substantially reduce or prevent waterborne pollutants from entering receiving waters and protect water quality during project construction. Therefore, this impact is considered **less than significant**.

Operation

Development of the proposed BSMP would result in the conversion of agricultural and rural residential land to urban uses including residential, commercial, office, business, parks, public uses, and roadways. These new land uses would result in new stormwater pollutants being introduced to the BSMP site. Pollutants associated with the operational phase of the BSMP include nutrients, oil and grease, metals, organics, pesticides, sediment, pathogens, and trash and other debris. Nutrients that could be present in post-construction stormwater include nitrogen and

phosphorous resulting from fertilizers applied to landscaping and atmospheric deposition. Excess nutrients can affect water quality by promoting excessive and/or a rapid growth of aquatic vegetation, which reduces water clarity and results in oxygen depletion. Pesticides, which are toxic to aquatic organisms and can bioaccumulate in larger species such as birds and fish, can also enter stormwater after application on landscaped areas of the BSMP. Oil and grease can enter stormwater from vehicle leaks, road surfaces, and maintenance activities. Metals may enter stormwater as surfaces corrode, decay, or leach. Clippings associated with landscape maintenance and street litter may be carried into storm drains.

The urban runoff from development of the BSMP site would contain levels of pollutants that could adversely affect water quality in Gilsizer Slough by increasing the aforementioned pollutants in stormwater and non-stormwater runoff (e.g., wash water, irrigation runoff). Similarly, because Gilsizer Slough and the Feather River are a source of groundwater recharge in the BSMP site, contaminants could migrate to groundwater, thereby affecting groundwater quality. The Basis of Design Report—Bogue Stewart Master Plan Area Proposed Drainage Improvements Preliminary Analysis (BOD Report) is the site-specific runoff control plan prepared to meet Section 4-21.66 of the Yuba City Municipal Code. The BOD Report includes post-construction stormwater quality BMPs consistent with the post-construction runoff control goals in the adopted SWMP and City of Yuba City Stormwater Management and Discharge Control Ordinance requirements.

As described above under Regulatory Framework, the City implements the Phase II MS4 Permit through a SWMP, and any development would be required to implement post-construction stormwater quality LID BMPs, such as streetscapes, bioswales, or vegetated swales along some of the streets, parks, parking lots, and parkways. These could address water quality issues upstream before entering the storm drain system.

The proposed detention ponds envisioned for the Newkom Ranch and Kells East Ranch sites are of the type usually referred to as “Extended Detention Ponds”, but with the addition of a forebay to settle out (and clean out) coarse sediments. Extended detention ponds are used to address both the stormwater runoff quantity and quality impacts of urban development. The lower stages of the proposed extended detention basins would detain runoff from the stormwater quality design storm for extended periods of time, thereby promoting pollutant removal through sedimentation. Stormwater runoff from the BSMP site west of the Kells East Ranch would be collected and discharged into proposed detention ponds. The remainder of the BSMP to the east of Newkom Ranch would collect stormwater in the proposed underground storm drainage system and divert flows to the City’s existing stormwater system that includes two existing detention ponds east of Garden Highway.

Two of the detention ponds would be long, narrow, and positioned along the alignment of Gilsizer Slough. These are referred to as the “West Ponds.” The portions of the BSMP site located to the west of State Route (SR) 99 would drain directly into these ponds. Two other ponds referred to as the “Central Pond” and “East Pond” would collect the drainage from the portions of

the BSMP site east of SR 99, excluding the later phases of development. The Central Pond would be located just west of SR 99 and the East Pond just east of SR 99 as can be seen in Figure 2-14. The two ponds would operate essentially as one because of a large underground interconnection.

The majority of increased runoff from the new impervious surfaces would be collected and diverted through the new storm drain system where it would have the opportunity to infiltrate via the detention ponds before being released to Gilsizer Slough where the majority of groundwater recharge within the BSMP site occurs.

The streetscapes, swales, and other LID BMPs mentioned above would be designed to meet Yuba City and state LID standards. As such, these LID BMPs would provide the first line of pretreatment of runoff and would be capable of meeting the water quality objectives of the Yuba City Stormwater Management Program to slow down, filter, and infiltrate stormwater. Once stormwater enters the underground storm drain system, the second round of pretreatment would occur in the detention ponds. The detention ponds would serve as settling basins, provide minimal infiltration, would reduce downstream flows in Gilsizer Slough lower than current conditions. This in turn would eliminate off-site transport of sediments, many pollutants, and trash. Furthermore, the low off-site flows that would be achieved by the storm drain system would eliminate concerns about erosion downstream.³⁴

Transitions from the West Ponds to Gilsizer Slough would include slope protection to eliminate erosion even during the largest storm events.³⁵ The slopes would be protected from erosion after construction by seeding with a mixture of suitable grasses and other vegetation.

As described above under Regulatory Framework, the goal of the NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the “maximum extent practicable” through the use of BMPs. Compliance with City of Yuba City Stormwater Management and Discharge Control Ordinance requirements would protect water quality during project operation. Implementation of BMPs would be required as a condition of approval of the proposed project, and would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards. Groundwater quality would be protected through the existing characteristics of the BSMP site and from the use of detention basins that would use pollutant removal features. These factors would limit the potential for contaminants to migrate to groundwater within the BSMP site. Therefore, this impact is considered **less than significant**.

Newkom Ranch

Construction

As described above, construction activities in the Newkom Ranch project site would be subject to requirements of the Construction General Permit. To comply with the Construction General

³⁴ MHM Incorporated, 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

³⁵ MHM Incorporated, 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

Permit, a SWPPP that includes BMPs specific to the Newkom Ranch project site would be prepared and implemented by qualified professionals. The example measures provided previously in the analysis of construction activities during buildout of the full BSMP apply to the Newkom Ranch project site as well. Adherence to BMPs would be required as a condition of the NPDES permit, and would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards. Therefore, this impact is considered **less than significant**.

Operation

As described previously, the sources of the pollutants within the Newkom Ranch project site would be the same as those described under the analysis of operation of the full BSMP. Compliance with City of Yuba City Stormwater Management and Discharge Control Ordinance requirements would protect water quality during project operation. Implementation of BMPs would be required as a condition of the SWMP and the Stormwater Management and Discharge Control Ordinance, and would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards. Groundwater quality would be protected through the existing characteristics of the BSMP site and from the use of detention basins that would utilize pollutant removal features. These factors would limit the potential for contaminants to migrate to groundwater within the Newkom Ranch project site. Therefore, this impact is considered **less than significant**.

Kells East Ranch

Construction

As described previously, the description of pollutants that would be associated with construction activities during buildout of the full BSMP also applies to construction activities within the Kells East Ranch project site. Construction activities in the Kells East Ranch project site would also be subject to requirements of the Construction General Permit. The example measures provided previously in the analysis of construction activities during buildout of the full BSMP apply to the Kells East Ranch project site as well. The specific BMPs to be implemented would be determined prior to issuance of the Construction General Permit, in coordination with the CVRWQCB. Adherence to these BMPs would be required as a condition of the permit, and would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards. Therefore, this impact is considered **less than significant**.

Operation

As described previously, the sources of pollutants within the Kells East Ranch project site would be the same as those described under the analysis of operation of the full BSMP. Compliance with City of Yuba City Stormwater Management and Discharge Control Ordinance requirements would protect water quality during project operation. Implementation of BMPs would be required as a condition of the SWMP and the Stormwater Management and Discharge Control Ordinance, and would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards. Groundwater quality would be protected through the existing characteristics of the BSMP site and from the use of detention basins that would utilize pollutant removal features. These factors would limit the potential for contaminants to migrate to

groundwater within the Kells East Ranch project site. Therefore, this impact is considered **less than significant**.

Summary

Adherence to BMPs as a condition of the NPDES permit would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards during construction. Compliance with City of Yuba City Stormwater Management and Discharge Control Ordinance and the SWMP requirements would protect water quality during project operation and would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards. Therefore, impacts related to violation of water quality standards or waste discharge requirements or otherwise substantially degrading water quality as a result of construction or operation of elements of the BSMP are considered **less than significant**.

Mitigation Measure

None required.

Impact 3.9-2: Development pursuant to the proposed BSMP could substantially deplete groundwater supplies or reduce groundwater recharge.

BSMP

Construction

Construction activities pursuant to the proposed BSMP would not include site dewatering or other forms of groundwater extraction. Soil compaction and placement of equipment and construction materials on the site during construction would result in minor and temporary interference with groundwater recharge. Temporary soil compaction and placement of construction materials on the site would not be of a sufficient scale to result in a net deficit in aquifer volume or lowering of the local groundwater table. As discussed previously in Section 3.9.1 Environmental Setting, groundwater in the BSMP site is between 15 to 20 feet bgs and the majority of groundwater recharge is from Gilsizer Slough. Therefore, there would be **no impact** on groundwater recharge during project construction.

Operation

Primary sources of groundwater recharge are percolation of streamflow into underlying permeable materials and direct infiltration of precipitation falling on permeable soils. Soils within the BSMP site are relatively permeable. Applied irrigation water can also provide some recharge. The amount of water that can percolate into underlying strata and recharge the aquifer depends not only on the amount of water available, but also the types and extent of underlying soil materials.

In addition, the BOD Report concluded the detention ponds could contribute to groundwater infiltration.³⁶

The majority of increased runoff from the new impervious surfaces would be collected and diverted through the new storm drain system where it would have the opportunity to infiltrate via the extended detention ponds before being released to Gilsizer Slough where the majority of groundwater recharge within the BSMP site takes place. As groundwater recharge within and along Gilsizer Slough and the Feather River would not be impeded, impacts on groundwater recharge during project operation would be **less than significant**.

Newkom Ranch

Construction

As described above for the full BSMP, construction activities within the Newkom Ranch project site would not include site dewatering or other forms of groundwater extraction. Soil compaction and placement of equipment and construction materials on the site during construction may temporarily interfere with groundwater recharge. Construction activities are temporary and the Newkom Ranch project site is a small area relative to the aquifer. Temporary soil compaction and placement of construction materials on the Area A site would not be of a sufficient scale to result in a net deficit in aquifer volume or lowering of the local groundwater table. Therefore, impacts on groundwater recharge during the Newkom Ranch project site construction would be **less than significant**.

Operation

As described previously for the full BSMP, the Newkom Ranch site would convert irrigated agriculture and rural residential land uses to residential, commercial, and related uses resulting in a substantial increase in impervious surfaces. Groundwater recharge in the Newkom Ranch project site occurs primarily along and within Gilsizer Slough and the Feather River channels. The proposed detention pond within the Newkom Ranch project site would allow for infiltration of large storm event flows because it would be designed to detain water and allow it to infiltrate. Increased runoff from the new impervious surfaces would be collected and diverted through the storm drain system and released to Gilsizer Slough where the majority of groundwater recharge within the Newkom Ranch project site takes place. As groundwater recharge within and along Gilsizer Slough and the Feather River would not be impeded, impacts on groundwater recharge during operation of the Newkom Ranch project site would be **less than significant**.

Kells East Ranch

Construction

As described previously for the full BSMP, construction activities within the Kells East Ranch project site would not include site dewatering or other forms of groundwater extraction. Soil compaction and placement of equipment and construction materials on the site during

³⁶ MHM Incorporated, 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

construction may temporarily interfere with groundwater recharge. Construction activities are temporary and the Kells East Ranch project site is a small area relative to the aquifer. Temporary soil compaction and placement of construction materials on the Kells East Ranch project site would not be of a sufficient scale to result in a net deficit in aquifer volume or lowering of the local groundwater table. Therefore, impacts on groundwater recharge during the Kells East Ranch project site construction would be **less than significant**.

Operation

As described previously for the full BSMP, the Kells East Ranch site would convert irrigated agriculture and rural residential land uses to residential, commercial, and related development and substantially increase impervious surfaces. Groundwater recharge in the BSMP site occurs primarily along and within the Gilsizer Slough and Feather River channels. The proposed detention basins within Kells East Ranch project site would allow for infiltration of large storm event flows because they would be designed to retain water and allow it to infiltrate. Increased runoff from the new impervious surfaces would be collected and diverted through the storm drain system and released to Gilsizer Slough where the vast majority of groundwater recharge within the BSMP site takes place. As groundwater recharge within and along Gilsizer Slough and the Feather River would not be impeded, impacts on groundwater recharge during operation of Kells East Ranch project site would be **less than significant**.

Summary

Proposed construction activities would not include site dewatering or other forms of groundwater extraction. Soil compaction and placement of equipment and construction materials on the site during construction may temporarily interfere with groundwater recharge. Temporary soil compaction and placement of construction materials on the site would not be of a sufficient scale to result in a net deficit in aquifer volume or lowering of the local groundwater table. Despite substantial increases in impervious surfaces as a result of development pursuant to the proposed BSMP, groundwater recharge within and along Gilsizer Slough and the Feather River would not be impeded during project operation. Therefore, impacts on groundwater recharge during construction and operation of development under the proposed BSMP would be **less than significant**.

Mitigation Measure

None required.

Impact 3.9-3: Development pursuant to the proposed BSMP would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which could result in flooding on- or off-site.

Full Master Plan

Construction

Implementation of the proposed BSMP would include construction activities such as clearing and grubbing, pavement laying, excavation and trenching for foundations and utilities, soil compaction, cut and fill activities, and grading, all of which would alter existing drainage patterns. As noted in the NPDES Construction General Permit guidelines, during construction, sediment loads can increase from 2 to 40,000 times over pre-construction levels and enter stream channels during large, episodic rain events. This increased sediment load leads to an initial aggradation phase, where stream depths may decrease as sediment fills the channel, leading to a decrease in channel capacity and increase in flooding and overbank deposition.

As described under Impact 3.9-1, any individual project developed pursuant to the proposed BSMP would be subject to the Construction General Permit; therefore, a SWPPP would be prepared and implemented by qualified professionals. During project construction, BMPs outlined in the SWPPP and implemented in compliance with the General Construction Permit must control the rate or amount of surface runoff from the BSMP site. Compliance with Construction General Permit through implementation of a site-specific SWPPP would prevent or minimize erosion and stormwater runoff into Gilsizer Slough or other surface drainages and thereby prevent on- or off-site flooding impacts during project construction. Therefore, this impact is considered **less than significant**.

Operation

Development under the proposed BSMP would increase the amount of impervious surfaces through the construction of buildings and structures, parking areas, and roadways which would substantially alter the existing drainage pattern of the BSMP site. Increased development results in less infiltration and surface storage, thus increasing the volume of stormwater runoff. Also increasing the amount of impervious areas results in faster times of concentration of stormwater, therefore increasing the peak flows. The proposed BSMP residential and commercial development would result in quicker and more intense stormwater runoff.³⁷ Without effective stormwater drainage controls, new impervious surfaces created by project development would result in localized ponding or street flooding on- and off-site.

While the development pursuant to the proposed BSMP would be designed consistent with the Yuba City SWMP and LID standards, the parameters used to design the stormwater drainage

³⁷ MHM Incorporated, 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

system uses more conservative values of runoff parameters (e.g., Curve Numbers, percent Impervious, and Lag Time) to insure robust stormwater drainage management.³⁸

The proposed stormwater drainage system would consist of trunk mains, storm drain lines, water quality swales, detention ponds, and existing Yuba City drainage infrastructure (see Figure 2-14 in Chapter 2, Project Description). The detention ponds would serve the Newkom Ranch and Kells East Ranch projects, as well as the remaining development areas of the BSMP (west of SR 99) and an area immediately adjacent to the east boundary of Newkom Ranch. All other areas within the BSMP east of Newkom Ranch would be served by trunk mains and storm drain lines connected to existing City infrastructure. The East Pond would connect to the Central Pond underneath SR 99 via an underground 60-inch pipeline. The Central Pond would then discharge into the Southwest Pond via an underground 48-inch pipeline with a flap gate at the outlet. The Northwest Pond would be connected to the Southwest Pond via an underground 20-foot high by 40-foot wide box culvert under the proposed parkway between the two ponds. Outfall structures would be provided at each location where the storm drain trunk lines discharge to the various detention ponds.

The detention ponds would serve as settling basins, infiltration basins, and would result in downstream flows lower than current conditions. This in turn would eliminate off-site transport of sediments, many pollutants, and trash. Furthermore, the reduction in off-site flows that would be achieved by the storm drain system would eliminate concerns about erosion downstream. These features address LID design criteria, Implementing Policy 9.3-I-3 of the Yuba City General Plan, and Yuba City stormwater and flood control ordinances.

The stormwater facilities designed to serve the Newkom Ranch, Kells East Ranch, and the remainder of the BSMP site (west of SR 99) would be capable of collecting stormwater and limiting peak off-site flows below the current peak flows. Two simulations were analyzed for these subareas of the BSMP site: (1) runoff models for current conditions; and (2) runoff models for developed conditions representing full development of the Newkom Ranch, Kells East Ranch, and the remainder of the BSMP site (west of SR 99) with the proposed stormwater drainage facilities. Both of these conditions were modeled for three storm events: the 10-year 24-hour, the 25-year 24-hour, and the 100-year 24-hour. Consistent with Yuba City standards, the storm drains would be designed to pass the 10-year storm, the main trunk lines would be designed to pass the 25-year storm and the detention pond capacities would be designed to accommodate the 100-year storm with one foot of freeboard.³⁹

The stormwater drainage system for the proposed BSMP was designed to discharge flows that do not exceed the current peak flow values and 48-hour quantities to Gilsizer Slough and South Yuba City stormwater drainage system. The total flows are defined as the total volume of

³⁸ MHM Incorporated, 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

³⁹ MHM Incorporated, 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

stormwater delivered offsite during a 48-hour period beginning with the start of a 24-hour storm. **Table 3.9-3** presents the comparison of the flows existing under current conditions compared to the flows expected under full development of the proposed BSMP. The results of the modeling indicate that offsite flows would not exceed current peak values and current 48-hour quantities to Gilsizer Slough.⁴⁰

**TABLE 3.9-3
 COMPARISON OF FLOWS IN GILSIZER SLOUGH UNDER CURRENT CONDITIONS AND DEVELOPED CONDITIONS**

Storm Event	Modeled Attribute	Current Conditions	Developed Conditions
100-year 24-hour	Peak flow rate offsite downstream	109.5 cfs ¹	106.2 cfs
	Total volume of outflow during 48 hours	148.3 acre-feet	131.0 acre-feet
25-year 24-hour	Peak flow rate offsite downstream	81.9 cfs	71.4 cfs
	Total volume of outflow during 48 hours	113.0 acre-feet	90.2 acre-feet
10-year 24-hour	Peak flow rate offsite downstream	72.8 cfs	58.8 cfs
	Total volume of outflow during 48 hours	101.2 acre-feet	77.4 acre-feet

NOTES:

1. cubic feet per second

SOURCE: MHM Incorporated, 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

Table 3.9-4 show the peak values of inflows, outflows and storage for all three ponds (West Ponds were modeled as one) and all three storm simulations. Peak flows and 48-hr total volumes from the proposed BSMP under developed conditions are expected to be lower than current pre-project conditions.⁴¹

For the rest of the BSMP, total runoff volume was computed for 100-year storm in order to verify the South Yuba City detention pond capacity, and the 25-year and 10-year storms were modeled for the design of the trunk mains and storm drain lines respectively. The modeling and design of the stormwater pipeline system will be reviewed for meeting the City’s design standards and ordinances prior to project approval.

⁴⁰ MHM Inc., 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

⁴¹ MHM Inc., 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

**TABLE 3.9-4
 PEAK WATER SURFACE LEVELS (WSEL) AND FLOWS IN THE BSMP DETENTION PONDS
 UNDER DEVELOPED CONDITIONS**

Pond	Storm Event	Peak WSEL feet	Peak Storage (acre-feet)
West	100-year 24-hour	40.92	18.0
	25-year 24-hour	40.24	15.5
	10-year 24-hour	40.00	14.7
Central	100-year 24-hour	40.95	48.3
	25-year 24-hour	40.16	40.2
	10-year 24-hour	39.89	37.4
East	100-year 24-hour	42.45	15.6
	25-year 24-hour	41.24	11.1
	10-year 24-hour	40.89	9.8

NOTES:

Values based on the worst case scenario of 50 percent peak flow from Gilsizer Slough upstream, Gilsizer flows removed from totals

SOURCE: MHM Inc., 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

According to the BOD Report, under all storm conditions, the design would:

1. Deliver runoff only to the historic discharge point;
2. Produce peak outflows lower than the outflows produced during storms from the current conditions;
3. Deliver a total quantity of stormwater off site during a 48-hour period (the 24-hour storm and the next 24 hours following the storm) that would not exceed the current total; and
4. Use water quality concepts from the Yuba City and Sutter County General Plans as well as the requirements of the Yuba City MS4 Phase II permit to achieve pre-treatment of stormwater before it enters the storm drain system and again as it enters and resides in the onsite detention ponds.⁴²

Because of the flood prevention sizing of the detention ponds and the reduction of flows compared to current flows, the potential for downstream flooding would be eliminated.⁴³ The proposed BSMP would include features designed to reduce stormwater flows to levels that would not exacerbate on- or off-site drainage or flooding problems, and all designs would be required to be approved by the City to ensure consistency with the Master Drainage Study criteria. Therefore, this impact is considered **less than significant**.

⁴² MHM Inc., 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

⁴³ MHM Inc., 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

Newkom Ranch

Construction

Construction of the Newkom Ranch project site would be subject to the Construction General Permit, and a SWPPP would be prepared and implemented by qualified professionals. During construction of the Newkom Ranch project site, BMPs outlined in a site-specific SWPPP and implemented in compliance with the Construction General Permit would be required to control the rate or amount of surface runoff from the BSMP site such that on- or off-site erosion and siltation is minimized to the maximum extent practicable. As described previously, the general methods of erosion and sediment control include controlling stormwater flowing onto and through the BSMP site, which would also prevent flooding on- or off-site during construction activities. Compliance with Construction General Permit through implementation of a site-specific SWPPP would protect against on- and off-site flooding impacts during project construction. Therefore, this impact is considered **less than significant**.

Operation

The Newkom Ranch project site would include the stormwater drainage infrastructure described previously that would ultimately drain to Gilsizer Slough. The stormwater drainage infrastructure for the BSMP site would be designed to meet Yuba City and state LID standards. In addition, the East Pond would be large enough to contain all the modeled storms, including the 100-year storm with one foot of freeboard. The East Pond would discharge to Gilsizer Slough via a flap gate that would remain closed until the water levels in the slough recede below the flap gate outlet structure. Because of the flood prevention sizing of the pond, the potential for downstream flooding would be eliminated.⁴⁴ The Newkom Ranch project site includes features designed to reduce stormwater flows below existing levels, and prevent on- or off-site flooding problems. Furthermore, stormwater system design would be reviewed for meeting the City's design standards and stormwater and flooding ordinances prior to project construction. Therefore, this impact is considered **less than significant**.

Kells East Ranch

Construction

Construction of the Kells East Ranch project site would be subject to the Construction General Permit, and a SWPPP would be prepared and implemented by qualified professionals. During construction of the Kells East Ranch project site, BMPs outlined in a site-specific SWPPP and implemented in compliance with the Construction General Permit would be required to control the rate or amount of surface runoff from the BSMP site such that on- or off-site erosion and siltation is minimized to the maximum extent practicable. As described previously, the general methods of erosion and sediment control include controlling stormwater flowing onto and through the BSMP site, which would also prevent flooding on- or off-site during construction activities. Compliance with Construction General Permit through implementation of a site-

⁴⁴ MHM Inc., 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

specific SWPPP would protect against on- and off-site flooding impacts during project construction. Therefore, this impact is considered **less than significant**.

Operation

The Kells East Ranch project site would include the stormwater drainage infrastructure described previously that would ultimately drain to Gilsizer Slough. The stormwater drainage infrastructure for the BSMP site would be designed to meet Yuba City and state LID standards. The Central Pond would large enough to contain all the modeled storms, including the 100-year storm with 1 foot of freeboard. The Central Pond would discharge to Gilsizer Slough via a flap gate that would remain closed until the water levels in the slough recede below the flap gate outlet structure.⁴⁵ The Kells East Ranch project site includes features designed to reduce stormwater flows below existing levels, and prevent on- or off-site flooding problems. Furthermore, stormwater system design would be reviewed for meeting the City's design standards and stormwater and flooding ordinances prior to project construction. Therefore, this impact is considered **less than significant**.

Summary

Construction of the proposed BSMP would employ a site-specific SWPPP for erosion and sediment control to prevent flooding on- or off-site during construction activities in compliance with the NPDES Construction General Permit and Yuba City ordinances. The proposed BSMP would include construction of a stormwater drainage system designed to maintain stormwater flows below current levels during all storms and would not exacerbate on- or off-site drainage or flooding problems. Design of the system would be required to meet all City stormwater and flood prevention ordinances prior to approval of the project and building permits. Therefore, impacts as a result of altering the existing drainage pattern of the site or area or a substantial increase in the rate or amount of surface runoff in a manner which could result in flooding on- or off-site are considered **less than significant**.

Mitigation Measure

None required.

Impact 3.9-4: Development pursuant to the proposed BSMP would place residential and other uses within a designated flood hazard zone.

Full Master Plan

CEQA generally does not require that public agencies analyze the impact existing environmental conditions might have on a project's future users or residents, according to the California Supreme Court's decision in *California Building Industry Association v Bay Area Air Quality*

⁴⁵ MHM Inc., 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

Management District (S213478, December 17, 2015). An agency must analyze how environmental conditions might adversely affect a project's residents or users only where the project itself might worsen existing environmental hazards in a way that will adversely affect them, or if one of the provisions of CEQA which require such an analysis for certain airport, school, and housing projects applies. Consequently, the analysis below is provided for the purpose of disclosure.

The current published Flood Insurance Rate Map (FIRM) for the BSMP site (Figure 3.9-1) shows approximately 196 acres of portions of the Newkom Ranch, Kells East Ranch, and the remainder of the BSMP site (west of SR 99) located in a 100-year floodplain Zone A. The rest of the BSMP site is not within the limits of the 100-year floodplain. The proposed BSMP includes residential, commercial and industrial uses that would be located in a designated flood hazard zone which could expose people and structures to risk and result in impediment or redirection of flood flows.

The Yuba City General Plan identifies areas where planned growth would occur, including the BSMP site. Existing levees protecting Yuba City and areas within the SOI were reevaluated in 2008. The results of that evaluation showed large new areas of Sutter County and Yuba City in flood zones with high-risk "A" designation. As a result, planned development could be exposed to 100-year flood hazard. In addition, parts of the BSMP site is located within a flood hazard area with 200-year flood depths deeper than 3 feet because of the condition of the levee system along the Feather River. Yuba City and Sutter County are in the process of working with local levee management agencies towards providing 200-year flood protection from the levee system along the Feather River in an effort to meet newly adopted state standards, but completion of the levee improvements will take many years.

SB 5 (California Government Code Section 65007(n)) requires that urban areas protected by state and federal levees achieve a 200-year level of flood protection by 2025. In compliance with SB 5, Yuba City amended its general plan to include: data and analysis contained in the flood protection plan being developed by the state; goals and policies for the protection of lives and property that would reduce the risk of flood damage; and related feasible implementation measures. In addition, Yuba City amended its zoning ordinance so that it is consistent with the amendments to Chapter 9 of the Yuba City General Plan and the ULOP criteria developed by the CVFPB.

The City ordinances require that a ULOP, or 200-year flood protection, be provided across portions of the City containing flood depths greater than three feet for the 200-year storm event for areas protected by the levee system. About a third of development within the BSMP site would be required to demonstrate consistency with ULOP criteria and adhere to all standards set forth in Chapter 9, Article 6 of the Yuba City Municipal Code, Flood Damage Prevention. The proposed BSMP project would use on-site soil and imported fill to raise building pad elevations to be one foot above the 100-year flood elevation to meet the FEMA standards for NFIP, as well as meet the ULOP criteria set forth by the City.

The Yuba City Flood Damage Prevention ordinance mandates substantial evidence of meeting ULOP and 100-year flood protection standards for new development prior to approval of the project and building permit. In July 2008, Sutter County and the Yuba Water Agency entered into an agreement to fund the local share of costs associated with levee improvements. The County adopted a development fee ordinance that applies to new development within the areas protected by the levee improvement program. Payment of these fees along with compliance with the City ordinance associated with flood protection would result in a **less-than-significant** impact.

Newkom Ranch and Kells East Ranch

An approximately 105 acres within the Newkom Ranch (44 acres) and the Kells East Ranch (61 acres) project sites are in the 100-year floodplain Zone A which could expose people and structures to risk and result in impediment or redirection of flood flows. The proposed Newkom Ranch and Kells East Ranch's project would use on-site soils from grading roads and from the East Pond (Newkom Ranch) and Central Pond (Kells East Ranch) detention ponds to raise building pad elevations one foot above the 100-year flood elevation.

As stated above the Yuba City Flood Damage Prevention ordinance mandates substantial evidence of meeting ULOP and 100-year flood protection standards for new development prior to approval of the project and building permit. In July 2008, Sutter County and the Yuba Water Agency entered into an agreement to fund the local share of costs associated with levee improvements. The County adopted a development fee ordinance that applies to new development within the areas protected by the levee improvement program. Payment of these fees along with compliance with the City ordinance associated with flood protection would result in a **less-than-significant** impact.

Summary

Several portions of the BSMP site are located within the 100-year flood hazard zone, and some of the development pursuant to the proposed BSMP would require 100-year flood protection. Chapter 9 of the Yuba City General Plan requires proposed developments within the 200-year flood hazard zone to demonstrate consistency with ULOP criteria. Therefore, impacts related to housing or structures impeding or redirecting flood flows would be **less than significant**.

Mitigation Measure

None required

Impact 3.9-5: Development pursuant to the proposed BSMP could expose people or structures to flooding associated with dam failure.

Full Master Plan

CEQA generally does not require that public agencies analyze the impact existing environmental conditions might have on a project's future users or residents, according to the California

Supreme Court's decision in *California Building Industry Association v Bay Area Air Quality Management District* (S213478, December 17, 2015). An agency must analyze how environmental conditions might adversely affect a project's residents or users only where the project itself might worsen existing environmental hazards in a way that will adversely affect them, or if one of the provisions of CEQA which require such an analysis for certain airport, school, and housing projects applies. Consequently, the analysis below is provided for the purpose of disclosure.

There are 11 dams in the region around the BSMP site. There is currently only one dam located within Sutter County that is under the jurisdiction of the California Department of Water Resources' Division of Safety of Dams (DSOD). There are three major dams outside the County, all under the jurisdiction of the DSOD, that have the potential to cause significant flooding in Sutter County affecting Yuba City if any were to fail. These dams (Oroville, Shasta, and New Bullards Bar) are operated under a variety of goals and regulations including flood control, water supply, fisheries, and other beneficial uses. The BSMP site is located within the inundation zones for all three dams.⁴⁶

Historically, there have been no dam failures affecting the Yuba City, and all dams have performed well during past storms and are expected to perform well in the future. The Sutter County Local Hazard Mitigation Plan concludes, "Although new growth and development corridors would fall in the area flooded by a dam failure, given the small chance of total dam failure and the large area that a dam failure would affect, development in the dam inundation area would continue to occur."⁴⁷ Yuba City has a Disaster Preparedness Guide that addresses dam failure emergencies and also has warning systems to inform people of a potential emergency event for evacuation.⁴⁸ During the 2016/17 winter season, the Oroville Dam Main Spillway experienced damage and resulted in use of the auxiliary spillway. Concern about the integrity of the auxiliary spillway and potential failure forced State and federal agencies to release large quantities of water into the Feather River potentially creating flood hazards to communities downstream. At the time, in order to maintain the safety of human life, federal, State, and local emergency staff evacuated numerous communities downstream, including Yuba City.

The proposed BSMP would facilitate development that would increase the number of people and structures that could be exposed to flooding from a dam failure; however, the proposed BSMP would not directly affect how the aforementioned dams would be operated, or result in the construction of a new dam. Therefore, the potential for a dam failure would be low and the proposed BSMP would not affect the potential for dam failure and impacts would be **less than significant**.

⁴⁶ Sutter County, 2015. *Sutter County Emergency Operations Plan, Sutter Operational Area, Annex 5—Floods and Dam Failure*. February 2015.

⁴⁷ Sutter County, 2013. *Sutter County Local Hazard Mitigation Plan*, August 2013.

⁴⁸ City of Yuba City, 2005. *Be Prepared Yuba City: A Household Emergency Preparedness Guide for Yuba City and Sutter County Residents*. August 2005.

Newkom Ranch

The information and analysis provided above for dam failure inundation is the same for the Newkom Ranch site of the BSMP, and impacts would be **less than significant**.

Kells East Ranch

The information and analysis provided above for dam failure inundation is the same for the Kells East Ranch site of the BSMP, and impacts would be **less than significant**.

Summary

No elements of the BSMP would directly affect how dams that could affect the BSMP site are operated, or increase the likelihood of failure of a dam that could result in inundation of the BSMP site or vicinity. Therefore, this impact would be **less than significant**.

Mitigation Measure

None required

Cumulative Impacts

Potential cumulative impacts on hydrology and water quality are attributed to development not only within Yuba City, but in the watershed areas outside of the City limits. Because Yuba City is located within the Lower Feather River watershed, the context for the evaluation of potential cumulative impacts on water quality and flood conditions is urban development not only within Yuba City but those areas protected by the Feather River levee system within the watershed. For cumulative impacts on groundwater supply, the cumulative setting is buildout conditions in the Yuba City General Plan and areas within the same underlying groundwater basin.

The following analysis determines whether a cumulative impact would occur and, if so, whether the contribution of the BSMP would have a cumulatively considerable contribution to identified significant cumulative impact.

Impact 3.9-6: Development pursuant to the proposed BSMP, in conjunction with cumulative development within the Lower Feather River watershed, could contribute to cumulative degradation of water quality.

Construction

Cumulative urban development in Yuba City and other areas of the watershed would involve soil-disturbing construction activities such as vegetation removal, grading, and excavation that would expose soil to wind- and water-generated erosion resulting in surface runoff with increased sediment loads. Along with sediment loading, construction activities could also introduce chemical pollutants to local waterways via site runoff, as described previously. All development that disturbs one acre or more of land surface or is part of a larger project that would result in one or more acres of land disturbance would be subject to requirements of the NPDES Construction General Permit to address potential impact to water quality. The Construction General Permit requires specific minimum BMPs for control of pollutants that may be transported in construction

site runoff, including erosion and sediment controls. In addition, the Yuba City regulates stormwater quality and erosion and sedimentation through local ordinances; specifically, through the City of Yuba City Municipal Code, Chapter 21, Compliance with City of Yuba City Stormwater Management and Discharge Control Ordinance, and Chapter 16, grading, erosion, and sediment control. Therefore, cumulative impacts from construction on water quality in the watershed would be **less than significant**.

Operation

Development of the proposed BSMP, in addition to cumulative development within the watershed would result in the conversion of agricultural and rural residential land to urban uses including residential, commercial, office, business, parks, public uses, and roadways. These new land uses would result in new stormwater pollutants being introduced to the watershed. Pollutants associated with the operational phase of developments include nutrients, oil and grease, metals, organics, pesticides, sediment, pathogens, and trash and other debris. Nutrients that could be present in post-construction stormwater include nitrogen and phosphorous resulting from fertilizers applied to landscaping and atmospheric deposition. Excess nutrients can affect water quality by promoting excessive and/or a rapid growth of aquatic vegetation, which reduces water clarity and results in oxygen depletion. Pesticides, which are toxic to aquatic organisms and can bioaccumulate in larger species such as birds and fish, can also enter stormwater after application on landscaped areas of development. Oil and grease can enter stormwater from vehicle leaks, road surfaces, and maintenance activities. Metals may enter stormwater as surfaces corrode, decay, or leach. Clippings associated with landscape maintenance and street litter may be carried into storm drains. This is considered a significant cumulative impact.

As described previously under Regulatory Framework, the City Phase II MS4 permit is implemented through a SWMP that requires the proposed BSMP to implement post-construction stormwater quality. In addition, the Yuba City regulates stormwater quality and erosion and sedimentation through local ordinances; specifically, through the City of Yuba City Stormwater Management and Discharge Control Ordinance which protects water quality during project operation. Implementation of BMPs would be required as a condition of the SWMP and the Stormwater Management and Discharge Control Ordinance, and would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards. Other communities within the watershed are also required to comply with federal, State, and local stormwater quality regulations and ordinances for development to control pollutants in stormwater discharge.

Development in the BSMP would comply with all applicable regulations and implement water quality BMPs and LID measures to reduce project-generated water pollutants to the maximum extent practicable. Compliance with Yuba City Stormwater Management and Discharge Control Ordinance requirements would protect water quality during project operation, and would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards. Through implementation of the existing regulations described above, the

project's contribution to the cumulative impact would be less than considerable and the impact is **less than significant**.

Mitigation Measure

None required.

Impact 3.9-7: Development pursuant to the proposed BSMP, in conjunction with other development overlying the Sutter Subbasin, could cumulatively contribute to substantial interference with groundwater recharge.

The proposed project, in combination with buildout of the Yuba City General Plan would result in the conversion of undeveloped pervious land to impervious urban surfaces. Because groundwater recharge occurs primarily along the stream channels and the Feather River in the Lower Feather River watershed,⁴⁹ buildout of the Yuba City General Plan would not substantially affect groundwater recharge such that there would be a lowering of groundwater levels in the basin. Therefore, cumulative effects on recharge would be **less than significant**.

Mitigation Measure

None required.

Impact 3.9-8: Development pursuant to the proposed BSMP could contribute to cumulative substantial alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

Development of the proposed BSMP project, in combination with cumulative development in Yuba City, result in increase of impervious surfaces and less infiltration and surface storage, thus increasing the volume of stormwater runoff. Also increasing the amount of impervious areas results in faster times of concentration of stormwater, therefore increasing the peak flows. The proposed BSMP residential and commercial development would result in quicker and more intense stormwater runoff.⁵⁰ Without effective stormwater drainage controls, new impervious surfaces created by project development would result in localized ponding or street flooding on- and off-site. This is considered a significant cumulative impact.

As discussed previously under Impact 3.9-4, the stormwater drainage systems for the proposed BSMP, would meet Yuba City design requirements for the attenuation of post-project peak flows

⁴⁹ Sutter County, 2012. *Sutter County Groundwater Management Plan*. February 2012.

⁵⁰ MHM Inc., 2016. *Basis of Design Report: Bogue Stewart Master Plan Area Drainage Improvements Preliminary Analysis*. October 14, 2016.

less than current levels within Gilsizer Slough and within the South Yuba City stormwater system ponds. The BSMP stormwater drainage system would also meet the requirements of the Stormwater Management and Discharge Control Ordinance as well as the Flood Damage Reduction ordinance. Prior to project approval and issuance of building permits, Yuba City would ensure that the applicable standards related to on- and off-site flooding are met and that the project would be implemented as designed. The implementation of these standards would reduce the contribution of the proposed BSMP, which would result in a less-than-considerable contribution, and the impact would be **less than significant**.

Mitigation Measure

None required.

Impact 3.9-9: Development pursuant to the proposed BSMP could contribute to cumulative placement of housing and structures within a 100-year flood hazard area, or within a 200-year floodplain that could impede or redirect flood flows.

CEQA generally does not require that public agencies analyze the impact existing environmental conditions might have on a project's future users or residents, according to the California Supreme Court's decision in *California Building Industry Association v Bay Area Air Quality Management District* (S213478, December 17, 2015). An agency must analyze how environmental conditions might adversely affect a project's residents or users only where the project itself might worsen existing environmental hazards in a way that will adversely affect them, or if one of the provisions of CEQA which require such an analysis for certain airport, school, and housing projects applies.

Development of the proposed BSMP, in combination with buildout of the Yuba City General Plan and other development in the Feather River watershed protected by the levee systems within Sutter County, would place housing and other structures within flood hazard areas of the Feather River and of local waterbodies like Gilsizer Slough. The placement of structures within flood hazard areas would increase risk of flooding on developed areas and could impede or redirect flows increasing areas of flooding elsewhere in the City. This is considered a significant cumulative impact.

As described previously, all proposed development within the BSMP site would be required to demonstrate consistency with ULOP criteria and adhere to all standards set forth in Chapter 9, Article 6 of the Yuba City Municipal Code, Flood Damage Prevention. The proposed BSMP project would use on-site soil and imported fill to raise building pad elevations to be one foot above the 100-year flood elevation to meet the FEMA standards for NFIP and meet the ULOP criteria set forth by the City. Further, as described previously, the BSMP would construct a stormwater drainage system that would contain the 100-year storm and reduce flow rates off-site,

thereby reducing flood flows downstream. This would prevent the redirection of flood flows from expanding to other areas within the City.

The Yuba City Flood Damage Prevention ordinance mandates substantial evidence of meeting ULOP and 100-year flood protection standards for new development prior to approval of the project and building permit. In September 2007 Yuba City, Sutter County, Butte County, Levee Districts 1 and 9, and the cities of Live Oak, Gridley and Biggs entered into a joint powers agreement to fund the local share of costs associated with levee improvements in the region. Subsequently, the City adopted a permit fees that apply to new and some existing development within the areas of the City protected by the levee improvement program. Payment of these fees along with compliance with the City Flood Damage Reduction ordinance would result in a less than considerable contribution and impacts would be **less than significant**.

Mitigation Measure

None required.

Impact 3.9-10: Development pursuant to the proposed BSMP, in combination with other development within Sutter County, could increase the number of people and structures that could be exposed to dam failure inundation hazard.

CEQA generally does not require that public agencies analyze the impact existing environmental conditions might have on a project's future users or residents, according to the California Supreme Court's decision in *California Building Industry Association v Bay Area Air Quality Management District* (S213478, December 17, 2015). An agency must analyze how environmental conditions might adversely affect a project's residents or users only where the project itself might worsen existing environmental hazards in a way that will adversely affect them, or if one of the provisions of CEQA which require such an analysis for certain airport, school, and housing projects applies.

Development of the proposed BSMP, in combination with development within the mapped dam inundation zones, would increase the population at risk for flooding within dam inundation zones. This is considered a significant cumulative impact. Urban development in Yuba City and the SOI would increase the number of people who could be exposed to flood hazard, in the unlikely event of dam overtopping or structural failure due to natural or human-caused events. Both Yuba City and Sutter County have established emergency response mechanisms in place.

The proposed BSMP would facilitate development that would increase the number of people and structures that could be exposed to flooding from a dam failure; however, the proposed BSMP would not directly affect how the aforementioned dams would be operated, or result in the construction of a new dam. Therefore, the potential for a dam failure would be low and the proposed BSMP would not affect the potential for dam failure and the proposed BSMP would have a less-than-considerable contribution and impacts would be **less than significant**.

Mitigation Measure

None required.

3.10 Land Use and Planning

This section addresses the land use and planning effects that may arise from implementation of the proposed BSMP project. The section describes existing and planned land uses in and adjacent to the BSMP project site, including current land uses, land use designations, and zoning. Section 15125 of the CEQA Guidelines states that an “EIR shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans.” Thus, potential inconsistencies between the proposed BSMP project and the Yuba City General Plan (2004), the Yuba City Zoning Code, relevant policies of the County of Sutter 2030 General Plan, and the Sutter County and Yuba County Airport Land Use Compatibility Plans are discussed in this chapter. Because the proposed BSMP project would require a sphere of influence (SOI) amendment, prior to annexation of Phase 1 and 2 into the Yuba City limits, this section also examines Sutter County Local Agency Formation Commission (LAFCO) policies concerning annexation and the expansion of the City’s SOI. Notwithstanding the conclusions reflected in this section, the final determination of consistency of the proposed BSMP with applicable plans and policies of the Yuba City General Plan is within the authority of the City Council. The information provided in this chapter is intended to inform that determination.

The City does not consider inconsistency with plan policies or codes necessarily to be indicative of significant environmental impacts. The extent that physical environmental effects would occur as a result of policy inconsistencies is disclosed in the environmental resource sections of Chapter 3 of this EIR. Thus, the reader is referred to the various environmental resource evaluations presented in Chapter 3 for a discussion of potential physical/environmental effects and potential incompatibilities that may be considered in the determination of physical environmental impacts. For example, land uses that produce excessive noise, light, dust, odors, traffic, or hazardous emissions may be undesirable when they intrude on places used for residential activities (e.g., residences, parks). Thus, certain industrial or commercial uses (which can produce noise and odors) may not be considered compatible with residential, educational, or healthcare uses, unless buffers, landscaping, or screening could protect residents from health hazards or nuisances. Such potential land use incompatibilities are addressed in the applicable environmental resource sections in Chapter 3, Environmental Impacts, Setting, and Mitigation Measures.

Comments received in response to the notice of preparation addressed the definition of multi-family residential development, the relationship of the BSMP to other annexation actions near the BSMP site, consistency with Sutter County General Plan policies regarding SOI expansion and subsequent required actions, land use compatibility with Sutter County and Yuba County airports, increased density on the project site, impacts to existing residences, and potential impacts to agricultural land and the use of agricultural buffers.

The analysis in this section was developed based on information provided in the Yuba City General Plan,¹ the County of Sutter 2030 General Plan,² the Sutter County and Yuba County Airport Land Use Compatibility Plans,^{3,4} the Yuba City Zoning Code, and the proposed BSMP Development Standards and Guidelines.

3.10.1 Environmental Setting

The BSMP site is located in unincorporated Sutter County, immediately to the south of the City of Yuba City. It is also located within a 5,079-acre area designated by the Sutter County General Plan Land Use Plan as a possible future expanded SOI, or annexation area, for Yuba City. Yuba City is located in northern Sutter County, around the intersection of State Route (SR) 99 and SR 20 along the Feather River, immediately west of the Yuba River and City of Marysville and south of the City of Live Oak.

Existing Uses

Full Master Plan

The BSMP project site encompasses 114 parcels that comprise approximately 741 acres immediately to the south of the City of Yuba City, in unincorporated Sutter County. Uses on the BSMP site are comprised of primarily agricultural lands and rural residences, but also include a gas station at the southwest corner of SR 99 and Bogue Road and a Pacific Gas and Electric (PG&E) substation located near the corner of Railroad Avenue and Tuscan Road. The majority of agricultural lands located within the BSMP site contain orchards. The orchards are accessible from public streets and private dirt roads. Residences that currently exist within the BSMP site are generally located adjacent to existing roads.

SR 99 is a four-lane State highway that bisects the BSMP site and connects it to Yuba City to the north and mostly rural areas across Sutter County to the south, and connects more broadly between the cities of Sacramento and Chico. The Kells East Ranch subarea of the BSMP site is located immediately to the west of SR 99 and the Newkom Ranch subarea is located immediately to the east. Railroad Avenue is major north-south, two-lane road that bisects the BSMP site, generally to the east of the Newkom Ranch phase of the project. Other north-south roadways include two-lane South Walton Avenue, which is along the western boundary of the BSMP site, and the four-lane Garden Highway, which is generally near the eastern boundaries of the BSMP site and connects it to downtown Yuba City. Bogue Road and Stewart Road are the only streets that travel east-west across the BSMP site. Both of these two-lane roads are the northern and southern boundaries for the BSMP site, respectively.

Gilsizer Slough is a drainage channel that transects the BSMP site from north to south and between South Walton Avenue and SR 99 and it is largely fenced off or adjacent to private

¹ City of Yuba City, 2004. *Yuba City General Plan*. April 8, 2004.

² Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

³ Airport Land Use Commission, 1994. *Sutter County Airport Comprehensive Land Use Plan*. Adopted April 1994.

⁴ Airport Land Use Commission for Sacramento, Sutter, Yola, and Yuba Counties, 2011. *Yuba County Airport Land Use Compatibility Plan*. Adopted March 17, 2011.

property. The Feather River is located immediately to the east of the BSMP site and flows north to south. The nearest crossing over the Feather River to the south of the BSMP site is located on SR 99 near the community of Nicolaus, approximately 13.7 miles away, and the nearest crossing to the north of the BSMP site is via Bridge Street to the Twin Cities Memorial (aka 5th Street) Bridge in Yuba City, approximately 3.8 miles to the north.

Riverbend Elementary School is a K-8 school operated by Yuba City Unified School District and is located between the two sections of the BSMP site along Stewart Road near Garden Highway.

Newkom Ranch

The Newkom Ranch site is generally located in the center of the BSMP site and is adjacent to SR 99. This component of the BSMP site is generally bounded by SR 99, Bogue Road, Railroad Avenue, and Stewart Road, although multiple parcels along the western side of Railroad Avenue form the actual boundary for the Newkom Ranch site. Uses within this area include orchards.

Kells East Ranch

The Kells East Ranch site is located in the west of the BSMP site, specifically to the west of SR 99. This component of the BSMP site is generally bounded by Gilsizer Slough, Bogue Road, SR 99, and Stewart Road. Uses within this area include one rural residence on Stewart Road and orchards.

Surrounding Uses

The BSMP site is generally surrounded by agricultural uses to the west and south and residential uses to the north and east.

West of SR 99, the northern parcels along Bogue Road are mainly agricultural, comprising mostly orchards, although there is a church located at the northeast corner of Bogue Road and South Walton Avenue. To the northwest of the corner of Bogue Road and South Walton Avenue, there are a number of single-family residences that extend to Sanborn Road.

East of SR 99, nearly all bordering northerly parcels along Bogue Road contain single-family residences, apart from a park-and-ride facility for the community and gas station located at the northeast corner of SR 99 and Bogue Road. The park-and-ride facility provides the local community with both local bus services across Yuba and Sutter Counties and express and commuter buses to Sacramento via Yuba Sutter Transit. Further north along SR 99, several parcels contain a variety of mostly industrial uses.

Along the eastern boundary of the main section of the BSMP site, orchards and agricultural uses, along with some single-family residential uses east of Tuscan Road and Riverbend Elementary School along Stewart Road, near the southeast corner of the BSMP site. Areas to the south of Stewart Road and west of South Walton Road are generally comprised of single-family residential uses, rural residential uses and agricultural uses—mainly orchards. Single-family residential uses are concentrated on Stewart Road between SR 99 and Caminito Avenue. There is

a storage company operating at the southeast corner of SR 99 and Stewart Road, an irrigation pump business is located further west along the southern side of Stewart Road, and Yuba City Unified School District's Transportation and Maintenance Office and bus storage is located at the southeast corner of Stewart Road and South Walton Avenue.

For the eastern section of the BSMP site located east of Garden Highway, single-family residences surround it to the north and northwest, the Feather River runs along its eastern border, orchards and some rural residences surround it to the south and southwest, and Riverbend Elementary School is located along its western border, across from Garden Highway.

Sutter County General Plan Land Use and Zoning Designations

The BSMP site is located adjacent to but outside the incorporated boundaries of the City of Yuba City and its SOI. As such, the BSMP site currently has no land use designations under the Yuba City General Plan. However, the Sutter County General Plan recognizes the BSMP site as comprising a portion of a possible future expanded SOI or annexation area for Yuba City.

As identified in the Sutter County General Plan, nearly half of the BSMP site is designated as Estate Residential, which allows for a density of between 0.3 and 2 dwelling units per acre (du/ac). Land within the BSMP site designated as Estate Residential is concentrated to the east of SR 99 and west of Riverbend Elementary School. A few parcels within the BSMP site along Railroad Avenue and near the intersections of Railroad Avenue and Bogue Road and Railroad Avenue and Stewart Road are designated Low Density Residential, which allows for a density of between 2 and 8 du/ac. There is also a gas station located at the southwest corner of SR 99 and Bogue Road that is currently designated as Industrial. All other land within the BSMP site is designated as Agriculture, 20-acre minimum (AG-20).

The Sutter County General Plan describes the Estate Residential designation as intended to provide for areas located within existing rural communities, new Rural Planned Communities, and unincorporated areas within the Live Oak SOI and both the existing or possible future Yuba City SOI. This designation is comprised of residential development on larger parcels ranging from 0.5 to 3 acres in size. The primary use is large lot single-family detached dwellings, including guesthouses. To avoid the premature conversion of agricultural lands and inefficient land use patterns, the amount of Estate Residential land use allocated within the County is limited. Prior to designating new Estate Residential land use, the County Board of Supervisors must find that there is a market demand for the use, existing Estate Residential land uses have been substantially built out, the use can be adequately served by services and infrastructure available at the time of project approval (either community or individual water and wastewater systems), and the use is compatible with adjacent and nearby uses.

The Low Density Residential designation is applied to suburban and urban areas suitable for single-family residential neighborhoods, with individual homes on lots ranging in area from 5,000 square feet to 0.5 acres. Typical permitted uses include detached single-family dwellings, day

care, religious institutions, and necessary public utility and safety facilities. Secondary dwelling units may be permitted subject to County standards.

The Industrial designation is intended to provide for light industrial, general industrial, and manufacturing uses. This designation is applied primarily within existing rural communities and new Growth Areas. Typical permitted uses are those that provide manufacturing, assembling, processing, fabricating, bulk handling of products, storage, warehousing, and heavy trucking. Light and heavy industries are required to conduct their operations in designated areas and minimize external visual and operational impacts on adjoining uses.

The Agriculture designation is intended to provide for the long-term production, processing, distribution, and sale of food and fiber on prime agricultural soils and other productive and potentially productive lands. This designation is applied in locations that have minimal intrusion and conflict from non-agricultural uses, or where such conflicts can be mitigated. Typical permitted uses include crop production, orchards, grazing, pasture and rangeland, and associated residences and agricultural support uses.

Figure 2-2 shows the Sutter County General Plan designations for the BSMP site and surrounding properties. Figure 2-3 shows the Sutter County zoning designations for the BSMP site and surrounding properties. As described above and discussed further below, implementation of the BSMP would require the concurrent expansion of the Yuba City SOI and annexation of the BSMP site into the City of Yuba City, and the BSMP would be developed consistent with the City's General Plan and the proposed BSMP Development Standards and Guidelines described below.

3.10.2 Regulatory Framework

Federal

There are no federal regulations that pertain to land use that are applicable to the proposed project.

State

Agricultural Land Regulation

The BSMP site comprises predominantly agricultural land which is regulated under a number of State regulations aimed at the preservation of agricultural land. Please see Section 3.2, Agriculture and Forestry Resources, for analyses specific to agricultural resources.

LAFCO

In 1963, the California Legislature established LAFCOs in each county and provided them with regulatory authority over boundary changes occurring within and surrounding local agencies. LAFCOs are responsible for applying the provisions of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 to their decisions regarding annexations, incorporations,

reorganizations, and other changes in government organization (California Government Code [CGC], Section 56000 et seq.). LAFCOs are required to consider the following objectives:

- Ensure the efficient provision of government services (CGC, Section 56301);
- Favor the logical formation and determination of local boundaries (CGC, Section 56301);
- Discourage urban sprawl and encourage infill development (CGC, Sections 56001 and 56301 and Policy 3c [2]);
- Require the adequate and timely provision of services (particularly water) (CGC, Section 56668[k]) to annexing areas;
- Discourage the premature conversion of prime agricultural land and open space (CGC, Section 56301);
- Consider and mitigate, if necessary, the fiscal consequences of annexation (CGC, Section 56886);
- Prohibit the creation of unincorporated islands except under unique and specified circumstances (CGC, Section 56744); and
- Consider the extent to which the fair-share housing needs are met (CGC, Sections 56668[1] and 56001).

School Siting

The proposed BSMP project would involve designating a parcel—Lot 1, which is located at the southeast corner of Bogue Road and South Walton Avenue—for a future K-8 combined elementary and middle school. Please see Section 3.13, Public Services, for more information about the proposed school site.

The California Department of Education maintains specific guidelines for public schools regarding facility placement that tend to feature more stringent restrictions than other types of development. Additionally, if any state school bonds are used for the proposed school land use, then the school district must prepare a Phase I environmental site assessment and any other studies required by the California Department of Toxic Substances Control (DTSC) to ensure safety on the school site. Evaluation results would be subject to review by the DTSC prior to parcel development. If the DTSC determines that no further investigation is needed, the site would be cleared for DTSC approval. However, if the DTSC does not approve the particular site assessment, a Preliminary Environmental Assessment would be required. The evaluation of the school site would also be subject to a subsequent CEQA review process by the school district upon purchase or intent to purchase the identified site due to these potential impacts and because approval of the school falls under a separate jurisdiction.

California Senate Bill (SB) 352 was adopted in 2003 and limits locating public schools within 500 feet of a freeway or busy traffic corridor (Section 17213 of the Education Code; Section 21151.8 of the Public Resources Code). The California Education Code, Section 17213 specifies that a school district may not approve a project involving the acquisition of a school site unless it

determines that the property to be purchased or built upon does not contain a pipeline situated underground or aboveground that carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line used only to supply that school or neighborhood. The California Code of Regulations, Title 5, Section 14010(h) states that, “the site shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above-ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional.” State guidelines also establish a strict student/acreage ratio, and this guide provides flexible formulas that permit each district to tailor its ratios as necessary to accommodate its individual conditions. The Department of Education also recommends that a site utilization study be prepared for the site, based on these formulas.

Local

The BSMP site is currently in unincorporated Sutter County and subject to its General Plan and Zoning Code. Implementation of the proposed BSMP would require the concurrent expansion of the Yuba City SOI and annexation of the BSMP site into the City of Yuba City, and the development of the BSMP would be required to be substantially compliant with Yuba City General Plan and the Yuba City Zoning Code.

Although the BSMP site would be annexed into the City, the Sutter County General Plan anticipates and includes policies relevant to the timing of and intergovernmental coordination related to potential annexation of land to the City.

The following presents goals and policies in the Yuba City General Plan and the Sutter County General Plan that are applicable to the proposed BSMP. A discussion of proposed BSMP consistency with Yuba City and Sutter County General Plans is provided below under Section 3.10.3, Land Use Evaluation.

Yuba City General Plan

The following land use and planning guiding and implementing policies from the City of Yuba City General Plan are applicable to the proposed BSMP.

Guiding Policy 3.4-G-1 Maintain a well-defined compact urban form, with a defined urban growth boundary and urban development intensities on land designated for urban uses.

Guiding Policy 3.4-G-2 Promote a balanced land use program that increases the ability of people to live and work in the city.

Guiding Policy 3.4-G-3 Promote development patterns that maximize residents’ accessibility to parks, open space, and shopping areas.

Implementing Policies

3.4-I-2 Establish standards for urban edges and ensure that designated intensities and uses provide an appropriate transition to rural land at these edges.

- 3.4-I-3 Require preparation of City initiated Specific Plans or developer master plans for strategic new growth areas with complex land use programs.
- 3.4-I-4 Support the County’s efforts to maintain viable agricultural uses surrounding the City in areas outside the proposed Urban Growth Boundary.
- 3.4-I-5 Provide a variety of housing in all neighborhoods and reserve sites, where appropriate, for housing types that ensures that Yuba City remains an inclusive, affordable community.
- 3.4-I-6 Provide for concentrations of activity and mixed-use and pedestrian-oriented development in selected areas.

Guiding Policy 3.5-G-1 Encourage new residential growth to be in the form of neighborhoods.

A neighborhood is defined as an area of over forty acres that includes a variety of complementary uses in which non-residential uses serve local residential uses.

Guiding Policy 3.5-G-2 Encourage development of mixed-use (residential, retail, and office) neighborhood centers, in both new neighborhoods and in established neighborhoods that lack them.

Centers are concentrations of activity and uses that serve a neighborhood function. They are located within close proximity and easy walking distance from adjacent residences.

Guiding Policy 3.5-G-3 Allow and encourage low-medium density small-lot single-family housing development in new and existing neighborhoods that enable compact development and efficient infill.

In addition to the benefit of affordability, small-lot housing increases opportunities to conserve land and can provide a positive aesthetic quality as characterized by Yuba City's older neighborhoods.

Guiding Policy 3.5-G-4 Improve the “community orientation” of new residential developments.

A “community orientation” calls for greater attention to the relationship between residences, streets and shared spaces, such as parks and community areas, and does not require sacrifice of privacy or amenities.

Guiding Policy 3.8-G-2 Promote neighborhood identity and encourage use of alternative modes of transportation by providing neighborhood shopping centers that many residents can reach on foot or bicycle.

Implementing Policies

- 3.8-I-2 Evenly distribute neighborhood and community shopping centers in new development areas to offer both choice and convenience for shoppers and residents.

- 3.8-I-4 Ensure that neighborhood retail centers and commercial service buildings are compatible with the surrounding neighborhood and with adjacent travel corridors.
- 3.8-I-7 Encourage the development of community commercial facilities that are accessible to both vehicles and pedestrians, and include amenities for both.

Guiding Policy 3.9-G-2 Encourage employment generating uses to locate along major transportation facilities.

Implementing Policies

- 3.9-I-2 Allow supporting retail and business services and other complementary uses in Office & Office Park areas.
- 3.9-I-9 Seek cooperative agreements with Sutter County towards the development of agricultural- and resource-based employment centers in areas outside the Yuba City Sphere of Influence, adjacent to the urban area, and along key transportation corridors.

Guiding Policy 4.2-G-1 Establish a clear distinction between the urban growth area and the surrounding rural and agricultural land.

Urban/Rural Edge

Implementing Policies

- 4.2-I-1 Establish a distinct design character for new development along Bogue Road, Township Road and Pease Road in order to clearly demarcate the urban edge. This will be accomplished by:
- Enforcing a 60-foot minimum rear setback requirement on new development along these roads;
 - Creating a 40-50-foot-wide landscaped buffer within the public right-of-way;
 - Planting multiple layers of trees closely for visual impermeability; and
 - Limiting local access (but allowing collector and arterial access and only a minimal number of residential streets) from these roads in order to maintain continuous street edges.
- 4.2-I-2 Create a “soft” transition at the urban/agricultural edge by appropriate landscape, with large canopy trees that are visually compatible with schools.
- 4.2-I-3 Maintain views into the agricultural lands on the rural side of the roadways by:
- Not planting within the right-of-way, trees spaced farther, and
 - Designating a minimum of 6 feet of space in the right of way for a curb and gutter on the rural side of the road.
- 4.2-I-4 Differentiate the landscape treatment of urban edges near key intersections.

Guiding Policy 8.2-G-1 Promote preservation of agriculture outside of the urban growth area.

Implementing Policies

- 8.2-I-2 Facilitate the continuance of agricultural activities within the City's urban growth area until the land is needed to accommodate population and employment growth. During this interim, minimize conflicts between agricultural uses and urban/suburban uses through site design techniques (not necessarily structural barriers).
- 8.2-I-3 Require property developers adjacent to sites where agricultural uses are being conducted to inform subsequent buyers of potential continued agricultural production and the lawful use of agricultural chemicals, including pesticides and fertilizers.

Sutter County General Plan

The Sutter County General Plan was last amended in December 2016. As mentioned in Chapter 2, Project Description, the BSMP site is located within a 5,079-acre area designated by the Sutter County General Plan Land Use Plan as possible future expanded SOI or annexation area for Yuba City. Upon annexation, the BSMP site would be subject to the Yuba City General Plan, rather than the Sutter County General Plan. The following goals and policies from the Sutter County General Plan are applicable to the proposed BSMP.

Policies

- LU 5.3 **Yuba City Possible Future SOI.** Consider the possible future expanded sphere of influence identified on the General Plan Land Use Diagrams as Yuba City's possible boundary of future planned urban growth. Enter into a memorandum of understanding (MOU) with Yuba City prior to supporting the City's possible future expanded sphere of influence.
- LU 5.4 **Sphere Expansion.** Discourage the modification or expansion of Yuba City's and Live Oak's spheres of influence beyond the boundaries identified (including the possible future expanded Yuba City sphere of influence) on the General Plan Land Use Diagrams until substantial build out has occurred within the existing spheres, and a clear market demand exists for new uses that cannot be more efficiently accommodated in other defined growth areas in the County.

As of the publication of this Draft EIR, Yuba City has initiated discussion with Sutter County regarding expansion of the Yuba City SOI.

Yuba City Zoning Ordinance

The Yuba City Title 8 Planning and Zoning Ordinance of the Municipal Code implements the City's General Plan and sets forth permitted and conditional uses for each zone, in addition to specifying development standards such as setbacks and lot coverage, among other issues.

Proposed BSMP Development Standards and Guidelines

The proposed BSMP Development Standards and Guidelines would provide direction for the planning, design, and review of development within the BSMP project site. The stated intent of the Development Standards and Guidelines is to contribute towards the creation of a unified

community that is characterized by high quality, diverse, attractive, and functional development. The Development Standards and Guidelines would influence the proposed BSMP project's visual character by establishing mandatory standards and recommended guidelines for site planning, architecture, screening, lighting, roadways, streetscapes, and landscaping. The Development Standards and Guidelines would serve to guide property owners, developers, builders, and design professionals on project design. They would also be used by public officials in the review, conditioning, and approval of discretionary development applications within the BSMP project site. Each individual development would be required to demonstrate how it meets the intent of the Development Standards and Guidelines.

The Yuba City General Plan, Zoning Code, and Citywide Design Guidelines apply to all projects and improvements subject to discretionary approval by the City of Yuba City. The proposed BSMP Development Standards and Guidelines would provide added direction for development within the BSMP project site. Where the provisions of the proposed BSMP Development Standards and Guidelines conflict with other City plans or requirements, the provisions of the Development Standards and Guidelines would prevail. Where the proposed BSMP Development Standards and Guidelines are silent, the applicable provisions of the other City plans, zoning ordinance or other requirements would be applicable.

Proposed BSMP Development Standards and Guidelines that would be applicable to land use compatibility are provided below.

Residential Design Guidelines

Edge Treatments

Intent: Ensure compatibility and integration between adjacent uses and spaces.

- Along the eastern edge of the project where new development abuts existing single-family residential, neighborhood layout should encourage integrating existing residential streets and enhance connectivity. Lotting patterns, densities and building types should be compatible with the immediately abutting existing residential uses.
- Use single-loaded roadways adjacent to parks and open space areas (such as Gilsizer Slough, detention areas, neighborhood parks) to the extent feasible to enhance neighborhood access and visibility. A minimum of 50 percent of the edge between residential uses and a park or open space area shall be open via single-loaded streets, live end cul-de-sacs, paseos, or other features that encourage pedestrian-/bike-connectivity.
- Encourage the use of attached or detached small-lot single family product types as a transition between traditional single-family units and attached multi-family units.
- Provide buffering between new residential development and adjacent rural residential and agricultural uses outside of the BSMP site along Stewart Road and South Walton Avenue (see **Figure 3.10-1**):
 - Maintain a minimum buffer of 168.0 feet between new residential structures and adjacent rural/agricultural uses consistent with the 1999 settlement agreement between Yuba City

and Sutter County and the Yuba City General Plan. Such buffer may include the road right-of-way, roadside landscape easements and expanded residential setbacks.

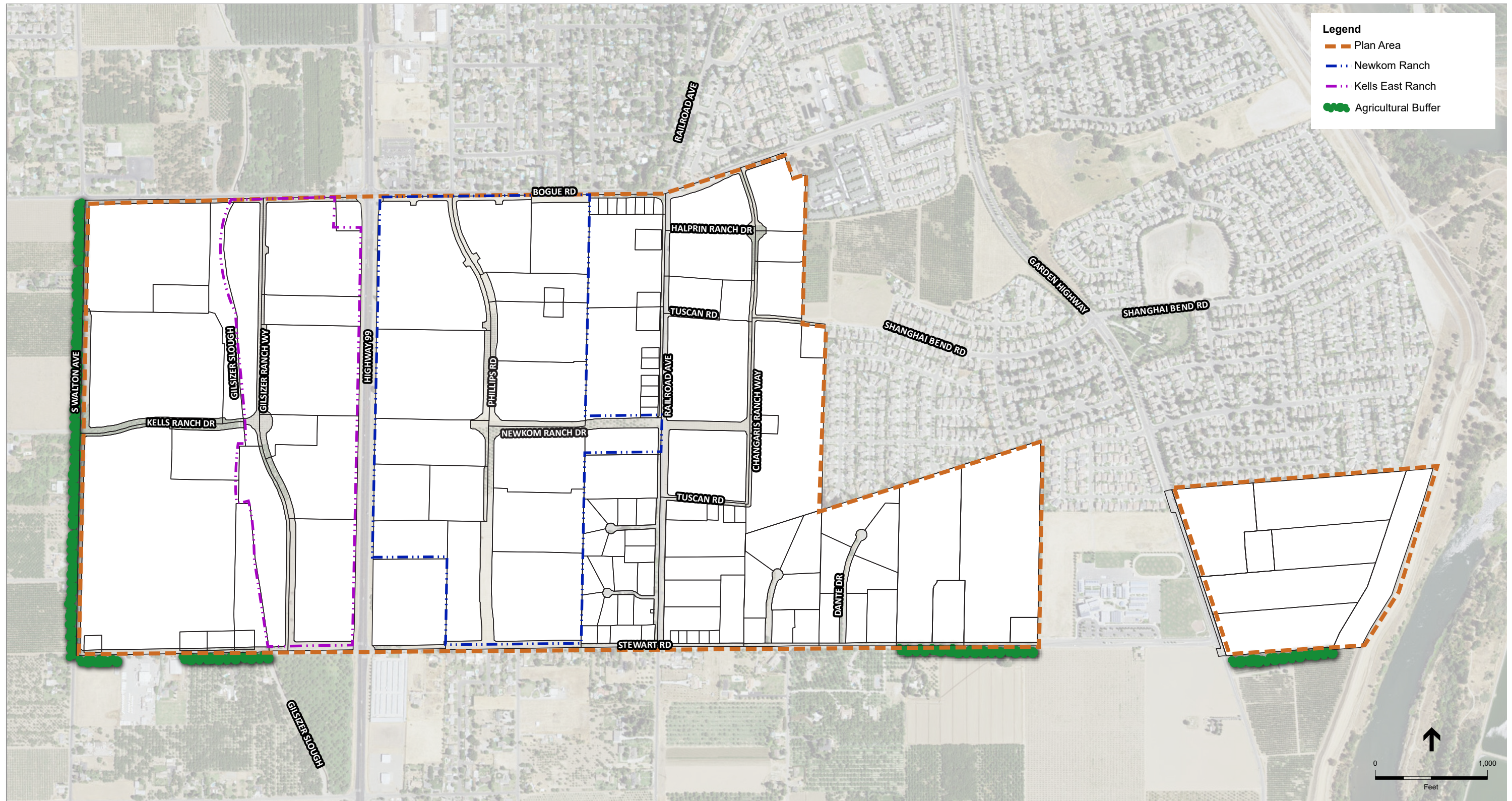
- Create a “soft” transition at the urban/agricultural edge by incorporating appropriate landscaping, with multiple layers of large canopy trees (hedgerows) that are compatible with adjacent rural and agricultural uses and provide visual impermeability.
- Apply the buffer guidelines from the Yuba City Urban-Rural Edge report as appropriate. While this report did not anticipate expansion of the City’s boundary to incorporate the BSMP site, the guidelines establish roadway buffer, access and trail, landscape planting and site furnishing treatments that should be applied to the buffers along Stewart Road and Walton Avenue.

Commercial and Employment Design Guidelines

Neighborhood Compatibility and Edge Treatment

Intent: To ensure compatibility between uses.

- Where commercial and employment uses share a common property line with existing or planned residential uses, incorporate the following design elements:
 - Incorporate a 6 to 8-foot-high solid wall constructed of masonry, concrete or equivalent material along the common property line (except at pedestrian, bicycle and vehicle cross access points).
 - Accompany these solid walls with dense landscaping (trees, shrubs and groundcover) within a minimum 10-foot-wide landscape planter on the non-residential side of the wall. Plant materials are to be selected and located to maximize the opportunity to screen views of non-residential buildings.
 - Use lighting sources with shields located to avoid light spillage and glare onto adjacent residential properties.
 - Locate loading docks, refuse enclosures, trash compactors, and other utility/maintenance facilities away from residential uses. Such facilities are to be enclosed with solid walls constructed of masonry, concrete or equivalent material to minimize noise impacts on adjacent properties. Non-residential projects may be conditioned to limit delivery hours.
 - Incorporate architectural enhancements, roof line variations, and other techniques to minimize the apparent massing of buildings adjacent to residential uses.
 - Designate pedestrian access/paseos connecting to neighboring uses as appropriate. For example, consider use of pedestrian connections at regular intervals along the fence/wall separating commercial areas from adjoining multi-family units to encourage access and connectivity.



SOURCE: USDA, 2014; City of Yuba City, 2016; MHM, 2016; ESA, 2016

Bogue-Stewart Master Plan . 140720

Figure 3.10-1
Agricultural Buffers

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- Where commercial and employment uses are across from existing residential development along Bogue Road, incorporate the following design elements:
 - Use lighting sources with shields located to avoid light spillage and glare onto adjacent residential properties.
 - Create a “soft” transition by incorporating appropriate landscaping within required landscape corridors and building setbacks, with multiple layers of large canopy trees (hedgerows).
 - Locate loading docks, refuse enclosures, trash compactors, and other utility/maintenance facilities away from residential uses. Such facilities to be enclosed with solid walls constructed of masonry, concrete or equivalent material to minimize noise impacts on nearby residential properties. Non-residential projects may be conditioned to limit delivery hours.
 - Incorporate architectural enhancements, roof line variations, and other techniques to minimize the apparent massing of buildings adjacent to residential uses.

- Where commercial and employment uses are across from existing rural residential and agricultural uses along Stewart Road and Walton Avenue, incorporate the following design elements:
 - Use lighting sources with shields located to avoid light spillage and glare onto adjacent residential properties.
 - Create a “soft” transition at the urban/agricultural edge by incorporating appropriate landscaping within required landscape corridors and building setbacks, with multiple layers of large canopy trees (hedgerows) that are compatible with adjacent rural and agricultural uses and provide visual impermeability.
 - Apply the buffer guidelines from the Yuba City Urban-Rural Edge report as appropriate.

Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento Region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba, as well as 22 cities, including the City of Sacramento. SACOG provides transportation planning and funding for the region, and serves as a forum for the study and resolution of regional issues. In addition to preparing the region’s long-range transportation plan, SACOG approves the distribution of affordable housing in the region and assists in planning for transit, bicycle networks, clean air, and airport land uses.

SACOG, in partnership with the non-profit organization Valley Vision, undertook the Blueprint Project to build a consensus around a single, coherent, long-term vision for the development of the Sacramento region. The Blueprint was not intended to advocate any particular development pattern; instead, SACOG assumed that if it provided accurate information and forecasting tools to a wide variety of interest groups, a consensus would naturally emerge on what the region as a whole wanted for its future.

Through discussions at a series of workshops held throughout the greater Sacramento region, a consensus emerged that the low-density, segregated land use developments of the recent past would likely cause deterioration in the regional quality of life if continued into the future. The regional consensus supported the notion that future development should follow the principles of “smart growth,” incorporating density of both residential and commercial development, diversity of land uses within a neighborhood, design of the neighborhood, and access to regional destinations.

The Blueprint, adopted by the SACOG Board of Directors in December 2004, is a voluntary framework for guiding future growth in the region. The Blueprint is not a policy document and does not regulate land use or approve or prohibit growth in the region. The Blueprint is a transportation and land use analysis suggesting how cities and counties should grow based on the key principles listed below. A key issue for the Blueprint Project is that compliance with the adopted plan relies entirely on SACOG’s ability to persuade jurisdictions to voluntarily follow the SACOG model. The Blueprint is intended by SACOG to be advisory and to guide the region’s transportation planning and funding decisions.

The approved Blueprint is based on seven interlocking principles:

- Compact Development that requires less conversion of rural land, shortens travel distances, and reduces the per-unit cost of infrastructure and services.
- Housing Choices, in particular small lot single-family dwellings and attached products that suit the needs of seniors, empty-nesters, young couples, single-person households, single-parent households and other types of small households that currently make up 4-out-of-5 American households. The smaller products fit well with the theme of compact development.
- Mixed-Use Developments that allow people to work and shop near their home.
- Use of Existing Assets, in particular the development of sites that are already within the urban footprint and urban services coverage. This includes both infill development of vacant lots as well as re-development of under-utilized sites such as low-density strip retail areas.
- Transportation Choices, in particular the ability to use non-auto modes (transit, bike, walk) for at least some trips. Non-auto modes are most practical in compact, mixed-use communities.
- Quality Design in terms of aesthetic buildings but also in terms of providing attractive, walkable public spaces that create a sense of community.
- Conservation of Natural Resources through less conversion of land to urban use, slower growth of demand for water, and reduction in the amount of per-capita auto travel.

Following the principles of the Blueprint, the SACOG 2036 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) is a plan for improving regional transportation. The MTP/SCS 2036 proactively links land use, air quality, and transportation needs for the greater Sacramento region. Goals include shortening commute times, reducing traffic congestion, lessening dependence on automobiles, improving air quality, reducing greenhouse gas emissions, reducing distances traveled between jobs and housing, and providing

for housing choices more aligned with the changing demographic. While the MTP/SCS is not a land use plan, it does include assumptions for land use and development trends.

The BSMP site is designated as “Blueprint Vacant Urban Designated Lands Not Identified for Development in the MTP/SCS Planning Period.”⁵ This type of category is defined as comprising areas of the region that are not expected to develop to urban levels during the MTP/SCS planning period, which has a horizon year of 2036. The MTP/SCS further states that these areas are generally dominated by commercial agriculture, forestry, resource conservation, mining, flood protection, or a combination of these uses.⁶ While the MTP/SCS acknowledges that some of these areas are covered under adopted plans that allow urban development, as is the case in the Sutter County General Plan, and that it is likely that some housing and employment growth associated with agriculture, forestry, mining, and other rural uses would occur in these particular areas by 2036, this document does not account for the proposed BSMP.

Airport Land Use Compatibility

Two airports are located within 2 miles of the BSMP site—Sutter County Airport and Yuba County Airport.

Sutter County Airport Comprehensive Land Use Plan

Sutter County Airport is located approximately 1.5 miles to the northeast of the BSMP site. The Sutter County Airport Comprehensive Land Use Plan (CLUP) was last adopted in April 1994 and establishes criteria and specific requirements for airport land use compatibility based on noise, safety, airspace protection, and overflight. All projects located within the Airport Influence Area at Sutter County Airport are required to be evaluated by SACOG and the Sutter County Airport Land Use Commission (ALUC). The ALUC reviewed the proposed BSMP site in relation to the CLUP for Sutter County Airport and determined that the proposed BSMP site is outside of the noise and safety zones of the CLUP, and therefore the proposed BSMP is compatible with the CLUP.⁷

Yuba County Airport Land Use Compatibility Plan

Yuba County Airport is located 1.4 miles to the east of the BSMP site. The Yuba County Airport Land Use Compatibility Plan was last adopted on March 17, 2011 and similarly establishes noise, safety, airspace protection, and overflight standards. SACOG also serves as the ALUC for this airport. Eastern portions of the BSMP site are located within the Yuba County Airport Airport Influence Area, specifically in Review Area 2. In Review Area 2, there are requirements that exist for airspace protection and overflight but not noise or safety. According to Policy 1.4.3(b), the following actions require ALUC review within Review Area 2:

⁵ Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)*. Adopted February 18, 2016. Pp. 28. Figure 3.2.

⁶ Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)*. Adopted February 18, 2016. Pp. 27.

⁷ Chew, Greg, SACOG/ALUC Senior Planner. Email communication to Ed Palmeri, Senior Planner, City of Yuba City Development Services Department, January 31, 2017.

1. Any proposed object (including buildings, antennas, and other structures) having a height that requires review by the Federal Aviation Administration in accordance with Part 77 of the Federal Aviation Regulation, commonly known as “FAR Part 77”.
2. Any project having the potential to create electrical or visual hazards to aircraft in flight (see Policies 3.3.3(c) and 3.3.3(d)), including:
 - Electrical interference with radio communications or navigational signals;
 - Lighting which could be mistaken for airport lighting;
 - Glare in the eyes of pilots of aircraft using the airport; and
 - Impaired visibility near the airport.
3. Any project having the potential to cause an increase in the attraction of birds or other wildlife that can be hazardous to aircraft operations in the vicinity of an airport.^{8,9}

For concerns of height, the FAR Part 77 surface would require FAA review for all buildings and objects 212 feet or greater.¹⁰

As shown on **Figure 3.10-2**, certain lots within the BSMP site would fall within Review Area 2 and would, therefore, be subject to the above requirements. These lots include:

- Portions of Lots 32, 34, 37, 38, 40, 41a, 44a, 44b, 44c, 44e, 44f, and 44g; and
- All of Lots 28, 33, 34, 35, 39, 41b, 44d, 45a, 45b, 46a, 46b, 47, 48, 49, and 50.

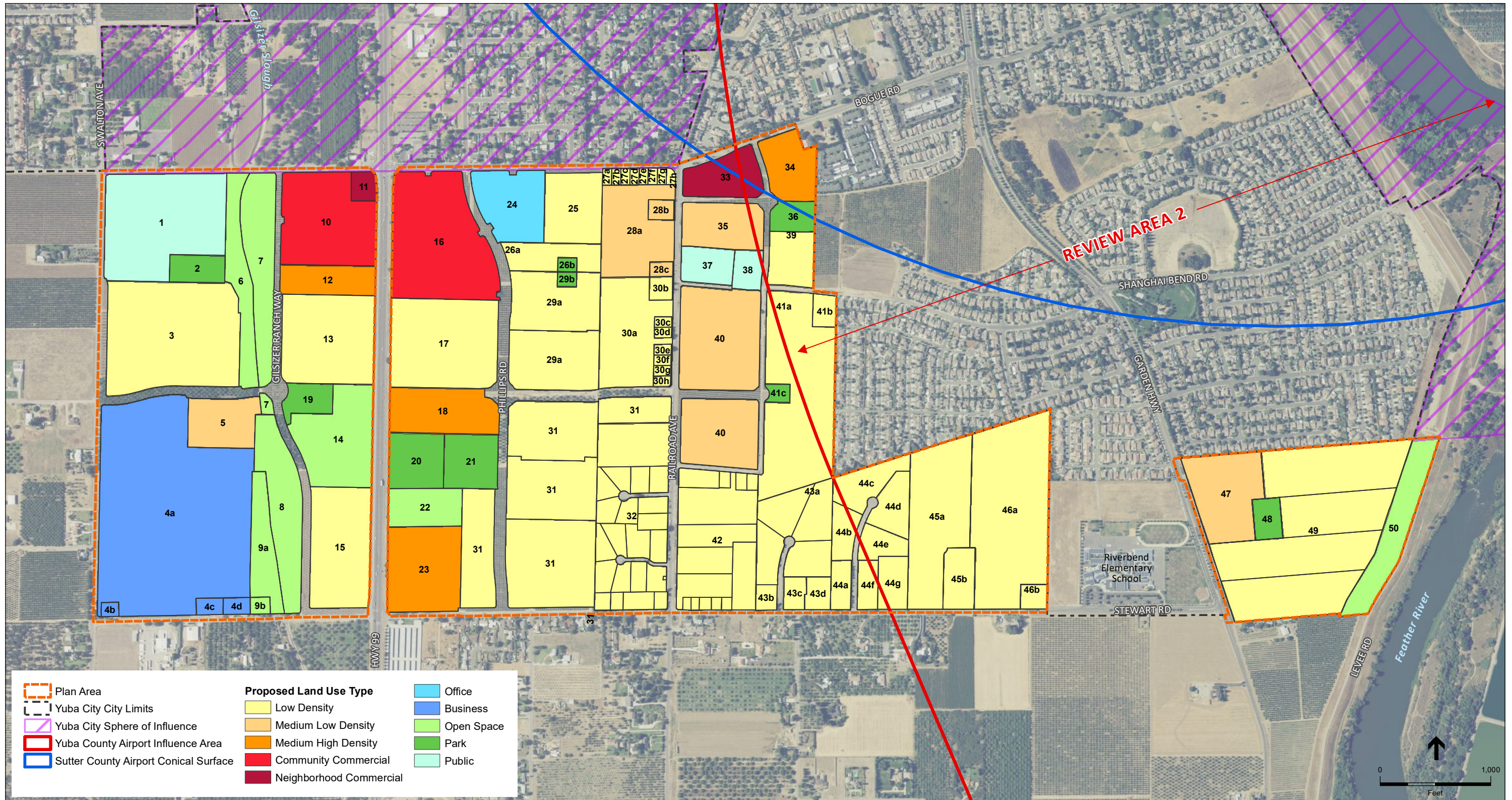
Review Area 2 does not include Newkom Ranch, Kells East Ranch, or any land west of SR 99.

These lots would be subject to possible ALUC review if any structures would be built at a height of 212 feet or greater. However, no buildings or structures within these lots would be anticipated to be built at a height of 212 feet and would thus not necessitate ALUC review. In addition, there would be no land uses within the proposed BSMP that would create electrical or visual hazards to aircraft in flight that would necessitate ALUC review. This issue is not discussed further in this EIR.

⁸ Airport Land Use Commission for Sacramento, Sutter, Yolo, and Yuba Counties, 2011. *Yuba County Airport Land Use Compatibility Plan*. Adopted March 17, 2011. Pp. 2-8.

⁹ See Section 3.8, Hazards, for additional information regarding potential hazards affecting airports that could be caused by the proposed BSMP.

¹⁰ Airport Land Use Commission for Sacramento, Sutter, Yolo, and Yuba Counties, 2011. *Yuba County Airport Land Use Compatibility Plan*. Adopted March 17, 2011. Pp. 2-49. Map 4.



SOURCE: USDA, 2016; City of Yuba City, 2016; MHM, 2018, ESA, 2019

Bogue-Stewart Master Plan and EIR . 140720
Figure 3.10-2
 Land Use and Airport Review Areas

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3.10.3 Land Use Evaluation

This section evaluates the proposed BSMP for compatibility with existing and planned adjacent land uses within and adjacent to the BSMP site and for consistency with adopted plans and policies. Physical environmental impacts resulting from implementation of the proposed BSMP are discussed in the applicable environmental resource sections in this EIR. This section differs from impact discussions in that only compatibility and consistency issues are discussed, as opposed to environmental impacts and mitigation measures. This discussion complies with section 15125(d) of the CEQA Guidelines, which requires EIRs to discuss inconsistencies with general plans and regional plans.

Compatibility with Adjacent Land Uses

Land use conflicts occur when adjacent land uses result in activities or features that become incompatible. For example, industrial or agricultural uses or busy roadways (which could produce noise, odors, and dust) may be considered incompatible with uses where people sleep or recreate. In addition, schools and medical care facilities are considered to be sensitive to noise disturbance and air pollution-related health risk factors. As noted above, physical environmental impacts resulting from implementation of the proposed BSMP, including impacts related to aesthetics, agricultural resources, air quality, hazards, and noise, are discussed in the applicable environmental resource sections in this EIR.

Phasing and Conflicts with Active Agriculture

As discussed above, the proposed BSMP would develop a planned community with a mix of residential, commercial, office/business, park and recreational sites, and public facilities on a 741-acre site that is currently occupied primarily by agricultural and rural residential uses.

Development within the BSMP site is anticipated to occur in three phases:

- Phase 1 – Newkom Ranch (development starting 2020);
- Phase 2 – Kells East Ranch (development starting 2022); and
- Remainder of the BSMP site (assumed to start in 2022).

As is characteristic of site development proposals, actual construction of the proposed BSMP would be determined on the basis of market demand. Therefore, it is assumed that the entire BSMP site would be developed gradually as the regional market allows, and not in a single construction program. Accordingly, it follows that the potential exists for land use conflicts within the boundaries of the BSMP site as development occurs over the long-term planning horizon. For instance, newly developed residential areas could for an extended period abut agricultural parcels that are actively farmed prior to development.

Conflicts between Uses

As described above, the BSMP site is generally surrounded by agricultural uses to the west and south and residential uses to the north and east, and the potential exists for land use conflicts between proposed uses within the BSMP site and adjacent residential and agricultural uses. These

potential conflicts and existing and proposed policies and guidelines designed to minimize or eliminate the conflicts are described below.

The predominant land use within the BSMP site would be residential. Residential development would range from low-density residential (2 to 8 dwelling unit per gross acre) to medium-high density residential (12 to 36 dwelling units per gross acre). Different types of residential uses are generally compatible, and the proposed BSMP would not propose any residential uses that would be incompatible with other adjacent residential land uses.

The proposed BSMP would also include neighborhood commercial, community commercial, office/office park, business/technology/light industry, parks and open space, school, and public facilities uses. As shown in Figure 2-6 in Chapter 2, Project Description, commercial and employment uses would generally be located along major roadways, while public facilities would be generally surrounded by residential development, parks, and open space. The proposed school site (Lot 1) at the southeast corner of Bogue Road and South Walton Avenue would be immediately to the west of Gilsizer Slough, while low-density residential uses would be located adjacent to the south of the proposed school site.

All commercial uses would be located along the southern side of Bogue Road, with larger-scale community commercial uses to be located at the southwest and southeast corners of SR 99 and Bogue Road, and neighborhood commercial uses at the southwest corner of SR 99 and Bogue Road and the southeast corner of Railroad Avenue and Bogue Road. Medium-high density residential and low-medium density residential uses would occur south of the commercial uses along both sides of SR 99, as well as portions near Railroad Avenue and Bogue Road and along Garden Highway in the eastern section of the BSMP site. The business/technology/light industry use would be located at a large lot located at the corner of South Walton Avenue and Stewart Road, and the office/office park use would be located on one lot, east of SR 99 on Bogue Road.

Instruments to Avoid Conflicts

Yuba City General Plan

The Yuba City General Plan includes policies designed to minimize land use incompatibilities, including incompatibilities between urban and rural uses. Policy 3.4-I-2 requires the establishment of standards for urban edges and ensure that designated intensities and uses provide an appropriate transition to rural land at these edges. Policy 3.9-I-2 requires the creation of a “soft” transition at the urban/agricultural edge through the incorporation of appropriate landscape, with large canopy trees that are visually compatible with schools.

Proposed BSMP Development Standards and Guidelines

As described above, the proposed BSMP Development Standards and Guidelines provide direction for the planning, design, and review of development within the BSMP project site. The Development Standards and Guidelines include mandatory standards and recommended guidelines for site planning, architecture, screening, lighting, roadways, streetscapes, and landscaping. The Development Standards and Guidelines would serve to guide property owners,

developers, builders, and design professionals on project design. They would also be used by public officials in the review, conditioning, and approval of discretionary development applications within the BSMP project site. Each individual development would be required to demonstrate how it meets the intent of the Development Standards and Guidelines.

The proposed BSMP residential design guidelines include specific guidance on edge treatments to ensure compatibility and integration between adjacent uses. Specifically, along the eastern edge of the BSMP site where new development abuts existing single-family residential uses, the proposed BSMP residential design guidelines specify that lotting patterns, densities and building types should be compatible with the immediately abutting existing residential uses.

The proposed residential design guidelines also require the provision of buffering between new residential development and adjacent rural residential and agricultural uses outside of the BSMP site along Stewart Road and South Walton Avenue, including requiring a minimum buffer of 168.0 feet between new residential structures and adjacent agricultural uses consistent with the Yuba City General Plan. The proposed guidelines further specify that development with the BSMP site should create a “soft” transition at the urban/agricultural edge by incorporating appropriate landscaping, with multiple layers of large canopy trees (hedgerows) that are compatible with adjacent rural and agricultural uses and provide visual impermeability.

The proposed BSMP commercial and employment design guidelines include specific guidance on edge treatments to ensure compatibility and integration between proposed BSMP commercial and employment uses with internal and adjacent uses. Specifically, where commercial and employment uses share a common property line with existing or planned residential uses, the proposed guidelines require commercial development to incorporate a 6 foot high decorative solid wall constructed of masonry, concrete or equivalent material along the common property line (except at pedestrian, bicycle and vehicle cross access points); accompany these walls with dense landscaping (trees, shrubs and groundcover) within a minimum 10 foot wide landscape planter on the non-residential side of the wall; use lighting sources with shields located to avoid light spillage and glare onto adjacent residential properties; and locate loading docks, refuse enclosures, trash compactors, and other utility/maintenance facilities away from residential uses.

For proposed commercial and employment uses across from existing residential development along Bogue Road, the proposed guidelines require new development to use lighting sources with shields located to avoid light spillage and glare onto adjacent residential properties; incorporation of appropriate landscaping within required landscape corridors and building setbacks, with multiple layers of large canopy trees (hedgerows); location of loading docks, refuse enclosures, trash compactors, and other utility/maintenance facilities away from residential uses. Such facilities would be required to be enclosed with solid walls constructed of masonry, concrete or equivalent material to minimize noise impacts on nearby residential properties.

For proposed commercial and employment uses across from existing rural residential and agricultural uses along Stewart Road and Walton Avenue the proposed guidelines require new development to use lighting sources with shields located to avoid light spillage and glare onto

adjacent residential properties, and to create a “soft” transition at the urban/agricultural edge by incorporating appropriate landscaping within required landscape corridors and building setbacks, with multiple layers of large canopy trees (hedgerows) that are compatible with adjacent rural and agricultural uses and provide visual impermeability.

Conclusions

Adherence to existing Yuba City General Plan policies and proposed BSMP Development Standards and Guidelines designed to minimize or eliminate land use conflicts would ensure that proposed development within the BSMP site would be compatible with internal and adjacent land uses.

Consistency with Adopted Plans and Policies

Yuba City General Plan

The proposed BSMP project would encompass the entire 741-acre site, which consists of the Newkom Ranch site, the Kells East Ranch site, and a composite of neighboring adjacent parcels. While the Yuba City General Plan does not explicitly call for annexation and development of the BSMP site, it does recognize the importance of cooperating with Sutter County in developing resource-based employment centers to areas outside of the Yuba City SOI, but adjacent to the urban area and along key transportation corridors (i.e., SR 99), as identified in Implementing Policy 3.9-I-9. Furthermore, the City would support the County’s efforts to maintain viable agricultural uses surrounding the City in areas outside the proposed urban growth boundary, in accordance with Implementing Policy 3.4-I-4. In addition, per Implementing Policy 3.4-I-2, the proposed BSMP would satisfy the requirements for urban edges, ensuring that the designated intensities and uses provide an appropriate transition to rural land at these edges. These actions would be made possible through a comprehensive master plan that focuses on strategic growth, as required in Implementing Policy 3.4-I-3.

The proposed BSMP would provide for a variety of residential units as described in Implementing Policy 3.4-I-5, and would also offer concentrations of activity and mixed-use and pedestrian-oriented development in selected areas, per Implementing Policy 3.4-I-6. As discussed in Chapter 2, Project Description, the proposed BSMP would include residential development in a wide variety of densities. Residential development would range from low density residential (2 to 8 dwelling unit per gross acre) to medium-high density residential (12-36 dwelling units per gross acre).

In accordance with Guiding Policy 4.2-G-1, the proposed BSMP would develop around a clearly defined, compact form that would include a variety of residential, commercial, office, business, and park uses in close proximity, consistent with Implementing Policies 3.8-I-2, 3.8-I-4, 3.8-I-7, and 3.9-I-2. As discussed above, the combination of land uses within the BSMP site are designed to be compatible. BSMP objectives also include developing a transportation system that offers choices for non-vehicular transportation, consistent with Guiding Policy 3.8-G-2. For these reasons, the proposed BSMP would be consistent with the goals and policies of the Yuba City General Plan. **Table 3.10-1** provides a further analysis of consistency of the proposed BSMP project with applicable Yuba City General Plan policies.

**TABLE 3.10-1
CITY OF YUBA CITY GENERAL PLAN CONSISTENCY – LAND USE AND PLANNING**

General Plan Guiding and Implementing Policies	Consistency Determination	Analysis
Chapter 3: Land Use		
Guiding Policy 3.4-G-1: Maintain a well-defined compact urban form, with a defined urban growth boundary and urban development intensities on land designated for urban uses.	Consistent	The proposed BSMP would provide a wide variety of well-defined uses, organized to establish a compact urban form. While the Yuba City General Plan expands the urban growth boundary, it does so in a location adjacent to the urban area and along a key transportation corridor (i.e., SR 99).
Guiding Policy 3.4-G-2: Promote a balanced land use program that increases the ability of people to live and work in the city.	Consistent	Land uses within the BSMP site would be carefully arranged to ensure cohesive movement and transitioning between uses, especially near the southern and western boundaries, which contain neighboring agricultural uses.
Guiding Policy 3.4-G-3: Promote development patterns that maximize residents' accessibility to parks, open space, and shopping areas.	Consistent	Parks, open spaces, and a variety of commercial uses would be available within the BSMP site and are evenly distributed throughout to ensure maximum accessibility and patronage.
Implementing Policy 3.4-I-2: Establish standards for urban edges and ensure that designated intensities and uses provide an appropriate transition to rural land at these edges.	Consistent	The proposed BSMP would provide appropriate edge treatment along all boundaries, and allows for a careful transition to neighboring southern and western parcels outside the BSMP site, which are generally agricultural.
Implementing Policy 3.4-I-3: Require preparation of City initiated Specific Plans or developer master plans for strategic new growth areas with complex land use programs.	Consistent	The proposed BSMP project is a master plan that undertakes a complex land use structure and is predicated on strategic new growth for Yuba City and the greater region.
Implementing Policy 3.4-I-4: Support the County's efforts to maintain viable agricultural uses surrounding the City in areas outside the proposed Urban Growth Boundary.	Consistent	The proposed BSMP project would not conflict with the County's efforts to maintain viable agricultural uses surrounding the City in areas outside the proposed Urban Growth Boundary.
Implementing Policy 3.4-I-5: Provide a variety of housing in all neighborhoods and reserve sites, where appropriate, for housing types that ensures that Yuba City remains an inclusive, affordable community.	Consistent	The proposed BSMP project would require minimum densities of 20 units per acre or greater, to allow affordable residential uses on enough land to accommodate 10 percent of the total number of residential units proposed by October 31, 2021, in accordance
Implementing Policy 3.4-I-6: Provide for concentrations of activity and mixed-use and pedestrian-oriented development in selected areas.	Consistent	Pedestrian-oriented development would be central to the proposed BSMP project, and concentrations of activity and movement are designated within select locations in the BSMP site. Mixed-use development would be encouraged within the Community Commercial (CC) and Office and Office Park (O/OP) designations.
Guiding Policy 3.5-G-1: Encourage new residential growth to be in the form of neighborhoods. A neighborhood is defined as an area of over forty acres that includes a variety of complementary uses in which non-residential uses serve local residential uses.	Consistent	The proposed BSMP would include 2,517 total dwelling units that would be provided in three types of residential neighborhood types of land use: Low Density Residential, Low-Medium Density Residential, and Medium-High Density Residential.

**TABLE 3.10-1
CITY OF YUBA CITY GENERAL PLAN CONSISTENCY – LAND USE AND PLANNING**

General Plan Guiding and Implementing Policies	Consistency Determination	Analysis
<p>Guiding Policy 3.5-G-2: Encourage development of mixed-use (residential, retail, and office) neighborhood centers, in both new neighborhoods and in established neighborhoods that lack them.</p> <p>Centers are concentrations of activity and uses that serve a neighborhood function. They are located within close proximity and easy walking distance from adjacent residences.</p>	Consistent	Mixed-use development would be encouraged within the Community Commercial (CC) and Office and Office Park (O/OP) designations and would establish neighborhood centers across the BSMP site.
<p>Guiding Policy 3.5-G-3: Allow and encourage low-medium density small-lot single-family housing development in new and existing neighborhoods that enable compact development and efficient infill.</p> <p>In addition to the benefit of affordability, small-lot housing increases opportunities to conserve land and can provide a positive aesthetic quality as characterized by Yuba City's older neighborhoods.</p>	Consistent	The Low Density Residential and Low-Medium Density Residential land uses would enable low to medium residential density and small-lot, single-family development to promote compact development within the BSMP site.
<p>Guiding Policy 3.5-G-4: Improve the "community orientation" of new residential developments.</p> <p>A "community orientation" calls for greater attention to the relationship between residences, streets and shared spaces, such as parks and community areas, and does not require sacrifice of privacy or amenities.</p>	Consistent	The proposed BSMP would emphasize community orientation for all new residential developments, integrating parks, community spaces, and open spaces to residential developments and streets.
<p>Guiding Policy 3.8-G-2: Promote neighborhood identity and encourage use of alternative modes of transportation by providing neighborhood shopping centers that many residents can reach on foot or bicycle.</p>	Consistent	Access throughout the BSMP site would provide bicycle and pedestrian access that encourages these alternative modes when traveling between residential communities and neighborhood shopping centers.
<p>Implementing Policy 3.8-I-2: Evenly distribute neighborhood and community shopping centers in new development areas to offer both choice and convenience for shoppers and residents.</p>	Consistent	The proposed BSMP project would promote cohesive and evenly distributed neighborhood and community shopping centers, with concentrations of activity and movement also designated within select locations.
<p>Implementing Policy 3.8-I-4: Ensure that neighborhood retail centers and commercial service buildings are compatible with the surrounding neighborhood and with adjacent travel corridors.</p>	Consistent	Retail and commercial development within the BSMP site would be intended to be compatible with the surrounding neighborhood and with adjacent travel corridors.
<p>Implementing Policy 3.8-I-7: Encourage the development of community commercial facilities that are accessible to both vehicles and pedestrians, and include amenities for both.</p>	Consistent	Access throughout the BSMP site, including community commercial facilities, would provide bicycle and pedestrian access that encourages these alternative modes while also ensuring vehicular access.
<p>Guiding Policy 3.9-G-2: Encourage employment generating uses to locate along major transportation facilities.</p>	Consistent	Employment-generating uses would be planned to be sited along SR 99, taking advantage of the exposure provided by the projected traffic volumes along this corridor.
<p>Implementing Policy 3.9-I-2: Allow supporting retail and business services and other complementary uses in Office & Office Park areas</p>	Consistent	The Office and Office Park (O/OP) land use designation would offer supporting retail and business services and other complementary uses.

**TABLE 3.10-1
CITY OF YUBA CITY GENERAL PLAN CONSISTENCY – LAND USE AND PLANNING**

General Plan Guiding and Implementing Policies	Consistency Determination	Analysis
Implementing Policy 3.9-I-9: Seek cooperative agreements with Sutter County towards the development of agricultural- and resource-based employment centers in areas outside the Yuba City Sphere of Influence, adjacent to the urban area, and along key transportation corridors.	Consistent	While the Yuba City General Plan does not explicitly call out annexation and development of the BSMP site, it does recognize the importance of cooperating with Sutter County in developing resource-based employment centers to areas outside of the Yuba City SOI but adjacent to the urban area and along key transportation corridors (i.e., SR 99).
Implementing Policy 3.9-I-2: Create a “soft” transition at the urban/ agricultural edge by appropriate landscape, with large canopy trees that are visually compatible with schools.	Consistent	The proposed BSMP project would provide appropriate edge treatment along all boundaries, and allow for a careful and soft transition to neighboring southern and western parcels outside the BSMP site, which are generally agricultural.
Chapter 4: Community Design		
Guiding Policy 4.2-G-1: Establish a clear distinction between the urban growth area and the surrounding rural and agricultural land.	Consistent	The design of the BSMP site, especially along its southern and western edges, would be intended to allow for a careful and soft transition to neighboring, generally agricultural uses.
Guiding Policy 4.2-G-2: Establish a clearly defined, compact form for the urban growth area.	Consistent	The proposed BSMP project would provide a wide variety of well-defined uses, organized to establish a compact urban form. While the Yuba City General Plan would expand its urban growth boundary, it would do so in a location adjacent to the urban area and along a key transportation corridor (i.e., SR 99).

SOURCE: City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004.

Sutter County LAFCO Policies for Annexation

The proposed BSMP project would include incremental requests for annexation of portions of the BSMP site to the City of Yuba City; while the annexations would be incremental based on specific proposed developments within the BSMP site, it is assumed that all land within the BSMP site would be eventually annexed to the City of Yuba City. Sutter County LAFCO is the organization responsible for evaluation and, if appropriate, approval of the annexation. Under the Cortese-Knox-Hertzberg Act, LAFCOs are responsible for preserving agricultural land, encouraging logical patterns of growth, and discouraging urban sprawl. The analysis below examines policies found in the Sutter County LAFCO Rules of Procedure Manual, and addresses the proposed BSMP project's consistency with Sutter County LAFCO policies for annexation. The final determination of consistency is the responsibility of Sutter County LAFCO.

Policy 1, "Purpose," is intended to achieve the following:

- a. Discourage urban sprawl;
- b. Encourage orderly formation and development of local governmental agencies, based on local conditions and circumstances;
- c. Initiate and make studies of governmental agencies; and
- d. Develop spheres of influence for each local governmental agency.

Policy 2(c) requires annexation applications to provide a Plan for Services, which is required to demonstrate that the range and levels of service currently available within the study area would, at least, be maintained by the annexing agency. In this regard, applicants are obligated to explain services and utilities to be used, and the financing that would be required to fund such efforts. In this Draft EIR, Section 3.13, Public Services, and Section 3.15, Utilities and Service Systems present and assess the existing conditions, required facilities and infrastructure, and potential environmental impacts of providing required services for the proposed BSMP.

Policy 6 involves concurrent city and district annexations, and applications that involve lands that are provided municipal service(s) by an independent special district(s) or County Service Area(s) are required to concurrently detach from the said district or service area as part of the annexation proposal. Municipal services do not include services provided by reclamation, levee or drainage districts. The BSMP would concurrently apply for annexation to both the City and various service agencies.

Sutter LAFCO is obligated by State law to consider the effect of the proposal on maintaining the physical and economic integrity of agricultural lands. The proposed BSMP would include a number of strategies aimed at buffering new development with adjacent agricultural uses, along with mitigation aimed at preserving important farmland. See Section 3.2, Agriculture and Forestry Resources, for additional information on farmland mitigation. In addition, the preservation of onsite open space areas along Gilsizer Slough would serve to protect open space within the BSMP site.

For the reasons described above, the proposed BSMP project would meet and not conflict with Sutter County LAFCO's annexation requirements.

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3.11 Noise

This section describes the existing noise environment near the BSMP site and evaluates the potential for construction and operation of the proposed BSMP to result in significant impacts associated with noise and vibration.

During the public review period for the notice of preparation, two letters were received that included comments associated with noise from increases in traffic along roadways serving the proposed BSMP. The comments expressed concerns related to increases in traffic noise exposure at existing residences. This issue has been addressed in Impact 3.11-2, below.

The analysis included in this section is based on project-specific construction and operational features, and data provided in the City of Yuba City General Plan,¹ Yuba City General Plan Final Environmental Impact Report (SCH No. 2001072105),² Sutter County General Plan,³ the Federal Transit Administration's (FTA's) *Transit Noise and Vibration Impact Assessment*,⁴ Yuba County Airport Land Use Compatibility Plan (ALUCP),⁵ Sutter County Comprehensive Land Use Plan (CLUP)⁶ and the Federal Highway Administration's (FHWA's) *Traffic Noise Model Technical Manual*⁷ and vehicle trip and distribution data provided by Fehr & Peers and reported in Section 3.14, Transportation and Traffic.

3.11.1 Environmental Setting

Technical Background and Noise Terminology

Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic

¹ City of Yuba City, 2004. *Yuba City General Plan*. April 8, 2004.

² City of Yuba City, 2004. *Yuba City General Plan Final Environmental Impact Report (SCH No. 2001072105)*. February 2004.

³ Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

⁴ Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*. May 2006.

⁵ Airport Land Use Commission for Sacramento, Sutter, Yolo, and Yuba Counties, 2011. *Yuba County Airport Land Use Compatibility Plan*. Adopted March 17, 2011.

⁶ Airport Land Use Commission, 2004. *Sutter County Airport Comprehensive Land Use Plan*. Adopted April 1994.

⁷ Federal Highway Administration, 1998. *FHWA Traffic Noise Model Technical Manual*. February 1998.

filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 3.11-1**.

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

L_{eq} : (*Equivalent Noise Level*): the energy-equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L_n (*Statistical Descriptor*): The noise level exceeded n percent of a specific period of time. For example, L_{30} is the median noise level, or level exceeded 50 percent of the time.

L_{max} : (*Maximum Noise Level*): the instantaneous maximum noise level for a specified period of time.

SEL (*Sound Exposure Level*): The equivalent sound level over a 1-second time interval for a discrete sound event (e.g., aircraft Overflight).

L_{dn} : (*Day-Night Average Noise Level*): also abbreviated DNL, it is a 24-hour day and night A-weighted noise exposure level which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises.

CNEL: (*Community Noise Equivalent Level*): similar to L_{dn} , the Community Noise Equivalent Level (CNEL) adds a 5-dB "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dB penalty between the hours of 10:00 p.m. and 7:00 a.m.

NOISE LEVEL
COMMON OUTDOOR ACTIVITIES (dBA) COMMON INDOOR ACTIVITIES

	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck at 50 feet at 50 mph	80	Food blender at 3 feet
Noisy urban area, daytime	70	Garbage disposal at 3 feet
Gas lawnmower at 100 feet	60	Normal speech at 3 feet
Commercial area	50	Large business office
Heavy traffic at 300 feet	40	Dishwasher in next room
Quiet urban daytime	30	Theater, large conference room (background)
Quiet urban nighttime	20	Library
Quiet suburban nighttime	10	Bedroom at night, concert hall (background)
Quiet rural nighttime	0	Broadcast/recording studio

As a general rule, in areas where the noise environment is dominated by traffic, the L_{eq} during the peak-hour is generally within one to two decibels of the L_{dn} at that location.⁸

Effects of Noise on People

When a new noise is introduced to an environment, human reaction can be predicted by comparing the new noise to the ambient noise level, which is the existing noise level comprised of all sources of noise in a given location. In general, the more a new noise exceeds the ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- except in carefully controlled laboratory experiments, a change of 1-dB cannot be perceived;
- outside of the laboratory, a 3-dB change is considered a just-perceivable difference;
- a change in level of at least 5-dB is required before any noticeable change in human response would be expected; and
- a 10-dB change is subjectively heard as approximately a doubling in loudness and can cause an adverse response.⁹

The perceived increases in noise levels shown above are applicable to both mobile and stationary noise sources. These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dB for hard sites and 7.5 dB for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dB (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a

⁸ California Department of Transportation, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.

⁹ California Department of Transportation, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013. Although the increases human perception in A-weighted noise levels is from a Caltrans document, the human perception of noise follows these noise levels regardless of the source – mobile or stationary. Therefore, this reference document is applicable to more than just traffic noise sources.

rate between 3 dB for hard sites and 4.5 dB for soft sites for each doubling of distance from the reference measurement.¹⁰

Noise levels may also be reduced by intervening structures, such as a row of buildings, a solid wall, or a berm located between the receptor and the noise source. According to the U.S. Department of Housing and Urban Development *Noise Guidebook*,¹¹ standard building construction results in an exterior-to-interior noise reduction of 20 dB with windows closed.

Fundamentals of Vibration

As described in the FTA's *Transit Noise and Vibration Impact Assessment*, ground-borne vibration can be a serious concern for nearby neighbors, causing buildings to shake and rumbling sounds to be heard.¹² In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses and heavy trucks on rough roads, and construction activities such as blasting, sheet pile-driving and operating heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is commonly used to express RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration assessment include structures (especially older masonry structures), people who spend a lot of time indoors (especially residents, students, the elderly and sick), and vibration sensitive equipment such as hospital analytical equipment and equipment used in computer chip manufacturing.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance can be well below the damage threshold for normal buildings.

¹⁰ California Department of Transportation, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.

¹¹ Department of Housing and Urban Development, 2009. *The Noise Guidebook*. March 2009.

¹² Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*. May 2006.

Existing Noise-Sensitive Land Uses

Noise sensitive land uses, where high noise levels can disrupt sleep, mechanical equipment, or other activities, or where long-term exposure can result in health effects, are typically defined as residences, schools, religious institutions, hospitals, care centers and hotels. The BSMP site includes land that is currently occupied by rural residential land uses and smaller pockets of single-family homes. These residential land uses are widely dispersed throughout the BSMP area and mostly located along South Walton Avenue, State Route (SR) 99, Railroad Avenue, Bogue Road, and Stewart Road.

Existing Noise Environment

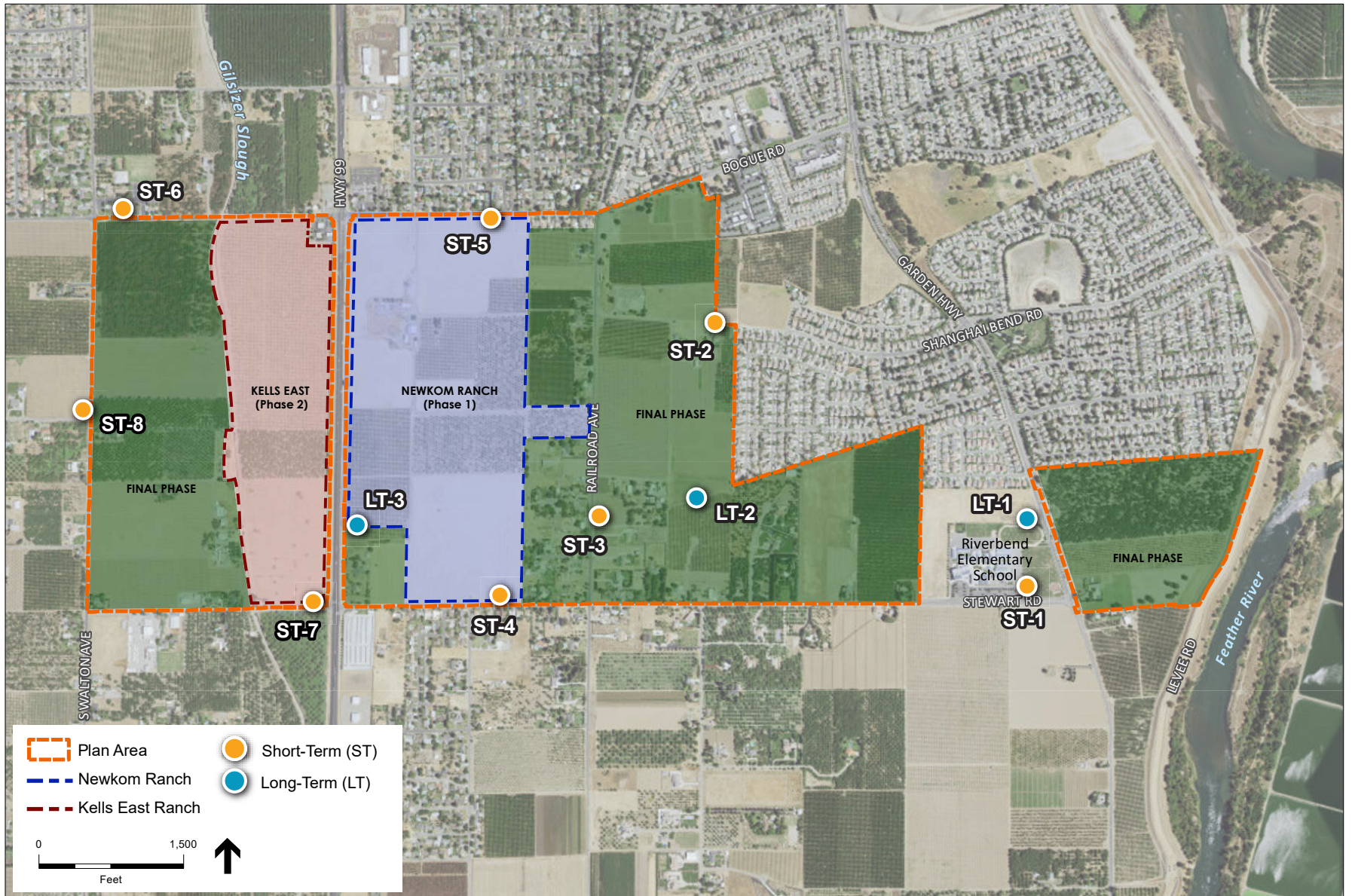
The ambient noise environment surrounding the BSMP site is primarily the result of traffic noise from South Walton Avenue, SR 99, Railroad Avenue, Bogue Road, and Stewart Road. Other noise sources in the area include off-road farming equipment and wildlife sounds such as birds chirping. The existing land uses within the BSMP site include agricultural uses for farming and scattered rural residential homes.

To quantify the existing ambient noise levels, a noise survey was conducted within and near the BSMP site. The noise measurement survey was conducted on July 12 and 13, 2017, and consisted of seven 15-minute short-term and three 24-hour long-term noise measurements. These locations are illustrated in **Figure 3.11-2**. The results of the 15-minute short-term noise measurement survey, which include the measured L_{eq} levels and descriptions of localized noise sources at all 10 monitoring locations, are presented in **Table 3.11-1**. The results of the 24-hour long-term noise measurement survey are found in **Table 3.11-2**. All long-term noise measurements were conducted using a Larson Davis LxT2 sound level meter and all short-term noise measurements were conducted using a Larson Davis 831 sound level meter. The noise meters were calibrated before and after the noise measurement survey.

**TABLE 3.11-1
 15-MINUTE SHORT-TERM AMBIENT NOISE MONITORING RESULTS**

Monitor	Start time	L_{eq} (dBA)	Primary Noise Source(s)
ST-1	1:52 PM	45	Garden Highway, Stewart Road, natural sounds
ST-2	2:21 PM	45	Shanghai Bend Road, natural sounds
ST-3	2:45 PM	60	Railroad Avenue
ST-4	3:07 PM	56	Stewart Road
ST-5	3:29 PM	66	Bogue Road
ST-6	3:51 PM	63	Bogue Road
ST-7	4:15 PM	67	SR 99
ST-8	4:40 PM	65	South Walton Avenue

SOURCE: ESA, 2017



SOURCE: ESRI, 2015; City of Yuba City, 2016; ESA, 2017

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Figure 3.11-2
Noise Measurement Locations

**TABLE 3.11-2
24-HOUR LONG-TERM AMBIENT NOISE MONITORING RESULTS
JUNE 12 - 13, 2017**

Measurement	L _{dn} (dBA)
LT-1	53
LT-2	46
LT-3	69

SOURCE: ESA, 2017

3.11.2 Regulatory Framework

Federal

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR, Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters (approximately 50 feet) from the vehicle pathway centerline. These controls are implemented through regulations on truck manufacturers.

State

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dBA. The State pass-by standard for light trucks and passenger cars (less than 4.8 tons, gross vehicle rating) is also 80 dBA at 15 meters (approximately 50 feet) from the roadway centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by State and local law enforcement officials.

Title 24 – Sound Transmission Control

Title 24 of the California Code of Regulations codifies Sound Transmission Control requirements, which establishes uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings. Specifically, Title 24 states that interior noise levels attributable to exterior sources shall not exceed 45 dBA CNEL in any habitable room of new dwellings. Title 24, Part 2 requires an acoustical report that demonstrates the achievements of the required 45 dBA CNEL. Dwellings are designed so that interior noise levels will meet this standard for at least ten years from the time of building permit application.

Local

City of Yuba City General Plan

The City of Yuba City General Plan presents the vision for the future of Yuba City, and outlines several guiding and implementing policies relevant to noise. Because the BSMP site would be annexed into the City of Yuba City, it must be found to be substantially compliant to the policies found within the Yuba City General Plan.

The following guiding and implementing policies from the City of Yuba City General Plan¹³ are relevant to noise.

Guiding Policy 9.1-G-1 Strive to achieve an acceptable noise environment for the present and future residences of Yuba City.

Guiding Policy 9.1-G-2 Incorporate noise considerations into land use planning decisions, and guide the location and design of transportation facilities to minimize the effects of noise on adjacent land uses.

Implementing Policies

- 9.1-I-1 Require a noise study and mitigation for all projects that have noise exposure greater than “normally acceptable” levels. Noise mitigation measures include, but are not limited to, the following actions:
- Screen and control noise sources, such as parking and loading facilities, outdoor activities and mechanical equipment,
 - Increase setbacks for noise sources from adjacent dwellings,
 - Retain fences, walls, and landscaping that serve as noise buffers,
 - Use soundproofing materials and double-glazed windows, and
 - Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.
- 9.1-I-3 In making a determination of impact under the California Environmental Quality Act (CEQA), consider an increase of four or more dBA to be "significant" if the resulting noise level would exceed that described as normally acceptable for the affected land use in **Figure 3.11-3**.
- 9.1-I-4 Protect especially sensitive uses, including schools, hospitals, and senior care facilities, from excessive noise, by enforcing “normally acceptable” noise level standards for these uses.
- 9.1-I-5 Discourage the use of sound walls. As a last resort, construct sound walls along highways and arterials when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility.
- 9.1-I-6 Require new noise sources to use best available control technology (BACT) to minimize noise from all sources.
- 9.1-I-7 Minimize vehicular and stationary noise sources and noise emanating from temporary activities, such as construction.

¹³ City of Yuba City, 2004. *Yuba City General Plan*. April 8, 2004.

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE - L _{dn} or CNEL (dBA)							
	50	55	60	65	70	75	80	
Residential – Low Density Single Family, Duplex, Mobile Home	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
Residential – Multi-Family	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
Transient Lodging – Motel/Hotel	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
Schools, Libraries, Churches, Hospitals, Nursing Homes	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
Auditorium, Concert Hall, Amphitheaters	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
Sports Arena, Outdoor Spectator Sports	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
Playgrounds, Neighborhood Parks	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
Golf Courses, Riding Stables, Water Recreation, Cemeteries	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
Office Buildings, Business, Commercial and Professional	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
Industrial, Manufacturing, Utilities, Agriculture	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█

	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.
	Clearly Unacceptable	New construction or development generally should not be undertaken.

SOURCE: State of California, Governor's Office of Planning and Research, 2003. *General Plan Guidelines.*

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Figure 3.11-3
Land Use Compatibility for Community Noise Environment

The proposed BSMP would generate noise and vibration during short-term construction activities and long-term operations. The proposed BSMP would also locate sensitive residential land uses in a rural environment, subject to noise (primarily from on-road transportation). Consistent with Policy 9.1-G-1, 9.1-G-2, and 9.1-I-1 through 9.1-I-6, on-road traffic and stationary noise sources were analyzed in Impact 3.11-2 and Impact 3.11-3. It was found that the BSMP would expose existing and proposed sensitive land uses to vehicular and stationary noise sources that would result in a less-than-significant level after the implementation of Mitigation Measure 3.11-2 and Mitigation Measure 3.11-3. Consistent with 9.1-I-7, construction noise was analyzed in Impact 3.11-1 where it was found that existing and proposed sensitive land uses would be exposed to construction noise that would result in a less-than-significant impact after the implementation of Mitigation Measure 3.11-1.

City of Yuba City Municipal Code

Title 4, Chapter 17, Section 4-17.10(e) of the Yuba City Municipal Code prohibits the operation of noise-generating construction equipment before 6:00 a.m. or after 9:00 p.m. daily, except Sunday and State or federal holidays when the prohibited time is before 8:00 a.m. and after 9:00 p.m.

Sutter County General Plan

The Sutter County General Plan presents the vision for the future of the unincorporated areas of the County which are not under the jurisdiction of another municipality's General Plan. Because the BSMP project site would be annexed into the City of Yuba City and no longer under jurisdiction of the County, only those County General Plan policies which are addressed in the analysis of the proposed BSMP project are presented here.

The following goals and policies from the *Sutter County 2030 General Plan*¹⁴ are relevant to noise.

Goal N 1 Protect the health and safety of County residents from the harmful effects of exposure to excessive noise and vibration.

Policies

N 1.4 New Stationary Noise Sources. Require new stationary noise sources to mitigate noise impacts on noise-sensitive uses wherever the noise from that source alone exceeds the exterior levels specified in **Table 3.11-3**.

¹⁴ Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

**TABLE 3.11-3
 SUTTER COUNTY GENERAL PLAN
 NOISE LEVEL STANDARDS FROM STATIONARY SOURCES**

Noise Level Descriptor	Daytime	Nighttime
	(7:00 a.m. to 10:00 p.m.)	(10:00 p.m. to 7:00 a.m.)
Hourly L_{eq} , dBA	55	45
Maximum level, dBA	70	65

SOURCE: Sutter County, 2011. *Sutter County 2030 General Plan*. Table 11-3. Adopted March 29, 2011.

N 1.7 **Vibration Standards.** Require construction projects and new development anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby noise-sensitive uses based on Federal Transit Administration criteria as shown in **Table 3.11-4**.

**TABLE 3.11-4
 SUTTER COUNTY GENERAL PLAN
 GROUND BORNE VIBRATION IMPACT CRITERIA FOR GENERAL ASSESSMENT**

Land Use Category	Frequent Events ^a	Occasional Events ^b	Infrequent Events ^c
Category 1: Buildings where vibration would interfere with interior operations	65 ^d	65 ^d	65 ^d
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

NOTES:
 Vibration levels are measured in or near the vibration-sensitive use.
 a. "Frequent Events" is defined as more than 70 vibration events of the same source per day.
 b. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
 c. "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.
 d. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels.

SOURCE: Federal Transit Administration, 2006. *Transit Noise Impact and Vibration Assessment*. May 2006.

Sutter County Airport Comprehensive Land Use Plan

The Sutter County CLUP was adopted by the Sacramento Area Council of Governments (SACOG) in April 1994. According to the Sutter County Airport CLUP's Land Use Compatibility Guidelines for Noise, residence land uses that are exposed to aircraft noise less than 65 dBA CNEL would be considered compatible with the CLUP.

Yuba County Airport Land Use Compatibility Plan

The current Yuba County ALUCP was adopted by SACOG on March 17, 2011. According to Yuba County ALUCP Policy 3.1.2 (Evaluating Noise Compatibility for New Development), noise sensitive land uses such as residences and schools that are exposed to aircraft noise less than 60 dBA CNEL would be considered normally compatible with the ALUCP.

3.11.3 Analysis, Impacts, and Mitigation

Significance Criteria

According to Appendix G of the State CEQA Guidelines, noise and vibration impacts resulting from the implementation of the proposed BSMP project would be considered significant if the project would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project.

Methodology and Assumptions

Construction Noise

Construction noise impacts are assessed relative to the increase in noise levels that could result from the operation of specified construction equipment compared to existing noise level conditions. The City of Yuba City General Plan and Municipal Code does not specify an incremental increase threshold for construction. For this analysis, it would be considered a significant impact in cases where sensitive land uses are exposed to construction noise levels that increase ambient noise levels by 10 dB or more.

Analysis of temporary construction noise effects caused by development pursuant to the proposed BSMP is based on specific estimates of construction equipment and duration of use from the project applicant. Since no specific projects have been proposed within the proposed BSMP, analysis of temporary construction noise effects are based on typical construction phases and equipment noise levels. The analyses account for attenuation of noise levels due to distances between the construction activity and the sensitive land uses in the site vicinity. Construction noise levels at nearby sensitive land uses that would be associated with development pursuant to the proposed BSMP are estimated using the FHWA's *Roadway Construction Noise Model*.¹⁵

¹⁵ Federal Highway Administration, 2006. *FHWA Roadway Construction Noise Model User's Guide*. January 2006.

Ground-borne Vibration

For the purposes of this assessment, the methodology described in the Caltrans' *Transportation and Construction Vibration Guidance Manual* was used to evaluate project-related vibration effects to nearby sensitive land uses.¹⁶ This Caltrans guidance manual focuses entirely on addressing vibration from construction activities. According to Caltrans' guidance manual, Construction is considered a continuous/frequent intermittent source.¹⁷ The building damage threshold for historic and some older buildings is 0.25 PPV (in/sec).

In absence of regulatory guidance from the City, to determine if construction vibration levels would result in human annoyance, construction vibration are compared to the vibration thresholds found in Sutter County's General Plan Policy N 1.7, which establishes that residences exposed to a vibration level of 80 VdB would result in violation of the Sutter County Code. For the purposes of this EIR, on- and off-site sensitive land uses exposed to construction vibration levels that would exceed these thresholds would be considered to result in a significant impact.

Roadway Traffic Noise

The California Supreme Court found that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369 (CBIA v. BAAQMD), the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. Thus, with respect to the exposure of new sensitive land uses to traffic noise from roadways in the vicinity of the BSMP, the City not required to consider the effects of bringing a new population into an area where such traffic noise already exists. Therefore, existing sensitive land uses exposed to traffic noise levels that exceed the allowed City of Yuba City's exterior incremental noise impact standards, established in Policy 9.1-I-3 of the General Plan, would result in a significant impact.

Roadside noise levels were calculated for the same roadways analyzed in Section 3.14, Transportation and Traffic. The street segments selected for analysis are those forecast to experience the greatest percentage increase in traffic generated by the proposed BSMP, which also happen to be the streets within the BSMP site that experience the highest existing traffic volumes. The noise levels are calculated using the FHWA's traffic noise prediction equations and traffic volumes identified in the transportation study prepared for this EIR (see **Appendix F**).

¹⁶ California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance Manual*. September 2013.

¹⁷ California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance Manual*. September 2013. pp. 38.

Aircraft Noise

Notwithstanding this judicial finding in the California Supreme Court's *CBIA v. BAAQMD* decision, an assessment of aircraft noise impacts is included in this section, for informational purposes. The BSMP site is located within two miles of the Yuba County Airport and Sutter County Airport. There is no evidence to suggest that the development of the proposed BSMP would increase or alter aircraft operations at the Yuba County Airport and Sutter County Airport. Nevertheless, in accordance with Yuba County ALUCP and Sutter County CLUP, if the proposed project would result in the development of noise sensitive land uses, such as residential uses, near the Yuba County Airport and Sutter County Airport where the residents or users would be exposed to aircraft noise levels in excess of 65 dBA CNEL, improvement measures are identified. Because such exposure to existing conditions falls outside of the bounds of CEQA analysis, these measures, if feasible, are not required to be implemented, but are available to the City to consider in its broader evaluation of the merits of the proposed BSMP.

Impacts and Mitigation Measures

Impact 3.11-1: Construction of development pursuant to the proposed BSMP could generate noise that would conflict with the City of Yuba City standards or result in substantial temporary or periodic increase in ambient noise levels.

Full Master Plan

Under the proposed BSMP, construction noise levels in and around the BSMP site would fluctuate depending on the type, number, and duration of use of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises (such as pile driving), which can be particularly disruptive. Given the anticipated type of construction for residential and non-residential uses, pile driving is not considered a likely construction technique to be used during project construction, but other noise intensive construction techniques could be employed, including use of large graders and excavators, pneumatic tools, and concrete mixers.

Table 3.11-5 shows typical noise levels produced by the types of construction equipment that would likely be used during construction of development pursuant to the proposed BSMP.

Unlike the daytime hours, construction activities during the nighttime hours, when ambient noise levels would be at their lowest, would substantially increase ambient noise levels that could result in an annoyance at nearby sensitive land uses. Construction activities that would occur outside of the City of Yuba City's allowed construction hours would constitute a significant impact.

Construction of development pursuant to the proposed BSMP would include site grading, excavation for infrastructure and building foundations, building construction, and paving and landscaping installation. All of these construction activities would require onsite staging areas to store off-road equipment and temporarily hold building materials and infill soil.

**TABLE 3.11-5
REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS
(50 FEET FROM SOURCE)**

Type of Equipment	L _{max} , dBA
Backhoe	80
Grader	85
Concrete Mixer Truck	85
Loader	80
Pneumatic Tools	85
Air Compressor	80
Excavator	85

NOTES:
1. Percent used during the given time period (usually an hour – hourly L_{eq}) were obtained from the FHWA Roadway Construction Noise Model User's Guide.

SOURCE: Federal Highway Administration, 2006. *FHWA Roadway Construction Noise Model*. January 2006.

While the BSMP phasing plan does not specify a project implementation schedule, for purposes of this environmental analysis project construction pursuant to the BSMP is assumed to begin in 2019 with Newkom Ranch and extend through 2040, as follows:

- Phase 1, Newkom Ranch: 2019 – 2039;
- Phase 2, Kells East Ranch: 2020 – 2040; and
- Final Phase, remainder of BSMP: 2021 – 2041

For analytical purposes this EIR has assumed construction of all of the development provided for in the proposed BSMP over a period of approximately 22 years, but the actual period of construction could occur over a shorter or longer period depending on market conditions.

The operation of each piece of off-road equipment within the BSMP site would not be constant throughout the day, as equipment would be turned off when not in use. Most of the time over a typical work day, the equipment would be operating at different locations within the BSMP site and would not likely be operating concurrently. However, for a more conservative approximation of construction noise levels to which the nearest sensitive receptor would be exposed, it is assumed for this analysis that two of the loudest construction equipment would be operating at the same time and location proximate to an offsite sensitive receptor. The nearest offsite sensitive receptors to the BSMP site are single-family homes along Shelby Court. These residences are located within 50 feet of the [main] BSMP site eastern boundary. Using the reference noise levels provided in Table 3.11-5, a backhoe and grader running at the same time and location could generate a maximum noise level of 88 dBA from a distance of 50 feet. Therefore, the nearest sensitive receptors located near construction areas could be exposed to a maximum noise level of 88 dBA during BSMP construction.

As the BSMP is incrementally developed over time, future residential buildings constructed in earlier phases of construction could be occupied and could be exposed to construction noise from subsequent construction phases. These future residences could be located within 50 feet of onsite construction activities. Using the reference noise levels provided in Table 3.11-5, a backhoe and grader running at the same time and location could generate a maximum noise level of 88 dBA from a distance of 50 feet. Therefore, the proposed onsite sensitive receptors located near construction areas could be exposed to a maximum noise level of 88 dBA during BSMP construction. As discussed in Section 3.11.1, Environmental Setting, the existing ambient within the project at the BSMP site ranges from 45 to 67 dBA L_{eq} . Construction of the BSMP could expose existing and future residences to construction noise that could increase ambient noise levels above 10 dB.

All construction activities proposed under the BSMP would be required to comply with Section 4.17.10(e) of the City of Yuba City Municipal Code by restricting construction to certain allowed hours. Although it is reasonable to assume that construction activities would comply with the City's allowed construction hours and would not conflict with the City's noise standards, construction associated with proposed BSMP development could expose nearby sensitive land uses to noise levels that could increase ambient noise levels by 10 dB. This increase in ambient noise levels would be perceived by the average person as a doubling of loudness and be considered a substantial temporary noise increase over the existing ambient levels. Therefore, noise generated during the construction of development pursuant to the proposed BSMP could result in a **potentially significant** impact.

Newkom Ranch

Construction activities within the Newkom Ranch property would have the identical construction noise effects as those discussed for the BSMP, above. The construction activities would utilize very similar construction equipment, phasing, and durations as those discussed for the BSMP. As noted above, construction activities within the Newkom Ranch property is expected to begin in 2020 and last approximately 20 years based on market demand.

The nearest offsite sensitive receptors to the Newkom Ranch property consist of single-family residences located approximately 100 feet north and 70 feet south of the property. Assuming a backhoe and grader running at the same time and location, residence located within 70 and 100 feet from these construction areas would be exposed to a maximum noise level of 84 and 80 dBA, respectively.

Future residential buildings built within the Newkom Ranch property in earlier phases of construction could be occupied and exposed to construction noise from subsequent construction phases. Much like the BSMP, these residences would likely be located within 50 feet from onsite construction areas. At this distance, onsite residences could be exposed to maximum noise level of 88 dBA during the build-out of the Newkom Ranch property. As discussed in Section 3.11.1, Environmental Setting, the existing ambient within the project at the BSMP site ranges from 45 to 67 dBA L_{eq} . Construction of the developments proposed on the Newkom Ranch property could

expose existing and future residences to construction noise that could increase ambient noise levels above 10 dB.

As with the BSMP, construction activities would comply with Section 4.17.10(e) of the City of Yuba City Municipal Code by restricting construction hours to within the City's allowed construction hours. Since construction activities would comply with the City's allowed construction hours, construction activities within the Newkom Ranch property would not conflict the City's noise standards. However, construction of the proposed development within the Newkom Ranch property could expose nearby sensitive land uses to noise levels that could increase ambient noise levels by 10 dB. This increase in ambient noise levels would be perceived by the average person as a doubling of loudness and be considered a substantial temporary noise increase over the existing ambient levels. Therefore, noise generated during the construction of the Newkom Ranch could result in a **potentially significant** impact.

Kells East Ranch

Construction activities within the Kells East Ranch property would have the identical construction noise effects as those discussed for the both the BSMP and Newkom Ranch, discussed above. The construction activities would utilize very similar construction equipment, phasing, and durations as those discussed for the BSMP. As noted above, construction activities within the Kells East Ranch property is expected to begin in 2022 and last approximately 20 years based on market demand.

The nearest offsite sensitive receptors to the Newkom Ranch property consist of single-family residences located approximately 570 feet north-east and 830 south-east feet south of the property. Assuming a backhoe and grader running at the same time and location, residence located within 570 and 830 feet from these construction areas would be exposed to a maximum noise level of 62 and 57 dBA, respectively.

Future residential buildings built within the Kells East Ranch property in earlier phases of construction could be occupied and exposed to construction noise from subsequent construction phases. Much like the BSMP, these residences would likely be located within 50 feet from onsite construction areas. At this distance, onsite residences could be exposed to maximum noise level of 88 dBA during the build-out of the Kells East Ranch property. As discussed in Section 3.11.1, Environmental Setting, the existing ambient within the project at the BSMP site ranges from 45 to 67 dBA L_{eq} . Construction of the developments proposed on the Kell's East Ranch property could expose existing and future residences to construction noise that could increase ambient noise levels above 10 dB.

As with the BSMP, construction activities would comply with Section 4.17.10(e) of the City of Yuba City Municipal Code by restricting construction hours to within the City's and County's allowed construction hours. Since construction activities would comply with the both the City and County allowed construction hours, construction activities within the Kells East Ranch property would not conflict with the City's noise standards. However, construction of the proposed

development within the Kells East Ranch property could expose nearby sensitive land uses to noise levels that could increase ambient noise levels by 10 dB. This increase in ambient noise levels would be perceived by the average person as a doubling of loudness and be considered a substantial temporary noise increase over the existing ambient levels. Therefore, noise generated during the construction of the Kells East Ranch could result in a **potentially significant** impact.

Summary

The construction activities associated with the proposed BSMP (including the BSMP and the Newkom Ranch, Kells Ranch properties) would consist of site grading, excavation for infrastructure and building foundations, building construction, and paving and landscaping installation. Construction activities not would include certain types of construction equipment generate impulsive noises (such as pile driving or blasting), which can be particularly disruptive. Since construction activities within proposed BSMP would occur within the City of Yuba City's allowed construction hours, construction noise as proposed under the proposed BSMP would not conflict with the City's noise standards. However, construction of the proposed development within the proposed BSMP could expose nearby sensitive land uses to noise levels that would be considered a substantial temporary noise increase over the existing ambient levels. Therefore, noise generated during the construction of the proposed BSMP could result in a **potentially significant** impact.

Mitigation Measure

Mitigation Measure 3.11-1: Construction Noise Measures (BSMP/NR/KER)

Individual project applicants of new development (excluding renovation of existing buildings) shall require construction contractors to implement the following measures during all phases of project construction:

- a) Whenever stationary noise sources – such as generators and compressors – are used within line of sight to occupied residences (on or offsite), temporary barriers shall be constructed around the source to shield the ground floor of the noise-sensitive uses. These barriers shall be of ¾-inch Medium Density Overlay (MDO) plywood sheeting, or other material of equivalent utility and appearance to achieve a Sound Transmission Class of STC-30, or greater, based on certified sound transmission loss data taken according to ASTM Test Method E90 or as approved by the City of Yuba City Building Official.
- b) Construction equipment staging areas shall be located as far as feasible from residential areas while still serving the needs of construction contractors.
- c) Equipment and trucks used for construction will use the industry standard noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible).
- d) Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically- or electrically-powered where feasible to avoid noise associated with compressed air exhaust from pneumatically-powered tools.

Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dB. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dB. Quieter procedures, such as use of drills rather than impact tools, shall be used whenever feasible.

Significance after Mitigation: Implementation of **Mitigation Measure 3.11-1** would reduce construction noise to the extent feasible. Restricting heavy-duty equipment operations in close proximity to buildings, the use of temporary barriers and hydraulic or electric powered impact tools would substantially reduce noise levels at adjacent sensitive receptors. These measures would minimize interior noise and associated sleep disturbance at nearby receptors during excavation, and construction. Therefore, after mitigation, this impact would be considered **less than significant** during the short-term duration of project-specific construction activities.

Impact 3.11-2: Operation of uses developed pursuant to the proposed BSMP could increase local traffic that could result in a substantial permanent increase in ambient exterior noise levels in the project vicinity.

Full Master Plan

Most of the long-term noise that would result due to the implementation of the proposed BSMP would primarily be traffic-generated. The proposed BSMP would contribute to an increase in local traffic volumes, resulting in higher traffic noise levels along local roadways. Using algorithms from the FHWA's *Traffic Noise Model Technical Manual* and the estimated BSMP traffic volumes provided by the 2017 Fehr & Peers traffic study, traffic noise levels were estimated for roadway segments within the BSMP site under Existing and Existing plus BSMP conditions.¹⁸ See Appendix F for modeling details. The segments analyzed and the associated results of the modeling are shown in **Table 3.11-6**.

According to the City of Yuba City General Plan Policy 9.1-I-3, a 4 dB increase in ambient noise levels is considered significant if the resulting noise level would exceed that described as "normally acceptable" for the affect land use in Figure 3.11-3. Therefore, existing sensitive land uses exposed to traffic noise levels above 60 dBA Ldn under Existing plus BSMP conditions that results in a traffic noise increase greater than 4 dB is considered a substantial increase in traffic noise.

As shown in Table 3.11-8, existing and proposed sensitive land uses adjacent to Stewart Road, between SR 99 and Phillips Road, would be exposed to an increase in traffic noise that would exceed the City of Yuba City Plan Policy 9.1-I-3. There are existing sensitive land uses adjacent to Stewart Road, between SR 99 and Phillips Road. Therefore, the increase in vehicular traffic along local roadways would result in the exposure of adjacent existing and planned sensitive land uses to traffic noise that would result in a **potentially significant** impact.

¹⁸ Fehr & Peers, 2016. BSMP Traffic Report. July 2017.

**TABLE 3.11-6
EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS
FROM A DISTANCE OF 50 FEET FROM CENTER OF ROADWAY
BSMP**

Roadway Segment	Traffic Noise Level, dBA, Ldn ¹			
	Existing	Existing plus Project	Incremental Increase	Existing Sensitive Land uses Exposed to a Significant Increase in Traffic Noise? (Yes or No) ²
SR 99				
SR 20 to Sunsweet Boulevard	75	76	1	No
Sunsweet Boulevard to Bridge St	75	76	1	No
Bridge St to Franklin Avenue	76	76	0	No
Franklin Avenue to Hunn Road	75	77	2	No
Hunn Road to Richland Road	75	77	2	No
Richland Road to Lincoln Road	75	77	2	No
Lincoln Road to Smith Road	74	76	2	No
Smith Road to Bogue Road	74	76	2	No
Bogue Road to Stewart Road	73	74	1	No
Stewart Road to Reed Road	73	74	1	No
Reed Road to Walnut Avenue	73	74	1	No
Walnut Avenue to Barry Road	73	74	1	No
South Walton Avenue				
Bridge St to Franklin Avenue	68	68	0	No
Franklin Avenue to Richland Road	66	66	0	No
Richland Road to Lincoln Road	65	66	1	No
Lincoln Road to Bogue Road	63	65	2	No
Rogue Road to Kells Ranch Road	60	61	1	No
Kells Ranch Road to Stewart Road	60	61	1	No
Stewart Road to Reed Road	58	58	0	No
Phillips Road				
Lincoln Road to Smith Road	61	61	0	No
Smith Road to Rogue Road	58	59	1	No
Rogue Road to Newkom Ranch Road	N/A	65	N/A	N/A
Newkom Ranch Road to Stewart Road	N/A	57	N/A	N/A
Railroad Avenue				
Lincoln Road to Bogue Road	64	66	2	No
Bogue Road to Newkom Ranch Road	64	66	2	No
Newkom Ranch Road to Stewart Road	64	66	2	No

**TABLE 3.11-6
 EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS
 FROM A DISTANCE OF 50 FEET FROM CENTER OF ROADWAY
 BSMP**

Roadway Segment	Traffic Noise Level, dBA, Ldn ¹			
	Existing	Existing plus Project	Incremental Increase	Existing Sensitive Land uses Exposed to a Significant Increase in Traffic Noise? (Yes or No) ²
Garden Highway				
Lincoln Road to Bogue Road	70	71	1	No
Bogue Road to Shanghai Bend Road	69	70	1	No
Shanghai Bend Road to Stewart Road	68	70	2	No
Gilsizer Ranch Way				
Bogue to Kells Ranch Road	N/A	61	N/A	No
Kells Ranch Road to Stewart Road	N/A	55	N/A	No
Chagaris Ranch Way				
Halprin Ranch Drive to Shanghai Bend Road	N/A	58	N/A	No
Shanghai Bend Road to Newkom Ranch Road	N/A	56	N/A	No
Bridge St				
S. Walton Avenue to SR 99	71	71	0	No
Franklin Road				
S. Walton Avenue to SR 99	71	72	1	No
Richland Road				
S. Walton Avenue to SR 99	60	60	0	No
Lincoln Road				
S. Walton Avenue to SR 99	68	69	1	No
SR 99 to Phillips Road	69	70	1	No
Phillips Road to Railroad Avenue	69	70	1	No
Railroad Avenue to Garden Highway	68	69	1	No
Bogue Road				
S. Walton Avenue to Kells Ranch Road	70	69	-1	No
Kells Ranch Road to SR 99	70	71	1	No
SR 99 to Phillips Road	70	72	2	No
Phillips Road to Railroad Avenue	68	70	2	No
Railroad Avenue to Garden Highway	68	70	2	No
Newkom Ranch Road				
Phillips Road to Railroad Avenue	N/A	59	N/A	N/A
Railroad Avenue to Chagaris Ranch Way	N/A	56	N/A	N/A

**TABLE 3.11-6
EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS
FROM A DISTANCE OF 50 FEET FROM CENTER OF ROADWAY
BSMP**

Roadway Segment	Traffic Noise Level, dBA, L _{dn} ¹			
	Existing	Existing plus Project	Incremental Increase	Existing Sensitive Land uses Exposed to a Significant Increase in Traffic Noise? (Yes or No) ²
Kells Ranch Road				
S. Walton Avenue to Gilsizer Ranch Way	N/A	59	N/A	No
Stewart Road				
S. Walton Avenue to Kells Ranch Road	57	57	0	No
Kells Ranch Road to SR 99	57	58	1	No
SR 99 to Phillips Road	58	62	4	Yes
Phillips Road to Muir Road	59	61	2	No
Muir Road to Railroad Avenue	59	61	2	No
Railroad Avenue to Garden Highway	63	64	1	No
NOTES:				
N/A = New Road				
1. Noise levels were determined using methodology described in FHWA Traffic Noise Model Technical Manual. See Appendix F for details.				
2. Existing land uses exposed to traffic noise that result in a noise increase greater than what is allowed in the City of Yuba City General Plan Policy 9.1-I-3 is considered a significant impact.				
SOURCE: ESA, 2017				

Newkom Ranch and Kells East Ranch

Most of the long-term noise that would result due to the implementation of the Newkom Ranch and Kells East Ranch would primarily be generated by traffic. The traffic generated by the developments proposed on the Newkom Ranch and Kells East Ranch properties would contribute to an increase in local traffic volumes, resulting in higher traffic noise levels along local roadways. Using algorithms from the FHWA's *Traffic Noise Model Technical Manual* and the estimated traffic volumes provided in this EIR's traffic analysis, traffic noise levels were estimated for roadway segments within the BSMP site under Existing and Existing plus development of the Newkom Ranch/Kells Ranch conditions.¹⁹ See Appendix F for modeling details. The segments analyzed and the associated results of the modeling are shown in **Table 3.11-7**.

¹⁹ Fehr & Peers, 2016. BSMP Traffic Report. July 2017.

**TABLE 3.11-7
 EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS
 FROM A DISTANCE OF 50 FEET FROM CENTER OF ROADWAY
 NEWKOM RANCH AND KELLS EAST RANCH**

Roadway Segment	Traffic Noise Level, dBA, L _{dn} ¹			
	Existing	Existing plus Project	Incremental Increase	Existing Sensitive Land uses Exposed to a Significant Increase in Traffic Noise? (Yes or No) ²
SR 99				
SR 20 to Sunsweet Boulevard	75	76	1	No
Sunsweet Boulevard to Bridge St	75	76	1	No
Bridge St to Franklin Avenue	76	76	0	No
Franklin Avenue to Hunn Road	75	76	1	No
Hunn Road to Richland Road	75	76	1	No
Richland Road to Lincoln Road	75	76	1	No
Lincoln Road to Smith Road	74	75	1	No
Smith Road to Bogue Road	74	75	1	No
Bogue Road to Stewart Road	73	74	1	No
Stewart Road to Reed Road	73	74	1	No
Reed Road to Walnut Avenue	73	74	1	No
Walnut Avenue to Barry Road	73	74	1	No
South Walton Avenue				
Bridge St to Franklin Avenue	68	68	0	No
Franklin Avenue to Richland Road	66	66	0	No
Richland Road to Lincoln Road	65	66	1	No
Lincoln Road to Bogue Road	63	64	1	No
Bogue Road to Kells Ranch Road	60	59	-1	No
Kells Ranch Road to Stewart Road	60	59	-1	No
Stewart Road to Reed Road	58	58	0	No
Phillips Road				
Lincoln Road to Smith Road	61	60	-1	No
Smith Road to Rogue Road	58	59	1	No
Rogue Road to Newkom Ranch Road	N/A	64	N/A	No
Newkom Ranch Road to Stewart Road	N/A	57	N/A	No
Railroad Avenue				
Lincoln Road to Bogue Road	64	65	1	No
Bogue Road to Newkom Ranch Road	64	64	0	No
Newkom Ranch Road to Stewart Road	64	64	0	No

**TABLE 3.11-7
EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS
FROM A DISTANCE OF 50 FEET FROM CENTER OF ROADWAY
NEWKOM RANCH AND KELLS EAST RANCH**

Roadway Segment	Traffic Noise Level, dBA, L _{dn} ¹			
	Existing	Existing plus Project	Incremental Increase	Existing Sensitive Land uses Exposed to a Significant Increase in Traffic Noise? (Yes or No) ²
Garden Highway				
Lincoln Road to Bogue Road	70	71	1	No
Bogue Road to Shanghai Bend Road	69	69	0	No
Shanghai Bend Road to Stewart Road	68	69	1	No
Gilsizer Ranch Way				
Bogue to Kells Ranch Road	N/A	58	N/A	N/A
Kells Ranch Road to Stewart Road	N/A	54	N/A	N/A
Chagaris Ranch Way				
Halprin Ranch Drive to Shanghai Bend Road	N/A	N/A	N/A	N/A
Shanghai Bend Road to Newkom Ranch Road	N/A	N/A	N/A	N/A
Bridge St				
S. Walton Avenue to SR 99	71	71	0	No
Franklin Road				
S. Walton Avenue to SR 99	71	71	0	No
Richland Road				
S. Walton Avenue to SR 99	60	60	0	No
Lincoln Road				
S. Walton Avenue to SR 99	68	69	1	No
SR 99 to Phillips Road	69	70	1	No
Phillips Road to Railroad Avenue	69	69	0	No
Railroad Avenue to Garden Highway	68	68	0	No
Bogue Road				
S. Walton Avenue to Kells Ranch Road	70	69	-1	No
Kells Ranch Road to SR 99	70	70	0	No
SR 99 to Phillips Road	70	72	2	No
Phillips Road to Railroad Avenue	68	70	2	No
Railroad Avenue to Garden Highway	68	69	1	No
Newkom Ranch Road				
Phillips Road to Railroad Avenue	N/A	55	N/A	No
Railroad Avenue to Chagaris Ranch Way	N/A	N/A	N/A	N/A

**TABLE 3.11-7
 EXISTING AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS
 FROM A DISTANCE OF 50 FEET FROM CENTER OF ROADWAY
 NEWKOM RANCH AND KELLS EAST RANCH**

Roadway Segment	Traffic Noise Level, dBA, L _{dn} ¹			
	Existing	Existing plus Project	Incremental Increase	Existing Sensitive Land uses Exposed to a Significant Increase in Traffic Noise? (Yes or No) ²
Kells Ranch Road				
S. Walton Avenue to Gilsizer Ranch Way	N/A	N/A	N/A	N/A
Stewart Road				
S. Walton Avenue to Kells Ranch Road	57	53	-4	No
Kells Ranch Road to SR 99	57	55	-2	No
SR 99 to Phillips Road	58	60	2	No
Phillips Road to Muir Road	59	59	0	No
Muir Road to Railroad Avenue	59	60	1	No
Railroad Avenue to Garden Highway	63	63	0	No

NOTES:
 NA = New Road
 1. Noise levels were determine using methodology described in FHWA Traffic Noise Model Technical Manual
 2. Existing sensitive land uses exposed to traffic noise that result in a noise increase greater than what is allowed in the City of Yuba City General Plan Policy 9.1-I-3 is considered a significant impact.

SOURCE: ESA, 2017

As shown in Table 3.11-7, none of the existing sensitive land uses along roadway segments analysis would be exposed to an increase in traffic noise that would exceed the City of Yuba City General Plan Policy 9.1-I-3. Therefore, the increase in vehicular traffic along local roadways would result in the exposure of adjacent existing sensitive land uses to traffic noise that would result in a **less-than-significant** impact.

Summary

Future traffic increases associated with the development of the proposed BSMP (including the BSMP and development of the Newkom Ranch and Kells East Ranch) would result in noise increases along roadway segments within the BSMP site that would result in a substantial noise increase that would exceed the City of Yuba City General Plan Policy 9.1-I-3. Therefore, operation of the proposed BSMP could result in a substantial permanent increase in ambient exterior noise levels in the project site that would result in a **significant** impact.

Mitigation Measure

Mitigation Measure 3.11-2: Transportation Source Mitigation (BSMP)

Prior to approval of a map, an acoustical study shall be submitted to the City demonstrating that the project would include noise attenuation to reduce noise levels at the existing residences adjacent to Stewart Road, between SR 99 and Phillips Road, to below the noise standard specified in the City's general plan Policy 9.1-I-3. If sound walls are proposed, they must be constructed of a material and at a height sufficient to reduce traffic noise to either 4 dB below existing conditions or below 60 dBA L_{dn} .

Significance after Mitigation: Implementation of **Mitigation Measure 3.11-2** would reduce the traffic noise exposure of existing sensitive uses along Stewart Road, between SR 99 and Phillips Road to below the City's general plan Policy 9.1-I-3. This would be achieved by requiring the applicant to prepare an acoustical study demonstrating how a sound wall could reduce traffic noise along Stewart Road to either 4 dB below existing conditions or below 60 dBA L_{dn} . With implementation of mitigation measure **Mitigation Measure 3.11-2**, this impact would be reduced to a **less-than-significant** impact.

Impact 3.11-3: Operation of uses developed pursuant to the proposed BSMP could introduce new stationary noise sources that could result in a substantial permanent increase in ambient exterior noise levels in the project vicinity or conflict with the City of Yuba City noise standards.

Since the City of Yuba City currently does not establish a stationary noise threshold in its General Plan or noise ordinance, for the purposes of this EIR the stationary noise thresholds found in the County of Sutter General Plan Policy N 1.4 (see Table 3.11-3) are used to determine the significance of stationary noise exposure. A nighttime threshold of 45 dBA L_{eq} is used to determine the significance of noise generated by activities that could occur at night, such as operation of HVAC units. A daytime stationary noise of 55 dBA L_{eq} is used to determine the significance of noise generating activities that are operated exclusively during daytime, such as operation of loading docks or activities at schools.

Full Master Plan

Heating, Ventilation, and Air-Conditioning (HVAC) Systems

HVAC systems for maintaining comfortable temperatures in buildings developed under the proposed BSMP would consist largely of packaged air conditioning systems. The precise locations of HVAC systems are unknown at this time, but typically HVAC systems are located at street level and on building rooftops. During maximum heating or air conditioning operations HVAC units can generate noise levels of approximately 51 dBA L_{eq} at a reference distance of 100 feet from the operating units.²⁰

²⁰ Puron, 2005. *48PG03-28 Product Data*. pp. 10–11.

Based on these levels of noise generation, sensitive land uses located within approximately 200 feet of HVAC units could be exposed to noise levels above the nighttime stationary noise standard of 45 dBA L_{eq} . Proposed commercial, retail, and office buildings could have HVAC units that could possibly be as close as 200 feet from the nearest existing or proposed sensitive land use. At this distance, existing and proposed sensitive land uses could be exposed to noise levels above the nighttime stationary noise threshold. Therefore, operation of HVAC units at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant** impact.

Loading Docks

Future commercial and industrial uses proposed within the BSMP site could require loading docks. Truck deliveries at loading docks generate noise as a result of truck arrivals and departures from the unloading area, trucks backing into the docks (including backup beepers), air brakes, and other truck unloading-related noise. These activities would be a source of elevated noise levels at nearby sensitive receptors. Noise levels of 80 dBA L_{max} and 60 dBA L_{eq} at a distance of 50 feet can be generated during loading dock activities.²¹

Based on these levels of noise generation, sensitive land uses located within approximately 160 feet of a loading dock could be exposed to noise levels above the applied County's daytime stationary noise standard of 55 dBA L_{eq} . The potential exists for loading docks to be as close as 160 feet from the nearest existing or proposed sensitive land use. At this distance, sensitive land uses within the project site could be exposed to levels above the daytime stationary. Therefore, operation of loading docks at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant** impact.

Schools

BSMP Lot 1, with a Public land use designation, on the southeast corner of South Walton Avenue and Bogue Road would allow for the development of a K-8 combined elementary and middle school with adjoining playgrounds. Noise generating activities occurring within educational land uses would be controlled by the school district and would depend on facility type. Daytime noise typically associated with schools typically includes intermittent noise such as loudspeakers used to signal the beginning and end of the school day, recess periods, and potentially for occasional announcements; adults' and children's voices; opening and closing of vehicle doors in parking lots; and use of landscape maintenance equipment. Maintenance activities associated with project-related parking and landscaped areas could include the use of mowers and leaf blowers.

Since the noise sources associated with a K-8 combined elementary and middle school are typically low, sensitive land uses located near the school grounds would not be exposed to noise levels that would exceed the County's daytime stationary noise standard of 55 dBA L_{eq} . In addition, during the daytime hours, when ambient noise levels are at their highest, intermittent noise generated by these sources would not be persistent enough to disrupt future residences.

²¹ ESA, 2008. *Fresh & Easy Distribution Truck Noise Study*. November 2008.

Therefore, activities at the proposed school would expose nearby sensitive land uses to noise levels that result in a **less-than-significant** impact.

Newkom Ranch

Heating, Ventilation, and Air-Conditioning Systems

As previously discussed, sensitive land uses located within approximately 200 feet of HVAC units could be exposed to noise levels above the nighttime stationary noise threshold of 45 dBA L_{eq} . As shown in Figure 2-7, there are proposed commercial (Lot 16) and office (Lot 24) uses within the Newkom Ranch property that would be adjacent to existing and proposed residential uses. Although the final layout of the developments proposed within the Newkom Ranch property have not been finalized, the commercial and office buildings located in Lots 16 and 24 could have HVAC units that could possibly be as close as 200 feet from the nearest existing or proposed sensitive land uses. At this distance, existing and proposed sensitive land uses could be exposed to noise levels above the nighttime stationary noise standard. Therefore, operation of HVAC units at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant** impact.

Loading Docks

As previously discussed, sensitive land uses located within approximately 160 feet of a loading dock could be exposed to noise levels above the daytime stationary noise threshold of 55 dBA L_{eq} . As shown in Figure 2-7, within the Newkom Ranch property there is a proposed commercial use (Lot 16) that would be adjacent to existing and proposed residential uses. Although the final layout of the developments proposed within the Newkom Ranch property have not been finalized, the commercial building located in Lot 16 could contain loading docks that could possibly be as close as 160 feet from the nearest existing or proposed sensitive land uses. At this distance, sensitive land uses could be exposed to levels above the County's daytime stationary noise standard. Therefore, operation of loading docks at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant** impact.

Kells East Ranch

Heating, Ventilation, and Air-Conditioning Systems

As previously discussed, sensitive land uses located within approximately 200 feet of HVAC units could be exposed to noise levels above the nighttime stationary noise threshold of 45 dBA L_{eq} . As shown in Figure 2-7, there are proposed commercial uses (Lot 10) uses within the Kells East Ranch property that would be adjacent to existing and proposed residential uses. Although the final layout of the developments proposed within the Kells East Ranch property have not been finalized, the commercial and office buildings located in Lot 10 could have HVAC units that could possibly be as close as 200 feet from the nearest existing or proposed sensitive land uses. At this distance, existing and proposed sensitive land uses could be exposed to noise levels above the nighttime stationary noise standard. Therefore, operation of HVAC units at the proposed

commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant** impact.

Loading Docks

As previously discussed, sensitive land uses located within approximately 160 feet of a loading dock could be exposed to noise levels above the daytime stationary noise threshold of 55 dBA L_{eq} . As shown in Figure 2-7, within the Kells East Ranch property there is a proposed commercial use (Lot 10) that would be adjacent to existing and proposed residential uses. Although the final layout of the developments proposed within the Kells East Ranch property have not been finalized, the commercial building located in Lot 10 could contain loading docks that could possibly be as close as 160 feet from the nearest existing or proposed sensitive land uses. At this distance, sensitive land uses could be exposed to levels above the County's daytime stationary noise standard. Therefore, operation of loading docks at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant** impact.

Summary

Commercial and office buildings developed under the proposed BSMP site could be located near existing and proposed sensitive land uses. These sensitive land uses could be exposed to stationary noise sources, such as loading docks and HVAC systems, that could exceed the daytime or nighttime stationary noise thresholds. Therefore, operation of the proposed BSMP could result in a substantial permanent increase in ambient exterior noise levels in the project site that would result in a **significant** impact.

Mitigation Measure

Mitigation Measure 3.11-3: Stationary Source Mitigation (BSMP/NR/KER)

The project sponsor shall ensure that the following measures are implemented for all development under the proposed BSMP:

- a) Prior to the issuance of building permits, individual project applicants shall submit engineering and acoustical specification for project mechanical HVAC equipment and the proposed locations of onsite loading docks to the Planning Director demonstrating that the HVAC equipment and loading dock design (types, location, enclosure, specification) will control noise from the equipment to not exceed 55 dBA during the daytime and 45 dBA during nighttime hours.
- b) Noise-generating stationary equipment associated with proposed commercial and/or office uses, such as portable generators, compressors, and compactors, within line-of-sight of adjacent noise-sensitive uses shall be enclosed or acoustically shielded to reduce noise-related impacts.

Significance after Mitigation: Impacts of non-transportation noise sources (i.e., HVAC units and loading docks), with implementation of **Mitigation Measure 3.11-3**, would be reduced to less-than-significant levels. As a result, impacts associated with HVAC and loading dock noise would be reduced to a **less than significant**.

Impact 3.11-4: Construction of development pursuant to the proposed BSMP could expose existing and/or planned buildings, and persons within, to vibration that could disturb people or damage buildings.

Full Master Plan

It is reasonably expected that such construction pursuant to the proposed BSMP would not include activities, such as pile driving, blasting, or use of impact hammers, known to generate high vibration levels. Nevertheless, construction of structures under the proposed BSMP could require the use of other types of equipment or vehicles that could expose nearby sensitive receptors to vibrations levels that could result in an annoyance or building damage. Because construction activities pursuant to the proposed BSMP are anticipated to take place on a frequent basis through 2040, these activities would be considered a continuous/frequent intermittent vibration source.

According to the Caltrans' *Transportation and Construction Vibration Guidance Manual*, the building damage threshold for historic and some older buildings is 0.25 PPV (in/sec) and the human annoyance vibration threshold is 80 VdB.^{22,23} As discussed in Section 3.5, Cultural Resources, no historic buildings or structures have been identified within or immediately adjacent to the BSMP site.

Ground-borne vibration from grading, excavation, and building construction within the BSMP site could produce vibration at nearby sensitive land uses and structures. The extent to which these receptors would be affected depends largely on soil conditions, building design and materials, construction techniques employed, distance from the construction site to the structure, the age, and condition of the structure, and the receptor's location in the building.

Typical reference vibration levels for various pieces of equipment likely to be used during the build-out of the BSMP are listed below in **Table 3.11-8**. During grading and building construction, the highest vibration levels would be generated by large bulldozers where building damage could occur within 13 feet of historic and some older buildings.²⁴ There are no existing buildings within or near the BSMP site located within 13 feet of onsite grading or building activities.

In regards to human annoyance, sensitive receptors located within 45 feet of grading would be exposed to construction vibration levels that could result in an annoyance.²⁵ There are no existing offsite sensitive uses located within 45 feet from where onsite building construction would occur. In addition, as the proposed BSMP is incrementally developed over time, future occupied residential buildings constructed in earlier phases of construction likely would be set back from

²² California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance Manual*. September 2013.

²³ Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

²⁴ Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*. May 2006.

²⁵ Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*. May 2006.

their respective property lines that would be greater than 45 feet and would not be exposed to vibration levels that would result in an annoyance.

**TABLE 3.11-8
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT**

Equipment/Activity	PPV at 25 ft (inches/second)^a
Large Bulldozer	0.089
Hoe Ram	0.089
Loaded Trucks	0.076
Caisson Drilling (represents Auger Drilling Pile Installation) ^d	0.089

SOURCE: Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*. May 2006 (Table 12-2, pp. 12-12).

As previously discussed, there are no existing or future propose sensitive buildings located within either the 13-foot or 45-foot threshold distances that would result in building damage or human annoyance, respectively. Therefore, the development of the proposed BSMP would not result in exposure of persons to vibration levels that would be considered excessive or significant under the established thresholds. This would be considered a **less-than-significant** impact.

Newkom Ranch

Construction of the development proposed within the Newkom Ranch property would have the identical impacts as those discussed under the BSMP. The construction activities within the Newkom Ranch property would have very similar construction equipment, phasing, and durations as those discussed under the BSMP. Within the Newkom Ranch property, construction activities would not expose future sensitive receptors to vibration levels that would result in building damage or human annoyance. Therefore, construction vibration is considered to be a **less-than-significant** impact.

Kells East Ranch

Construction of the development proposed within the Kells East Ranch property would have the identical impacts as those discussed under the BSMP. The construction activities within the Kells East Ranch property would have very similar construction equipment, phasing, and durations as those discussed under the BSMP. Within the Kells East Ranch property, construction activities would not expose future sensitive receptors to vibration levels that would result in building damage or human annoyance. Therefore, construction vibration is considered to be a **less-than-significant** impact.

Summary

The construction activities that would be associated with the proposed BSMP (including the Newkom Ranch and Kells East Ranch properties) would not include construction activities known to generate high vibration levels, such as impact pile driving or blasting. Onsite grading

and building construction activities would be the highest sources of construction vibration, but since there would be no existing or future sensitive receptors or structures located in close proximity to future construction sites, buildings and residents would not be exposed to vibration levels that could result in either building damage or human annoyance. Therefore, construction vibration is considered to be a **less-than-significant** impact.

Mitigation Measure

None required.

Impact 3.11-5: The proposed BSMP could result in exposure of residents or workers to excessive aircraft noise levels.

There is no established connection between the proposed BSMP and the number or operational characteristics of aircraft operations at the Yuba County Airport and the Sutter County Airport. Pursuant to the California Supreme Court's decision in *CBIA v. BAAQMD*, effects of the existing environment on future residents and users in a project are not impacts under CEQA. Nevertheless, an assessment of the consistency of the proposed BSMP with established aircraft noise thresholds is included in this section for informational purposes.

Full Master Plan

The eastern portion of the proposed BSMP is located within two miles of the Yuba County Airport and the Sutter County Airport.

Sutter County Airport

The Sutter County Airport CLUP adopted by SACOG provides the 65 dBA CNEL noise contour for the airport.²⁶ According the Sutter County Airport CLUP, residence land uses that are exposed to aircraft noise less than 65 dBA CNEL would be considered compatible with the CLUP.

Based on the aircraft noise contours provided in the Sutter County CLUP, the proposed land uses located on the north eastern portion of the BSMP, nearest to the Sutter County Airport, would be located approximately 1.3 miles outside of the airport's 65 dBA CNEL contour. These sensitive receptors would be exposed to aircraft noise that would not exceed the compatible noise thresholds established in the Sutter County CLUP for residential uses.

Yuba County Airport

The Yuba County ALUCP adopted by SACOG²⁷ provides the 55, 60 and 70 dBA CNEL noise contours for the airport.²⁸ According the Yuba County ALUCP, noise sensitive land uses such as

²⁶ Airport Land Use Commission, 2004. *Sutter County Airport Comprehensive Land Use Plan*. Adopted April 1994.

²⁷ SACOG serves as the Airport Land Use Commission for Sacramento, Sutter, Yolo, and Yuba counties.

²⁸ Airport Land Use Commission for Sacramento, Sutter, Yolo, and Yuba Counties, 2011. *Yuba County Airport Land Use Compatibility Plan*. Adopted March 17, 2011.

residences and schools that are exposed to aircraft noise less than 60 dBA CNEL would be considered normally compatible with the ALUCP.

Based on the aircraft noise contours provided in the Yuba County ALUCP, the proposed land uses located on the eastern portion of the BSMP, nearest to the Yuba County Airport, would be located approximately 1.4 miles outside of the airport's 55 dBA CNEL contour. These sensitive receptors would be exposed to aircraft noise that would be below the normally compatible noise thresholds established in the Yuba County ALUCP.

Newkom Ranch

The sensitive land uses proposed within the Newkom Ranch property would be approximately 2.7 and 1.6 miles outside of the Yuba County Airport's 55 dBA CNEL and Sutter County Airport's 65 dBA CNEL contours, respectively. These sensitive receptors would be exposed to aircraft noise that would be below the normally compatible noise thresholds established in the Yuba County ALUCP and Sutter County CLUP.

Kells East Ranch

The sensitive land uses proposed within the Kells East Ranch property would be approximately 3.5 and 1.9 miles outside of the Yuba County Airport's 55 dBA CNEL and Sutter County Airport's 65 dBA CNEL contours, respectively. These sensitive receptors would be exposed to aircraft noise that would be below the normally compatible noise thresholds established in the Yuba County ALUCP and Sutter County CLUP.

Summary

The sensitive land uses proposed within BSMP (including the BSMP, the Newkom Ranch, and Kells East Ranch properties) would be located approximately 1.3 miles outside of the Sutter County Airport's 65 dBA CNEL noise contour and 1.4 miles outside of the Yuba County Airport's 55 dBA CNEL noise contour at the closest point. Sensitive receptors proposed within the BSMP would not be exposed to aircraft noise that would exceed the normally compatible noise thresholds established in the Sutter CLUP County and Yuba County ALUCP. Therefore, the proposed residents and workers within the proposed BSMP would be exposed to aircraft noise that would result in a **less-than-significant** impact.

Mitigation Measure

Not applicable.

Cumulative Impacts

The geographic context for changes in the noise and vibration environment due to development of the proposed BSMP would be localized in the rural southern portion of City of Yuba City and adjacent to unincorporated areas of Sutter County, as well as along roadways that would serve the proposed BSMP. In order to contribute to a cumulative construction noise impact, another project in close proximity would have to be constructed concurrently with construction pursuant to the

proposed BSMP. There are numerous development projects currently in the planning stages in several locations near and within the BSMP site, that could be constructed and operational in the foreseeable future. The largest project near the BSMP site is the River Edge Apartments (650 Lincoln Road).

Cumulative traffic was forecasted using the SACOG's 2036 Metropolitan Transportation Plan/Sustainability Communities Strategy (MTP/SCS). Increases in vehicle trips due to development pursuant to the proposed BSMP would combine with other development projects in the City of Yuba City and would result in a cumulative increase in traffic along area roadways as evaluated the transportation and traffic analysis presented in section 3.14 of this EIR; these cumulative traffic increases would affect noise conditions within the City.

Impact 3.11-6: Development pursuant to the proposed BSMP could result in exposure of people to cumulative increases in construction noise levels.

As previously discussed in Impact 3.11-1, construction activities could adversely affect both existing and future proposed sensitive land uses if located within close proximity to BSMP-related construction. The only known cumulative project that could be constructed at the same time as the BSMP is the River Edge Apartments (650 Lincoln Road), which is located approximately 4,100 feet north of the BSMP site. Due to the large distance between the BSMP site and the River Edge Apartments (650 Lincoln Road), the combined noise exposure between these two projects would not be higher than what was predicted under the BSMP. Although considerable uncertainty exists regarding the construction schedules for the BSMP as well as cumulative projects, construction noise associated with the River Edge Apartments (650 Lincoln Road) in combination with the proposed BSMP would be considered a temporary **significant** cumulative impact and the contribution of the proposed BSMP would be less than cumulatively considerable.

Mitigation Measures

Mitigation Measure 3.11-6: Construction Noise Measures (BSMP/NR/KER)

Implement Mitigation Measure 3.11-1.

Significance after Mitigation: As discussed under Impact 3.11-1, implementation of **Mitigation Measure 3.11-6** would reduce the construction noise generated by the BSMP to a less-than-significance level by restricting heavy-duty equipment operations in close proximity to buildings, the use of temporary barriers and hydraulic or electric powered impact tools. With the implementation of **Mitigation Measure 3.11-6** listed above, the contribution of the proposed BSMP to this cumulative impact would be further reduced, and the impact would be reduced to a **less-than-significant** level.

Impact 3.11-7: Development pursuant to the proposed BSMP would contribute to cumulative construction that could expose existing and/or planned buildings, and persons within, to significant vibration.

As discussed under Impact 3.11-1, the construction activities within the proposed BSMP would consist of site grading, excavation for infrastructure and building foundations, building construction, and paving and landscaping installation. Since there is no existing or future proposed sensitive buildings located immediately adjacent to these construction areas, these sensitive receptors or buildings would not be exposed to vibration levels that would result in either building damage or human annoyance.

If proposed BSMP-related construction activities were to coincide with another development in close physical proximity, the combined effect could result in the exposure of sensitive receptors or buildings to higher vibration levels than what was predicted for the proposed BSMP. Since the nearest cumulative project, the River Edge Apartments, is located approximately 4,200 feet from where onsite BSMP-related construction activities would occur, the combined vibrations generated during the construction of the BSMP and nearby cumulative project would not expose existing or future planned residential buildings to vibration levels higher than what is currently assessed in this EIR. The construction vibration associated with cumulative projects in combination with the proposed BSMP would be considered a **less-than-significant** impact.

Mitigation Measure

None required.

Impact 3.11-8: Development pursuant to the proposed BSMP would contribute to cumulative increases in traffic noise levels.

On-road traffic associated with the full build-out of the proposed BSMP would be the primary source that would contribute to the cumulative noise environment. Noise projections were made using traffic noise prediction equations found in the FHWA's *Traffic Noise Model Technical Manual* for Existing, Cumulative and Cumulative plus BSMP conditions using roadway traffic volumes.²⁹ The segments analyzed and results of the modeling are shown in **Table 3.11-9**.

²⁹ Fehr & Peers, 2016. BSMP Traffic Report. July 2017.

**TABLE 3.11-9
CUMULATIVE L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY**

Roadway Segment	Traffic Noise Level 50 feet from Center of Roadway, dBA, L _{dn} ¹						
	Existing	Cumulative without Project	Cumulative with Project	Cumulative with Project incremental increase above Existing Conditions	Cumulative with Project incremental increase above Cumulative without Project	Cumulatively Significant? (Yes or No) ²	Project's Contribution Significant? (Yes or No) ²
State Route 99							
SR 20 to Sunsweet Boulevard	75	77	77	2	0	No	No
Sunsweet Boulevard to Bridge St	75	77	77	2	0	No	No
Bridge St to Franklin Avenue	76	76	77	1	1	No	No
Franklin Avenue to Hunn Road	75	76	77	2	1	No	No
Hunn Road to Richland Road	75	76	77	2	1	No	No
Richland Road to Lincoln Road	75	76	77	2	1	No	No
Lincoln Road to Smith Road	74	76	77	3	1	No	No
Smith Road to Bogue Road	74	76	77	3	1	No	No
Bogue Road to Stewart Road	73	76	76	3	0	No	No
Stewart Road to Reed Road	73	76	76	3	0	No	No
Reed Road to Walnut Avenue	73	76	76	3	0	No	No
Walnut Avenue to Barry Road	73	76	76	3	0	No	No
South Walton Avenue							
Bridge St to Franklin Avenue	68	68	68	0	0	No	No
Franklin Avenue to Richland Road	66	67	68	2	1	No	No
Richland Road to Lincoln Road	65	67	68	3	1	No	No
Lincoln Road to Bogue Road	63	64	65	2	1	No	No
Rogue Road to Kells Ranch Road	60	59	62	2	3	No	No
Kells Ranch Road to Stewart Road	60	59	62	2	3	No	No
Stewart Road to Reed Road	58	58	58	0	0	No	No
Phillips Road							
Lincoln Road to Smith Road	61	61	61	0	0	No	No
Smith Road to Rogue Road	58	58	59	1	1	No	No
Rogue Road to Newkom Ranch Road	N/A	N/A	64	N/A	N/A	N/A	N/A
Newkom Ranch Road to Stewart Road	N/A	N/A	57	N/A	N/A	N/A	N/A
Railroad Avenue							
Lincoln Road to Bogue Road	64	65	66	2	1	No	No
Bogue Road to Newkom Ranch Road	64	64	66	2	2	No	No
Newkom Ranch Road to Stewart Road	64	64	66	2	2	No	No

**TABLE 3.11-9
 CUMULATIVE L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY**

Roadway Segment	Traffic Noise Level 50 feet from Center of Roadway, dBA, L _{dn} ¹						
	Existing	Cumulative without Project	Cumulative with Project	Cumulative with Project incremental increase above Existing Conditions	Cumulative with Project incremental increase above Cumulative without Project	Cumulatively Significant? (Yes or No) ²	Project's Contribution Significant? (Yes or No) ²
Garden Highway							
Lincoln Road to Bogue Road	70	72	73	3	1	No	No
Bogue Road to Shanghai Bend Road	69	69	70	1	1	No	No
Shanghai Bend Road to Stewart Road	68	69	70	2	1	No	No
Gilsizer Ranch Way							
Bogue to Kells Ranch Road	N/A	N/A	60	N/A	N/A	N/A	N/A
Kells Ranch Road to Stewart Road	N/A	N/A	55	N/A	N/A	N/A	N/A
Chagaris Ranch Way							
Halprin Ranch Dr to Shanghai Bend Rd	N/A	N/A	58	N/A	N/A	N/A	N/A
Shanghai Bend Rd to Newkom Ranch Rd	N/A	N/A	58	N/A	N/A	N/A	N/A
Bridge St							
S. Walton Avenue to SR 99	71	73	73	2	0	No	No
Franklin Road							
S. Walton Avenue to SR 99	71	73	73	2	0	No	No
Richland Road							
S. Walton Avenue to Highway 99	60	61	61	1	0	No	No
Lincoln Road							
S. Walton Avenue to SR 99	68	72	72	4	0	Yes	No
SR 99 to Phillips Road	69	72	72	3	0	No	No
Phillips Road to Railroad Avenue	69	72	72	3	0	No	No
Railroad Avenue to Garden Highway	68	71	71	3	0	No	No
Bogue Road							
S. Walton Avenue to Kells Ranch Road	70	69	71	1	2	No	No
Kells Ranch Road to SR 99	70	69	72	2	3	No	No
SR 99 to Phillips Road	70	69	72	2	3	No	No
Phillips Road to Railroad Avenue	68	69	70	2	1	No	No
Railroad Avenue to Garden Highway	68	69	70	2	1	No	No
Newkom Ranch Road							
Phillips Road to Railroad Avenue	N/A	N/A	58	N/A	N/A	N/A	N/A
Railroad Ave to Chagaris Ranch Way	N/A	N/A	52	N/A	N/A	N/A	N/A

**TABLE 3.11-9
CUMULATIVE L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY**

Roadway Segment	Traffic Noise Level 50 feet from Center of Roadway, dBA, L _{dn} ¹						
	Existing	Cumulative without Project	Cumulative with Project	Cumulative with Project incremental increase above Existing Conditions	Cumulative with Project incremental increase above Cumulative without Project	Cumulatively Significant? (Yes or No) ²	Project's Contribution Significant? (Yes or No) ²
Kells Ranch Road							
S. Walton Ave to Gilsizer Ranch Way	N/A	N/A	59	N/A	N/A	N/A	N/A
Stewart Road							
S. Walton Avenue to Kells Ranch Road	57	53	56	-1	3	No	No
Kells Ranch Road to SR 99	57	53	58	1	5	No	No
SR 99 to Phillips Road	58	59	62	4	3	Yes	No
Phillips Road to Muir Road	59	59	61	2	2	No	No
Muir Road to Railroad Avenue	59	60	61	2	1	No	No
Railroad Avenue to Garden Highway	63	63	64	1	1	No	No

NOTES:

N/A = New Road

1. Noise levels were determined using methodology described in FHWA Traffic Noise Model Technical Manual

2. Sensitive land uses exposed to traffic noise that result in a noise increase greater than what is allowed in the City of Yuba City General Plan Policy 9.1-I-3 is considered a significant impact.

SOURCE: ESA, 2017

Cumulative traffic noise level significance is determined by a two-step process. First, a comparison is made of the increase in noise levels between cumulative conditions with the proposed BSMP and existing conditions to incremental threshold established in the Yuba County's General Plan Policy 9.1-I-3. If the roadside noise levels would exceed this incremental threshold, a cumulative noise impact would be identified.

The second step of the cumulative roadside noise analysis (if a cumulative noise impact is predicted) is to evaluate if the contribution of the BSMP to roadside noise levels is cumulatively considerable. This second step (if necessary) involves assessing whether the proposed BSMP contribution to roadside noise levels (i.e., the difference between cumulative conditions and cumulative plus project conditions) would exceed the incremental threshold established in the Yuba County's General Plan Policy 9.1-I-3. The roadway segments analyzed and the results of the noise increases resulting from modeling are shown in Table 3.11-9.

As can be seen from the table, a cumulative increase in noise levels along Lincoln Road (between South Walton Avenue and SR 99) and Stewart Road (between SR 99 and Phillips Road) would

exceed the incremental threshold established in the Yuba County's General Plan Policy 9.1-I-3, which would result in a cumulatively significant noise increase. However, the contribution of the proposed BSMP to this cumulative increase would range from 0 to 3 dB, which would not exceed the incremental threshold established in the Yuba County's General Plan Policy 9.1-I-3. Consequently, the BSMP's cumulative contribution to roadside noise impacts would be less than considerable, and thus this cumulative impact is considered **less than significant**.

Mitigation Measure

None required.

Impact 3.11-9: Development pursuant to the proposed BSMP would contribute to cumulative increases in stationary noise levels.

Heating, Ventilation, and Air-Conditioning (HVAC) Systems

The nearest cumulative project to the BSMP is the River Edge Apartments (650 Lincoln Road), which consists of the construction and operation of apartment buildings. It is unlikely that this cumulative project would include commercial uses that would require HVAC units. As discussed under Impact 3.11-3, the operation of HVAC units at commercial buildings could expose sensitive uses to noise levels that would exceed the nighttime stationary noise threshold found in the County of Sutter General Plan policy N 1.4 (see Table 3.11-5) of 45 dBA L_{eq} . Although there are no cumulative projects near the BSMP that would include HVAC units as part of their project design, the HVAC units proposed under the BSMP by itself could expose nearby sensitive land uses to noise levels that would be considered significant. Therefore, operation of HVAC units at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant** impact.

Loading Docks

The nearest cumulative project to the BSMP is the River Edge Apartments (650 Lincoln Road), which consists of the construction and operation of apartment buildings. It is unlikely that this cumulative project would include commercial uses that would require loading docks. As discussed under Impact 3.11-3, the operation of loading docks at commercial buildings within the BSMP site could exceed the daytime stationary noise threshold found in the County of Sutter General Plan Policy N 1.4 (see Table 3.11-5) of 55 dBA L_{eq} . Although there are no cumulative projects near the BSMP that would include loading docks as part of their project design, the loading docks proposed under the BSMP by itself could expose nearby sensitive land uses to noise levels that would be considered significant. Therefore, operation of loading docks at the proposed commercial buildings could expose nearby sensitive land uses to noise levels that could result in a **potentially significant** impact.

Schools

As previously discussed, the nearest cumulative project to the BSMP is the River Edge Apartments (650 Lincoln Road). The River Edge Apartments would consist of the construction and operation of apartments and would not include any educational uses, such as K-8 or middle schools. As discussed under Impact 3.11-3, the proposed school under the BSMP would only operate during the daytime hours, when ambient noise levels are at their highest, intermittent noise generated by the proposed school (e.g., loudspeakers, adults' and children's voices, parking lot noise and landscaping) would not be persistent enough to disrupt future residences. Therefore, operation of proposed school at the proposed would expose nearby sensitive land uses to noise levels that would result in a **less-than-significant** impact.

Mitigation Measures

Mitigation Measure 3.11-9: Stationary Source Mitigation (BSMP/NR/KER)

Implement Mitigation Measure 3.11-3.

Significance after Mitigation: Impacts of non-transportation noise sources (i.e., HVAC units and loading docks), with implementation of **Mitigation Measure 3.11-9**, would be reduced to less-than-significant levels. As a result, impacts associated with HVAC and loading dock noise would be reduced to a **less than significant**.

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3.12 Population and Housing

This section addresses the characteristics and trends of the population and housing within the City of Yuba City and the region, and describes the potential changes to population and housing demographics, including shifts in the jobs-housing ratio and the displacement of existing housing and residents, due to the implementation of the proposed BSMP.

While an EIR may provide information regarding land use, socio-economic, population, employment, or housing issues, CEQA does not recognize these issues as direct physical effects on the environment.¹ Therefore, this analysis does not identify environmental impacts and mitigation measures. Adverse physical effects on the environment that could result from implementation of the project, including the changes to land use addressed in this chapter, are evaluated and disclosed in the appropriate technical sections of this EIR.

Comments received in response to the notice of preparation expressed concern with impacts related to attracting homeless populations. This section provides a discussion on homelessness, along with a description of strategies that the City of Yuba City and other area agencies are incorporating to address homelessness within the region.

This analysis was developed based on the California Department of Finance (DOF) Population and Housing Estimates,² Sacramento Area Council of Governments' (SACOG) 2013-2021 Regional Housing Needs Assessment Plan,³ SACOG's 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS),⁴ the Sutter County General Plan,⁵ the Yuba City General Plan⁶ (notably the Yuba City 2013-2021 Housing Element), the Yuba City General Plan EIR,⁷ and United States Census Bureau's (U.S. Census) American Fact Finder.

3.12.1 Environmental Setting

Table 3.12-1 presents population and housing data for the statistical region surrounding the BSMP project site.

¹ State CEQA Guidelines section 15064(d)(1).

² California Department of Finance, Demographic Research Unit, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. May 1, 2017.

³ Sacramento Area Council of Governments, 2012. *Regional Needs Housing Plan 2013-2021*. Adopted September 20, 2012.

⁴ Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)*. Adopted February 18, 2016.

⁵ Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

⁶ City of Yuba City, 2004. *Yuba City General Plan*. April 8, 2004.

⁷ City of Yuba City, 2004. *Yuba City General Plan Final Environmental Impact Report (SCH No. 2001072105)*. February 2004.

**TABLE 3.12-1
 POPULATION AND HOUSING TRENDS, 2000-2017**

	2000	2010	2017 ⁶	Absolute Change, 2000-2017	Percent Change, 2000-2017
Yuba City MSA (Sutter and Yuba Counties Combined)					
Population	139,149 ¹	167,152 ³	171,533	32,384	23.3
Housing Units	50,955 ¹	60,975 ³	62,644	11,689	22.9
Sutter County					
Population	78,930 ¹	94,737 ⁴	96,956	18,026	22.8
Housing Units	28,319 ¹	33,858 ⁴	34,339	6,020	21.3
Yuba City					
Population	36,758 ²	64,925 ⁵	67,445	30,687	83.5
Housing Units	13,912 ²	23,174 ⁵	23,672	9,760	70.2

SOURCES:

1. U.S. Census Bureau, 2000. Population, Housing Units, Area, and Density: 2000 - State -- County / County Equivalent Census 2000 Summary File 1 (SF 1) 100-Percent Data. Geography: California. Accessed July 24, 2017.
2. U.S. Census Bureau, 2000. Population, Housing Units, Area, and Density: 2000 - State -- Place and (in selected states) County Subdivision, Census 2000 Summary File 1 (SF 1) 100-Percent Data. Geography: Yuba City city, California. Accessed July 24, 2017.
3. U.S. Census Bureau, 2017. American FactFinder: Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016, Geography: Yuba City, CA Metro Area.
4. U.S. Census Bureau, 2010. Population and Housing Occupancy Status: 2010 - County -- Census Tract, 2010 Census Redistricting Data (Public Law 94-171) Summary File. Geography: Sutter County, California. Accessed July 24, 2017.
5. U.S. Census Bureau, 2010. Population, Housing Units, Area, and Density: 2010 - State -- Place and (in selected states) County Subdivision, 2010 Census Summary File 1. Geography: Yuba City, California. Accessed July 24, 2017.
6. California Department of Finance, Demographic Research Unit, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. May 1, 2017.

Regional Population

Together, the counties of Sutter and Yuba comprise the Yuba City Metropolitan Statistical Area (MSA). Since 2000, this MSA has been one of the most rapidly growing in California. As shown in Table 3.12-1, the Yuba City MSA population increased 20 percent between 2000 and 2010, growing from 139,149 people⁸⁻⁹ to 167,152.¹⁰ Following the economic recession that lasted from 2007 to 2009, the population of the MSA grew an additional 2.6 percent from 2010 to 2017, reaching 171,533 people, as estimated by the DOF.¹¹

City of Yuba City Population

The population and housing unit growth rate in Yuba City outpaced the County and MSA over the period of 2000 to 2017. As shown in Table 3.12-1, Yuba City experienced nearly an 84

⁸ U.S. Census Bureau, 2000. American FactFinder: Population, Housing Units, Area, and Density: 2000 - State -- County/County Equivalent. Geography: California. Accessed July 24, 2017.

⁹ This reference uses the sum of the 2000 Sutter and Yuba County populations, per U.S. Census Bureau, to establish a 2000 Yuba City MSA population.

¹⁰ U.S. Census Bureau, 2017. American FactFinder: Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016, Geography: Yuba City, CA Metro Area. Accessed July 24, 2017.

¹¹ California Department of Finance, Demographic Research Unit, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. May 1, 2017.

percent increase in population between the years 2000 and 2017. According to the U.S. Census, the City's population was 36,758 in 2000,¹² 64,925 in 2010,¹³ and 67,445 in 2017.¹⁴

The City's share of the total population in Sutter County has increased substantially since 2000, from 46.6 percent¹⁵ of the County¹⁶ to 69.6 percent in 2017,¹⁷ while the City's share of the MSA population^{18,19} has increased moderately over the same period, rising from 26.4 percent²⁰ in 2000 to 39.3 percent in 2017.²¹

Yuba City Population Characteristics

The median age of Yuba City residents increased from 33.0 years in 2010²² to 34.5 years in 2015.²³ The median age in Yuba City has remained younger than the statewide median, rising from 35.2 in 2010²⁴ to 35.8 in 2015.²⁵ The percentage of working age residents, aged 18 through 65, increased only slightly from 60.1 percent (39,015 people) in 2010²⁶ to 60.2 percent (39,749 people) in 2015.²⁷ The percentage of seniors (aged 65 and older) between 2010 and 2015 increased from 11.1 percent²⁸ to 13.2 percent,²⁹ respectively. The aging of the population is a

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- ¹² U.S. Census Bureau, 2000. Population, Housing Units, Area, and Density: 2000 - State -- Place and (in selected states) County Subdivision, Census 2000 Summary File 1 (SF 1) 100-Percent Data. Geography: Yuba City, California. Accessed July 24, 2017.
- ¹³ U.S. Census Bureau, 2010. Population, Housing Units, Area, and Density: 2010 - State -- Place and (in selected states) County Subdivision, 2010 Census Summary File 1. Geography: Yuba City, California. Accessed July 24, 2017.
- ¹⁴ California Department of Finance, Demographic Research Unit, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. May 2017.
- ¹⁵ U.S. Census Bureau, 2000. Population, Housing Units, Area, and Density: 2000 - State -- Place and (in selected states) County Subdivision, Census 2000 Summary File 1 (SF 1) 100-Percent Data. Geography: Yuba City, California. Accessed July 24, 2017.
- ¹⁶ U.S. Census Bureau, 2000. Population, Housing Units, Area, and Density: 2000 - State -- County / County Equivalent Census 2000 Summary File 1 (SF 1) 100-Percent Data. Geography: California. Accessed July 24, 2017.
- ¹⁷ California Department of Finance, Demographic Research Unit, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. May 1, 2017.
- ¹⁸ U.S. Census Bureau, 2000. American FactFinder: Population, Housing Units, Area, and Density: 2000 - State -- County/County Equivalent. Geography: California. Accessed July 24, 2017.
- ¹⁹ This reference uses the sum of the 2000 Sutter and Yuba County populations, per U.S. Census Bureau, to establish a 2000 Yuba City MSA population.
- ²⁰ U.S. Census Bureau, 2000. Population, Housing Units, Area, and Density: 2000 - State -- Place and (in selected states) County Subdivision, Census 2000 Summary File 1 (SF 1) 100-Percent Data. Geography: Yuba City. Accessed July 24, 2017.
- ²¹ California Department of Finance, Demographic Research Unit, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. May 1, 2017.
- ²² U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data. Geography: Yuba City, California. Accessed July 24, 2017.
- ²³ U.S. Census Bureau, 2015. ACS Demographic and Housing Estimates: 2011-2015 American Community Survey 5-Year Estimates Geography: Yuba City, California. Accessed July 25, 2017.
- ²⁴ U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010 – 2010 Demographic Profile Data. Geography: California. Accessed July 25, 2017.
- ²⁵ U.S. Census Bureau, 2015. ACS Demographic and Housing Estimates: 2011-2015 American Community Survey 5-Year Estimates Geography: California. Accessed July 25, 2017.
- ²⁶ U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data. Geography: Yuba City, California. Accessed July 24, 2017.
- ²⁷ U.S. Census Bureau, 2015. ACS Demographic and Housing Estimates: 2011-2015 American Community Survey 5-Year Estimates Geography: Yuba City, California. Accessed July 25, 2017.
- ²⁸ U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data. Geography: Yuba City, California. Accessed July 24, 2017.
- ²⁹ U.S. Census Bureau, 2015. ACS Demographic and Housing Estimates: 2011-2015 American Community Survey 5-Year Estimates Geography: Yuba City, California. Accessed July 25, 2017.

trend that has been reflected statewide, as the senior population increased from 11.4 percent in 2010³⁰ to 12.1 percent in 2014.³¹

Housing

Regional Housing Supply

While the economic recession of 2007 to 2009 caused a downturn in housing values and new home construction across Northern California and the Central Valley, in line with general statewide and national trends, these regions have recently experienced a period of recovered economic growth. Housing values across the Yuba City MSA are considerably lower than in Sacramento, and significantly lower when compared to the San Francisco Bay Area. Thus, Yuba City and the Yuba City MSA provide a more affordable housing option for people willing to commute across Northern California, notably the greater Sacramento region.

As noted in Table 3.12-1, approximately 9,262 housing units were built in Yuba City between 2000 and 2010,³² representing an increase of 70 percent over the 2000 housing unit count. From 2010 to 2017, the number of housing units increased within the City by 498 housing units, or 2.1 percent³³ – a slower rate of growth that is likely a result of the recession. The housing vacancy rate for Yuba City has remained at approximately 7.0 percent from 2010 to 2017.³⁴

Jobs-Housing Relationship

The jobs-housing relationship is a concept that describes the ratio of residences (or households) to employment in a particular geographically-defined area. A low jobs-housing ratio (i.e., few jobs relative to the number of households in the area) indicates that many workers commute out of their area of residence to another location for employment. In areas containing a high jobs-housing ratio (i.e., many jobs for the number of households in the area), jobs are filled by workers who commute from outside the area. A jobs-housing ratio of 1.0 reflects that there is one job available per household and is considered to be in “balance.” Areas with high or low jobs-housing ratios are likely to generate more and longer home-to-work commutes.³⁵

When assuming that the affordability of housing and the range of employment income in the local market are paired reasonably closely, if the quantity and proximity of housing units is proportionate to the quantity and proximity of jobs, the majority of employees would be able to work and reside in the same community. A more balanced relationship between jobs and housing

³⁰ U.S. Census Bureau, 2010. Profile of General Population and Housing Characteristics: 2010 – 2010 Demographic Profile Data. Geography: California. Accessed July 25, 2017.

³¹ U.S. Census Bureau, 2015. ACS Demographic and Housing Estimates: 2011-2015 American Community Survey 5-Year Estimates Geography: California. Accessed July 25, 2017.

³² California Department of Finance, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. May 1, 2017.

³³ California Department of Finance, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. May 1, 2017.

³⁴ California Department of Finance, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. May 1, 2017.

³⁵ Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy*. pp. 220. February 18, 2016.

can help reduce the number of vehicle trips and overall vehicle miles traveled (VMT) as a result of shorter commutes to employment within the same proximate residential areas. Such a reduction in vehicle trips and VMT would tend to reduce levels of air pollutant emissions (including greenhouse gas emissions) and create less vehicular congestion on area roadways and intersections (i.e., fewer automobiles on the roads). The availability of an adequate housing supply, presenting a range of price levels that include reasonably affordable prices for local employees, could potentially reduce commute mileage between homes and work sites.

The SACOG MTP/SCS for the Sacramento region links land use, air quality, and transportation needs. The MTP/SCS supports the Sacramento Region Blueprint, which implements smart growth principles, including housing choice, compact development, mixed-use development, natural resource conservation, use of existing assets, quality design and transportation choice. The SACOG MTP/SCS analyzes and forecasts population growth across El Dorado, Placer, Sacramento, Sutter, Yuba, and Yolo Counties, and projected the change in the jobs-housing ratio between 2008 (considered to be a somewhat normal year in the regional economy) and 2036 (see **Table 3.12-2**). Within the SACOG region there were 969,838 jobs and 819,277 households in 2008, resulting in a jobs-housing ratio of 1.18. By 2036, the SACOG MTP/SCS projects that there will be 1,327,279 jobs and 1,140,202 households across the region, resulting in a jobs-housing ratio of 1.16.³⁶ In light of the fact that households typically have more than one job, at a regional level the jobs/housing relationship is projected to remain in balance.

**TABLE 3.12-2
 JOBS AND HOUSEHOLDS, 2008 AND 2036**

Geographic Area	Total Jobs		Households		Jobs-Housing Ratio	
	2008	2036	2008	2036	2008	2036
SACOG Region	969,838	1,327,279	819,277	1,140,202	1.18	1.16
Sutter County	31,751	43,805	31,314	43,462	1.01	1.01

NOTE:

The SACOG Region includes El Dorado, Placer, Sacramento, Sutter, Yuba, and Yolo Counties.

SOURCE: Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy*. pp. 220. Table 9.5. February 18, 2016.

In 2008, Sutter County had 31,751 jobs and 31,314 households, resulting in a jobs-housing ratio of 1.01. In 2036, the County is expected to have 43,805 jobs and 43,462 households, also resulting in a jobs-housing ratio of 1.01.³⁷

³⁶ Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy*. pp. 220. Table 9.5. February 18, 2016.

³⁷ Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy*. pp. 220. Table 9.5. February 18, 2016.

Yuba City's employment base in September 2016 was approximately 29,300,³⁸ with 21,859 households.³⁹ This generates a jobs-housing ratio of 1.34, reflective of Yuba City's continuing role as the major employment provider for the Yuba City MSA and demonstrating that employees commute from neighboring communities in the region to work in Yuba City.

Homelessness

Based on a 2013 series of point-in-time counts, Yuba-Sutter area's homeless population was estimated at 798 people.⁴⁰ As described in its 2013-2021 Housing Element, Yuba City maintains a commitment to combating homelessness region-wide through the provision of affordable housing and support services. To achieve these efforts, the City is a member of the Sutter-Yuba Homeless Consortium aimed at resolving issues pertaining to homelessness. This consortium is comprised of more than 50 representatives, including service providers, government agencies, service providers, nonprofits, and faith-based organizations within Yuba and Sutter Counties, whose goal is to address homeless needs and provide comprehensive services on a regional basis.⁴¹ The City also utilizes funding as a Community Development Block Grant entitlement city to solicit input from the public involving housing needs and supportive service needs for special needs populations, such as the homeless population.

The Yuba City Housing Element also notes that the following institutions and organizations provide assistance to homeless individuals and families:

- Casa De Esperanza
- Twin Cities Rescue Ministries
- Regional Emergency Shelter Team
- Sutter-Yuba Mental Health Services
- Hands of Hope
- St. John's Episcopal Church
- St. Andrew Presbyterian Church
- River Bottoms Ministry
- A Hand Up Ministry
- Crossroads Community Church⁴²

³⁸ California Employment Development Department, Labor Market Information Division, 2017. Labor Force and Unemployment Rates for California Areas – Yuba City.

³⁹ U.S. Census Bureau, 2015. Selected Housing Characteristics: 2011-2015 American Community Survey 5-Year Estimates. Geography: Yuba City. Accessed July 25, 2017.

⁴⁰ City of Yuba City, 2013. *City of Yuba City 2013-2021 Housing Element Update*. February. pp. 34.

⁴¹ City of Yuba City, 2013. *City of Yuba City 2013-2021 Housing Element Update*. February. pp. 34.

⁴² City of Yuba City, 2013. *City of Yuba City 2013-2021 Housing Element Update*. February. pp. 36.

3.12.2 Regulatory Framework

Federal

There are no federal regulations that specifically regulate population or housing issues that would be applicable to the proposed BSMP.

State

California Housing Element Requirements

California law (Government Code Section 65580, et seq.) requires cities and counties to include a housing element as a part of their general plan to address housing conditions and needs in the community. Housing elements are prepared approximately every five years (eight following implementation of Senate Bill [SB] 375), following timetables set forth in the law. The housing element must identify and analyze existing and projected housing needs and “make adequate provision for the existing and projected needs of all economic segments of the community,” among other requirements. The City adopted its current Housing Element in 2013.

Regional Housing Needs Assessment

State law mandates that all cities and counties offer a portion of housing to accommodate the increasing needs of regional population growth. The statewide housing demand is determined by the California Department of Housing and Community Development (HCD), while local governments and councils of governments decide and manage their specific regional and jurisdictional housing needs and develop a regional housing needs assessment (RHNA).

In the greater Sacramento region, which includes the City of Yuba City, SACOG has the responsibility of developing and approving an RHNA and a Regional Housing Needs Plan (RHNP) every eight years (Government Code, Section 65580 et seq.). This document has a central role of distributing the allocation of housing for every county and city in the SACOG region. Housing needs are assessed for very low income, low income, moderate income, and above moderate households.⁴³

Local

The BSMP site is currently in unincorporated Sutter County and under jurisdiction of its General Plan. Implementation of the BSMP would require a sphere of influence amendment (SOIA) and annexation of Phase 1 (Newkom Ranch) and Phase 2 (Kells East Ranch) into the City of Yuba City. The development of the BSMP would be required to be substantially compliant with Yuba City General Plan. Although within the City, adjacent areas to the west and south of the BSMP site would remain in unincorporated Sutter County. Consequently, BSMP development adjacent to these unincorporated areas would need to consider applicable Sutter County General Plan goals

⁴³ Sacramento Area Council of Governments, 2012. *Regional Needs Housing Plan 2013-2021*. Adopted September 20, 2012. pp. 4. Table 1.

and policies. The following section presents goals and policies in the Yuba City General Plan and the Sutter County General Plan that are applicable to the proposed BSMP.

Sacramento Area Council of Governments

As described above, SACOG is the association of local governments that includes Yuba City, along with other jurisdictions comprising the six counties in the greater Sacramento region. In addition to preparing the Metropolitan Transportation Plan and Sustainable Communities Strategy for the region, SACOG approves the distribution of affordable housing in the region through its RHNP. SACOG also assists in planning for transit, bicycle networks, clean air and serves as the Airport Land Use Commission for the region.⁴⁴

City of Yuba City General Plan

These guiding policies from the City of Yuba City General Plan are relevant to population and housing.

Guiding Policy 2.5-G-1 Foster a climate in which business can prosper and actively promote economic development opportunities and knowledge of Yuba City in the region, state and nation.

Guiding Policy 2.5-G-4 Promote economic development activities that link residents with businesses in the City, such as job training and job development, and facilitate a desired jobs/housing balance.

Guiding Policy 2.5-G-7 Enhance aspects of the community that help economic development and draw residents to Yuba City, including small-town ambience, educational, cultural, environmental and recreational resources, and affordable housing.

Guiding Policy 3.9-G-1 Provide appropriately located areas for a broad range of employment generating uses to strengthen the City's economic base and provide employment opportunities for residents.

Guiding Policy 3.9-G-2 Encourage employment generating uses to locate along major transportation facilities.

Guiding Policy 3.9-G-3 Encourage local serving professional and administrative offices to locate as part of locally-oriented office uses and in mixed-use community activity centers.

Guiding Policy 3.9-G-6 Provide sites for commercial services that complement employment center development or that require an industrial environment.

Guiding Policy 3.9-G-7 Achieve compatibility between employment center development and surrounding neighborhoods through buffering requirements and performance standards intended to minimize

⁴⁴ Sacramento Area Council of Governments, 2017. About SACOG. Available: <http://www.sacog.org/about/>. Accessed July 25, 2017.

harmful effects of excessive noise, light, glare, and other adverse environmental impacts.

As described in Chapter 2, the proposed BSMP would provide for a mix of employment-generating uses that are diverse in nature and located near and along State Route (SR) 99 and Garden Highway, which are both major local and regional thoroughfares. The proposed BSMP would offer sites that both complement the development of employment centers and adequately buffer between other existing agricultural uses and other surrounding uses. These aspects would subsequently continue to promote the desired jobs-housing balance that the City is seeking, as employment generating uses would also develop alongside a wide range of housing within the BSMP site. For these reasons, the proposed BSMP would be consistent with the applicable population and housing goals and policies found in the Yuba City General Plan. The Yuba City Council will make the final determination of consistency of the proposed BSMP with the General Plan.

City of Yuba City 2013-2021 Housing Element

The following policies and programs from the City of Yuba City 2013-2021 Housing Element are relevant to the population and housing effects of the proposed BSMP.

Policy H-B Provide incentives and programs to ensure the provision of extremely low-, very low-, low- and moderate-income housing units to meet community needs.

Program

H-B-2 Continue to strive to increase the number of extremely low-, very low-, and low-income households receiving rental assistance and support applications by the Regional Housing Authority of Sutter & Nevada Counties for Section 8 Housing Choice Vouchers as well as Article 34 referenda requests. In addition, support increase in the number of these types of households receiving rental assistance through Tenant Based Rental Assistance via HOME.

H-B-3 Continue the City's policy which allows for second dwelling units within single family residential neighborhoods by reducing lot coverage requirements and allowing for tandem parking when setback requirements are met.

Policy H-C Continue to work with Sutter County on actions to fulfill Yuba City's fair share of regional housing needs.

Program

H-C-2 The City will continue to negotiate written agreements with the County to transfer RHNA fair share allocations due to annexations of vacant land designated for residential use and establish the standards and conditions that will subsequently be applied on a project-by-project basis. The success of written agreements developed will be evaluated and any findings incorporated into the future contracts in order to adequately provide for regional fair share housing needs. Additionally, the City will work with the County and SACOG to incorporate changes to target adjustments to RHNA allocations established in agreements in subsequent Housing Element updates.

- H-C-3 In order to continue to meet affordable housing needs, the County will assist in obtaining funding for any planned affordable housing projects that are to be annexed. Annexation agreements/written documents will identify any such projects and will outline joint funding strategies.
- H-C-5 Work with the County and SACOG to incorporate adjustments to RHNP allocations established in agreements in subsequent Housing Element updates.
- H-C-6 Allow affordable residential uses on enough land to accommodate 10 percent of the total number of residential units proposed by a specific plan.

Policy H-D Facilitate the production of various housing types and densities to meet the needs of all income groups and ensure that housing opportunities are open to all without regard to race, color, age, sex, religion, national origin, family status, or physical handicap. The City shall seek to meet the special housing needs of individuals with disabilities and developmental disabilities, extremely low-, very low- and low incomes, large families, senior citizens, farmworkers and their families, female-headed households with children, and others with special needs.

Program

- H-D-1 Continue and expand, where feasible, partnerships with for-profit or nonprofit housing organizations to provide affordable housing. Consider contracting with additional organizations to provide housing services and information for special needs groups within the City.
- H-D-3 The City will continue to encourage diversity in unit size within multiple-family housing projects and to be proactive in the development of three- and four-bedroom housing units for large families by granting priority funding for projects which include three or more bedrooms.
- H-D-5 In order to remove constraints on housing for persons with disabilities under guidelines set forth in the Fair Housing Act, provide a reasonable accommodation procedure that is available to individuals with disabilities and their representatives as well as providers of housing for individuals with disabilities. Evaluate the zoning regulations for ADA compliance and formalize a provision for reasonable accommodations for persons with disabilities that will be separate from a variance or use permit. When updating the zoning and building code to include a reasonable accommodation measure the City will reference the model ordinance and examples provided to the City by HCD to open housing opportunities to individuals with disabilities. Provide safeguards on privacy interests of applicants and providers. Provide an opportunity for appeal of adverse decisions by aggrieved applicants.
- H-D-6 Continue to offer specific incentives for development of individual or group-care housing affordable to the City's senior and special needs populations through City-specific density bonuses (in addition to state requirements), reduced parking requirements, and development fee reductions for projects at infill localities.
- H-D-8 The City will work with housing providers to ensure that special housing needs and the needs of lower-income households are addressed for seniors, large families, female-headed households, female-headed households with children,

persons with disabilities and developmental disabilities, extremely low-income households, and homeless individuals and families. The City will seek to meet these special housing needs through a combination of regulatory incentives, zoning standards, new housing construction programs, and supportive services programs. The City will promote market-rate and affordable housing sites, housing programs, and financial assistance available from the city, county, state and federal governments. In addition, as appropriate, the City will apply or support others' applications for funding under state and federal programs designated specifically for special needs groups and other lower-income households such as seniors, persons with disabilities, extremely low-income households, and persons at risk for homelessness.

Policy H-E Encourage the use of energy-efficient materials and technology in new construction.

Program

H-E-1 Incorporate energy conservation measures as an integral part of housing rehabilitation programs. Provide free information to residents on energy conservation and available programs at the Community Development Department counter and on the City's website, and feature energy conservation as an important part of the annual Housing Fair.

The proposed BSMP would offer a wide variety of housing types, which would cater to smaller and larger families of varying income levels and backgrounds. Specifically, the proposed BSMP would require housing featuring minimum densities of 20 units per acre or greater to allow affordable residential uses on enough land to accommodate 10 percent of the total number of residential units proposed in the Yuba City Housing Element. The Low-Medium and Medium-High land use designations could be designed to allow affordable housing on site. As such, the proposed BSMP would be designed to support the City's efforts to meet its fair share of regional housing needs. For these reasons, the proposed BSMP would be consistent with the applicable goals and policies found in the Yuba City Housing Element.

Sutter County General Plan

The following goals and policies from the Sutter County General Plan are relevant to the proposed BSMP's role in population and housing.

Goal LU 4 Facilitate orderly, well-planned, sustainable, and efficient growth that balances aesthetic, functional, resource, and economic considerations.

Policies

- LU 4.1 Growth Areas. Direct future growth and development to the growth areas identified on Figure 3-1.
- LU 4.2 Urban and Suburban Residential. Direct new urban and suburban residential development to defined Growth Areas where adequate public facilities and services are available. For Estate Residential uses, public facilities may be provided by either community or individual water and wastewater systems.

Goal LU 5 Promote a collaborative process for the planning and annexation of the area within the cities spheres of influence.

Policies

- LU 5.8 Employment- and Revenue-Generating Uses. Coordinate with the cities to encourage projects that result in employment- and revenue-generating land uses resulting in benefits to both the County and cities.
- LU 5.10 Orderly Progression. Support annexation proposals that include land areas of adequate size to be planned and developed in a comprehensive fashion, extend in an orderly progression outward from the incorporated cities, and do not result in the creation of unincorporated islands.

As discussed above, the proposed BSMP would provide for a mix of employment generating uses, along with diverse housing choices, immediately to the south of Yuba City and contiguous with the existing developed edges of the City. The BSMP site has been designated by Sutter County as a possible future SOI for Yuba City and, as such, the City and Sutter County would continue to coordinate efforts aimed at establishing appropriately buffered residential and commercial development that would ensure suitable levels of housing and employment while also interfacing with the existing surrounding rural and agricultural qualities as a whole. The proposed BSMP would also feature several alternative transportation aspects, such as bicycle, pedestrian, and public transit access, that would encourage BSMP residents to work and live in close proximity, including unincorporated areas within Sutter County. These aspects would subsequently continue to promote the desired jobs-housing balance that the City is seeking, as employment generating uses would also develop alongside a wide range of housing within the BSMP site. For these reasons, the proposed BSMP would be consistent with the applicable population and housing goals and policies found in the Sutter County General Plan.

3.12.3 Analysis, Impacts, and Mitigation

Significance Criteria

Informed by State CEQA Guidelines Appendix G, for the purposes of this EIR impacts related to population and housing are considered significant if the proposed BSMP would:

- Directly or indirectly induce substantial population growth; or
- Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.

Methodology and Assumptions

Primary and secondary impacts (i.e., increase in air pollutants, traffic, damage to biological resources) associated with increasing residential and commercial development, along with other proposed uses within the BSMP site, are addressed in the relevant technical sections of this EIR. The potential for the project to encourage and induce growth beyond the BSMP site boundaries and the potential for displacement to occur on site are evaluated below.

Development of the proposed BSMP would allow for development of lower, middle, and higher density residential uses, which would provide a variety of single-family, multifamily, and affordable housing options within the BSMP site. Pursuant to Program H-C-6 of the City’s Housing Element, the proposed BSMP would require minimum densities of 20 units per acre or greater to facilitate at least 10 percent of the total number of residential units proposed by October 31, 2021 to be developed as affordable units. Based on this, approximately 118 units of affordable housing may be provided with lower-income sites potentially available within the Medium-High density residential designation.

A variety of employment and business opportunities would be possible in the BSMP site, and this too would attract additional economic activity and patronage within the BSMP site. The proposed BSMP would also require approval by the Sutter County Local Agency Formation Commission (Sutter LAFCO) for the SOIA, and annexation of Phases 1 and 2 into the City.

Table 3.12-3 presents the population and housing unit projection anticipated for the proposed BSMP, while **Table 3.12-4** provides the employment projection.

**TABLE 3.12-3
 BSMP POPULATION AND HOUSING GENERATION**

	Proposed Dwelling Units	Population Rate (People per Household) ^a	Projected Population
Newkom Ranch Phase			
Low Density Residential	427	2.67	1,140
Low-Medium Density Residential	--	--	--
Medium/High Density Residential	216	2.67	577
TOTAL Newkom Ranch Phase	643	--	1,717
Kells East Ranch Phase			
Low Density Residential	147	2.67	392
Low-Medium Density Residential	--	--	--
Medium/High Density Residential	122	2.67	326
TOTAL Kells East Ranch Phase	269	--	720
Final Phase			
Low Density Residential	754	2.67	2,013
Low-Medium Density Residential	430	2.67	1,148
Medium/High Density Residential	420	2.67	1,121
TOTAL Final Phase	1,604	--	4,282
FULL BSMP (BSMP/NR/KER)			
Low Density Residential	1,329	2.67	3,548

**TABLE 3.12-3
 BSMP POPULATION AND HOUSING GENERATION**

	Proposed Dwelling Units	Population Rate (People per Household) ^a	Projected Population
Low-Medium Density Residential	430	2.67	1,148
Medium/High Density Residential	758	2.67	2,024
TOTAL FULL BSMP	2,517	--	6,719

NOTE:

a. Population rate based on Yuba City average household size of 2.67 persons per household.

SOURCES: City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004, Resolution #04-049. pp. 3-8. Table 3-3; Environmental Science Associates, 2017

**TABLE 3.12-4
 BSMP EMPLOYMENT GENERATION**

	Square Feet ^a	Percent Retail	Percent Non-retail	SF per Retail Employee	SF per Non-retail Employee	Projected Employment
Newkom Ranch Phase						
Neighborhood Commercial	--	70	30	--	--	--
Community Commercial	229,779	75	25	500	400	488
Office & Office Park	108,464	5	95	400	300	357
Business, Technology & Light Industrial		0	100	--	--	--
TOTAL	338,243	--	--	--	--	845
Kells East Ranch Phase						
Neighborhood Commercial	--	70	30	--	--	--
Community Commercial	161,172	75	25	500	400	342
Office & Office Park	--	5	95	--	--	--
Business, Technology & Light Industrial	--	0	100	--	--	--
TOTAL	161,172	--	--	--	--	342
Final Phase						
Neighborhood Commercial	82,328	70	30	500	400	177
Community Commercial	--	75	25	--	--	--
Office & Office Park	--	5	95	--	--	--
Business, Technology & Light Industrial	574,992	0	100	0	750	767
K-8 School	--	--	--	--	--	108
TOTAL	657,320	--	--	--	--	1,052
FULL BUILDOUT (BSMP/NR/KER)						
Neighborhood Commercial	82,328	70	30	500	400	177

**TABLE 3.12-4
 BSMP EMPLOYMENT GENERATION**

	Square Feet ^a	Percent Retail	Percent Non-retail	SF per Retail Employee	SF per Non-retail Employee	Projected Employment
Community Commercial	390,951	75	25	500	400	831
Office & Office Park	108,464	5	95	400	300	357
Business, Technology & Light Industrial	574,992	0	100	0	750	767
K-8 School	--	--	--	--	--	108
TOTAL FULL BUILDOUT	1,156,735	--	--	--	--	2,240

NOTE:

Employee calculations do not include Public Facilities, a land use designation for which the Yuba City General Plan did not assign employment rates.

SOURCES: City of Yuba City, 2004. *Yuba City General Plan*. Adopted April 8, 2004, Resolution #04-049. pp. 3-8. Table 3-5; Yuba City Unified School District. 2017; Environmental Science Associates, 2017.

The proposed BSMP would not contemplate removing any existing residential structures on the BSMP site other than situations where homeowners may voluntarily sell their property for future development. Future implementation of the proposed BSMP may require the removal of existing structures used solely to support farming practices within the BSMP site, but these situations too would involve voluntary sales of property to future developers. This analysis assumes no dwelling units or people would be displaced as a result of implementation of the proposed BSMP and no replacement housing would be required to be constructed.

Issues Not Discussed in Impacts

All impacts relating to population and housing are discussed in this section.

Impacts and Mitigation Measures

Impact 3.12-1: Development pursuant to the proposed BSMP would induce substantial population growth in an area.

Full Master Plan

The BSMP site is located in a predominantly rural area with a low population count. There are few scattered residences throughout the site on large lots, with limited infrastructure. The majority of the roads are small, two-lane thoroughfares, though SR 99 is a four-lane State highway that bisects the BSMP site. Upon buildout of the proposed BSMP, including the Newkom Ranch and Kells East Ranch phases, 2,517 dwelling units would be constructed and approximately 1,288,723 square feet of non-residential space would be constructed accommodating 2,240 jobs (see Table 3.12-4).

The jobs-housing ratio proposed BSMP would be approximately 0.85:1. That is, there would be approximately 0.85 jobs for every housing unit within the BSMP site. A jobs-housing ratio below

1.0, indicates that there are fewer jobs than dwelling units in a given area, resulting in some people commuting to another area for work.

As of 2016, Yuba City had a jobs-housing ratio of 1.34, or 1.34 jobs for every housing unit in Yuba City.^{45,46} If the jobs and dwelling units projected in the BSMP were added to the existing jobs and housing in the City, the citywide jobs-housing ratio would decrease to 1.29. The proposed BSMP would contribute to an improved, more balanced jobs-housing ratio in the City.

Maintaining a jobs-housing ratio closer to 1.0 can reduce home-to-work commuting and the amount of vehicle miles traveled, which in turn can reduce GHG emissions, traffic congestion, and a variety of other environmental effects. In particular, if a community is capable of providing nearly equal levels of employment and housing, it is possible for employees to choose housing that is close to their jobs and thereby avoid seeking housing in other, more distant communities. Thus, a more balanced jobs-housing ratio has the potential to minimize the inducement of population growth. Development of the BSMP site would bring the overall jobs-housing ratio within Yuba City closer to 1.0, but it would not guarantee that people would choose to live and work in the same community.

Notwithstanding the improvement in the overall jobs-housing relationship in Yuba City, implementation of the proposed BSMP would result in a substantial increase in population in Yuba City. Such infrastructure as roadways and utilities piping would be oversized to accommodate development for the proposed BSMP, as well as any further growth contemplated in the City's water and sewer plans. Although the implementation of the proposed BSMP would result in the development of approximately 2,100 dwelling units and 1.3 million square feet of non-residential space, this growth reflects values consistent with the City of Yuba City General Plan and its water and sewer plans.

As discussed earlier in this section, population increases and decreases are not, in and of themselves, considered physical environmental effects. Physical environmental effects that would be a result of population growth within the BSMP area are examined in the appropriate environmental resource sections of this EIR. This is a **less-than-significant** impact.

Newkom Ranch

The Newkom Ranch phase, much like the BSMP site, is located in a predominantly rural area with a low population count. No dwelling units currently exist on site, as the majority of the land within this site consists of orchards and other agricultural uses. Buildout of Newkom Ranch would generate a total of 643 dwelling units, of which 427 units would be Low Density Residential and 216 would be Medium/High Density Residential. This phase would generate a total of 1,717 residents (see Table 3.12-3).

⁴⁵ California Employment Development Department, Labor Market Information Division, 2017. Labor Force and Unemployment Rates for California Areas – Yuba City.

⁴⁶ U.S. Census Bureau, 2015. Selected Housing Characteristics: 2011-2015 American Community Survey 5-Year Estimates. Geography: Yuba City. Accessed July 25, 2017.

As seen in Table 3.12-4, this phase would generate a total of approximately 340,000 square feet of non-residential uses, comprised of approximately 230,000 square feet of Community Commercial uses and approximately 110,000 square feet of Office and Office Park uses. Based on the assumptions provided in the Yuba City General Plan, this phase would generate a total of approximately 850 jobs.

The Newkom Ranch phase's jobs-housing ratio would be approximately 0.49, or approximately 0.49 jobs for every housing unit within the Newkom Ranch site. A jobs-housing ratio below 1.0 indicates that there are fewer jobs than dwelling units in the Newkom Ranch site, resulting in some people commuting to another area for work. When considered within the context of Yuba City as a whole, development of the Newkom Ranch phase would bring the City's overall jobs-housing ratio of 1.34 closer to 1.0, although it would not guarantee that people would choose to live and work in the same community.

Implementation of this phase would directly result in a substantial increase in population in Yuba City. Although designed to connect with subsequent phases of development within the overall BSMP site, the infrastructure would be sized to accommodate growth anticipated in Newkom Ranch.

As discussed earlier in this section, population increases and decreases are not, in and of themselves, considered physical environmental effects. Physical environmental effects that would be a result of population growth within the BSMP area are examined in the appropriate environmental resource sections of this EIR. This is a **less-than-significant** impact.

Kells East Ranch

The Kells East Ranch phase, much like the BSMP site, is located in a predominantly rural area with a low population count. Few dwelling units currently exist on site, as the majority of the land within this site consists of orchards and other agricultural uses. Buildout of the Kells East Ranch phase would generate a total of 270 dwelling units, of which 147 units would be Low Density Residential and 123 would be Medium/High Density Residential. This phase would generate a population of approximately 720 people (see Table 3.12-3).

As seen in Table 3.12-4, the Kells East Ranch phase would generate a total of approximately 161,000 square feet of Community Commercial uses. Based on the assumptions provided in the Yuba City General Plan, this phase would generate a total of approximately 345 jobs.

The Kells East Ranch phase's jobs-housing ratio would be approximately 1.27, or approximately 1.27 jobs for every housing unit within the Kells East Ranch site. A jobs-housing ratio above 1.0 indicates that there are fewer dwelling units than jobs in this site, resulting in some people commuting from another area for employment within the Kells East Ranch site. When considered within the context of Yuba City as a whole, development of the Kells East Ranch phase would bring the overall Yuba City jobs-housing ratio of 1.34 closer to 1.0, although it would not guarantee that people would choose to live and work in the same community.

Implementation of this phase would directly result in a substantial increase in population in Yuba City. Although designed to connect with subsequent phases of development within the overall BSMP site, the infrastructure would be sized to accommodate growth anticipated in Kells East Ranch.

As discussed earlier in this section, population increases and decreases are not, in and of themselves, considered physical environmental effects. Physical environmental effects that would be a result of population growth within the BSMP area are examined in the appropriate environmental resource sections of this EIR. This is a **less-than-significant** impact.

Mitigation Measure

None required.

Impact 3.13-2: Development pursuant to the BSMP would not displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.

Full Master Plan, Newkom Ranch, Kells East Ranch

The proposed BSMP, including Newkom Ranch and Kells East Ranch phases, contemplates a mixed-use community that would include various types of residential, commercial, office, recreational, and public uses in what is now a predominantly agricultural area. Currently, there are 114 parcels totaling 741 acres under multiple ownership, with several of these parcels containing single-family (i.e., agricultural) residences and inhabitants. While the proposed BSMP could result in the replacement of some of these residences, individual property owners would not be required to sell and/or relocate their homes. Furthermore, any homes that are demolished would be the result of a voluntary sale of the property by the property owner(s) and there would be new housing within the BSMP site at various price points for such owners to purchase. As a result, the proposed BSMP would not displace a substantial number of people or existing housing and would not necessitate the construction of replacement housing elsewhere. Therefore, the proposed BSMP, including Newkom Ranch and Kells East Ranch, would have **no impact** on existing housing or the need for replacement housing.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative context for the proposed BSMP is the full buildout of Yuba City, including its sphere of influence (SOI), as established in the Yuba City General Plan.

Impact 3.12-3: Development pursuant to the proposed BSMP, in combination with future buildout of the City of Yuba City as well as the City’s sphere of influence, could directly or indirectly induce substantial population growth in the area.

The BSMP site is a largely undeveloped, low-density, and predominantly rural area of Sutter County that is developing along the SR 99 corridor, which runs primarily through the center of Yuba City and connects the site to Sacramento to the south and Live Oak and Chico to the north. Upon buildout of the proposed BSMP, 2,517 dwelling units would be built for 6,719 residents and approximately 1.3 million square feet of non-residential space would be constructed, accommodating 2,132 jobs (see Table 3.12-4).

As stated in Impact 3.12-1, the addition of the housing and employment generated by the proposed BSMP would cause the citywide jobs-housing ratio to decrease from 1.34 to 1.29, thus helping contribute to an improved, more balanced jobs-housing ratio in the City. The proposed BSMP would increase the number of Yuba City households from 21,859 to 24,376, an increase of 12 percent. Similarly, the employment would increase from 29,300 to 31,432, an increase of 7 percent.

The development in the proposed BSMP would be consistent with the vision of the Yuba City General Plan. As discussed earlier in this section, population increases and decreases are not, in and of themselves, considered physical environmental effects. Physical environmental effects that would be a result of population growth within the BSMP area are examined in the appropriate environmental resource sections of this EIR. This is a **less-than-significant** impact.

Mitigation Measure

None required.

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3.13 Public Services and Recreation

This section addresses potential impacts to public services, including police protection, fire protection, schools, and parks and recreation facilities, related to the proposed BSMP project.

The City received a comment on the notice of preparation that expressed concern that the distance of the BSMP project site from the Yuba City police station would result in lengthy police response times to the area. This issue is addressed in Section 3.13.1, Police Protection. No comments were received regarding fire protection, schools, or parks and recreation.

The analysis provided in this section was developed based on data provided in the Yuba City General Plan,¹ the Yuba City Unified School District (YCUSD) Master Facilities Plan – 2014 through 2024,² and supplemental information from the Yuba City Police Department (YCPD), the Yuba City Fire Department (YCFD), and the Yuba City Community Services Department.

3.13.1 Police Protection

Environmental Setting

Sutter County Sheriff's Office

The Sutter County Sheriff's Office (SCSO) currently provides police protection services in unincorporated areas of Sutter County, the City of Live Oak, and portions of Yuba City located south of Franklin Road and generally west of Gilsizer Slough, under contract. The SCSO is responsible for managing Sutter County jail, which is located at SCSO Headquarters, at 1077 Civic Center Boulevard in Yuba City. In total, the SCSO is responsible for providing these services to approximately 608 square miles, including 187 miles of navigable waterways within Sutter County.

Upon annexation, law enforcement for the BSMP site would become the responsibility of the YCPD, and the SCSO would remain responsible for providing police protection to areas adjacent to the south and west of the BSMP site. The SCSO holds mutual aid agreements with the California Highway Patrol (CHP), the YCPD, the Marysville Police Department (MPD), and the Yuba County Sheriff Department (YCSD).

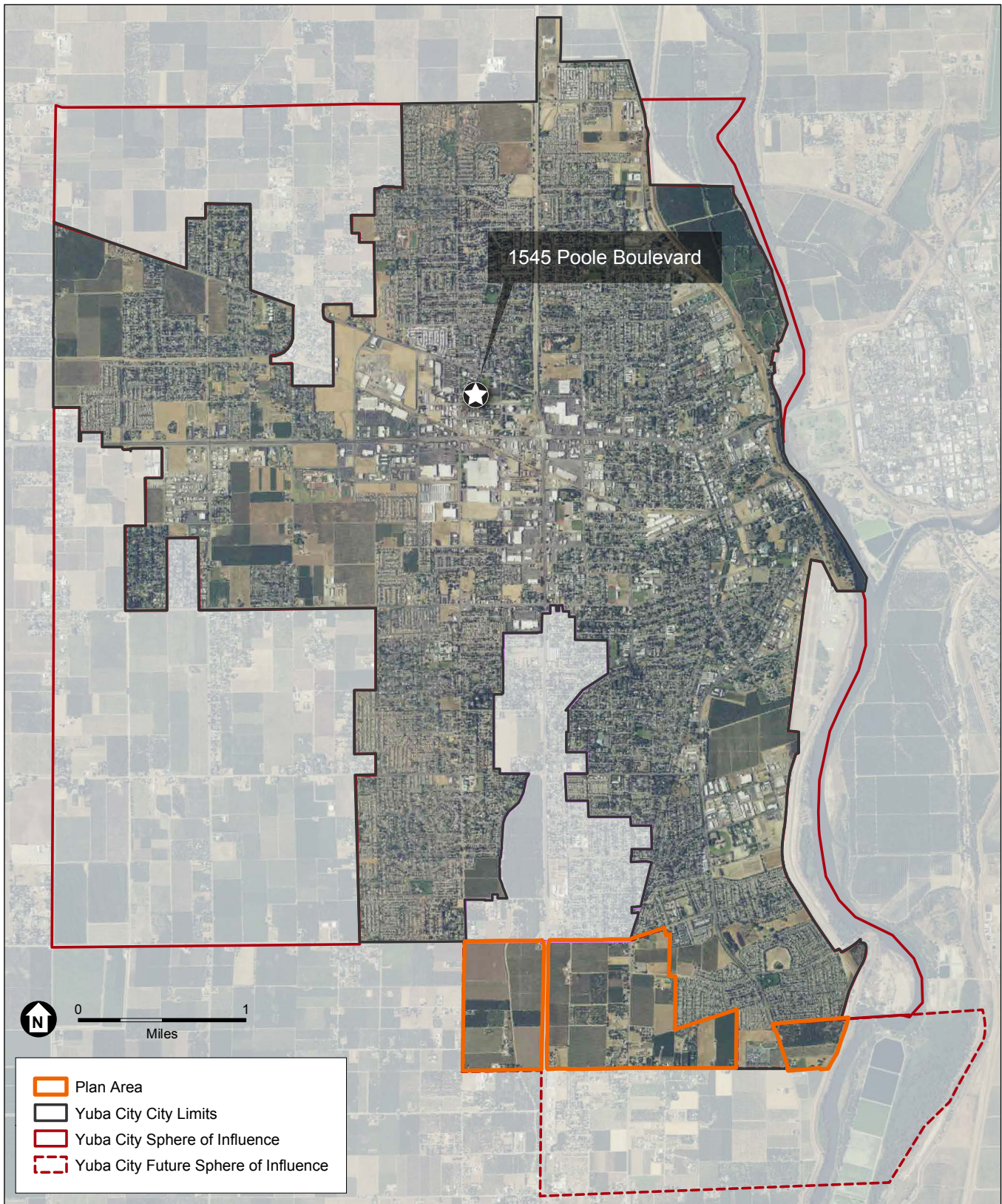
Yuba City Police Department

The YCPD houses its central command at its main station, located at 1545 Poole Boulevard, approximately 3 miles north of the BSMP site (see **Figure 3.13-1**). YCPD is staffed by 64 sworn officers, seven reserve officers, and 29 civilian staff. In 2016, YCPD received 47,085 calls for service.³ YCPD currently provides crime prevention services, along with a Special Weapons and Tactics (SWAT) unit, canine unit, and participation in a Yuba-Sutter Area Gang Enforcement Team. The YCPD has mutual aid agreements with CHP, SCSO, MPD, and YCSD.

¹ City of Yuba City, 2004. *Yuba City General Plan*. April 8, 2004.

² Yuba City Unified School District. 2014. *Facilities Master Plan – 2014-2024*. August 12, 2014.

³ Yuba City Police Department. 2017. *2016 Annual Report*. pp. 62.



SOURCE: City of Yuba City, 2016; ESA, 2017

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Figure 3.13-1
Yuba City Police Department Stations

The patrol area for the YCPD covers roughly 14.91 square miles and is comprised of five beats. Overall, the patrol area consists of the entire City except for portions of Yuba City located south of Franklin Road and generally west of Gilsizer Slough, as this area is serviced by the SCSO under contract. Beat 5 is located closest to the BSMP site, covering all land within Yuba City to the east of State Route (SR) 99 and south of Franklin Avenue.

California Highway Patrol

The CHP is a statewide police agency responsible for law enforcement along the state highways across California, which includes SR 20 and SR 99. The CHP also augments local law enforcement efforts throughout the State.

Regulatory Framework

Federal

There are no federal regulations regarding police protection services that are applicable to the proposed BSMP project.

State

California Master Mutual Aid Agreement

The California Master Mutual Aid Agreement is a framework agreement between the State of California and local governments for aid and assistance by the interchange of services, facilities, and equipment, including but not limited to fire, police, medical and health, communication, and transportation services and facilities to cope with the problems of emergency rescue, relief, evacuation, rehabilitation, and reconstruction.

Essential Services Building Act

The Essential Services Building Act of 1986, found in Chapter 2, Section 16000 of the California Health and Safety Code, applies to fire stations, police stations and other public facilities that respond to emergencies. It is intended to ensure that essential services buildings are capable of providing essential services to the public after a disaster, are designed and constructed to minimize fire hazards and are capable of resisting, insofar as practical, the forces generated by earthquakes, gravity, and winds. In addition, nonstructural components vital to the operation of essential services buildings must be able to resist, insofar as practical, the forces created by earthquakes, gravity, fire, and wind.

Local

The BSMP site is currently in unincorporated Sutter County and subject to the regulatory oversight of the Sutter County General Plan and Zoning Code. Implementation of the proposed BSMP would require a sphere of influence (SOI) amendment to the Yuba City SOI and the incremental annexation of the BSMP site into the City of Yuba City, starting with Phase 1 and Phase 2. The proposed BSMP would be developed consistent with the City's General Plan and the proposed BSMP Development Standards. Accordingly, applicable Yuba City policies are provided below.

City of Yuba City General Plan

The following guiding policies from the City of Yuba City General Plan are relevant to police protection.

Guiding Policy 9.4-G-1 Ensure continued adequate law enforcement capabilities.

Guiding Policy 9.4-G-3 Maintain current police and fire response times and staffing ratios.

According to the Yuba City Police Chief, YCPD aims to ensure that one new officer is hired for every 1,000 new residents, along with one new vehicle for every 2,000 new residents and one new dispatcher and community service officer (CSO) and supporting vehicle and equipment for every 5,000 new residents.⁴

The proposed BSMP would provide the necessary funding and support for YCPD to continue serving the City and its patrol area adequately. The BSMP would pay all applicable fees, in addition to entering a Community Facilities District (CFD), to give YCPD its fair share of funding to support the appropriate law enforcement capabilities. Ultimately, these required funds would allow for YCPD to maintain appropriate response times and adequate staffing levels.

Yuba City Municipal Code – Development Impact Fees

Title 8, Chapter 10 of the Yuba City Municipal Code identifies development fees required to finance public improvements. These fees are used to fund public services, including police protection, fire protection, and parks and recreational facilities. The City adopted CFD NO. 2017-1, which provides additional funding for services provided to residential units for police protection, fire protection, and parks and recreational facilities.⁵ It should be noted that a separate CFD will be established for the BSMP.⁶

Analysis, Impacts, and Mitigation

Significance Criteria

Implementation of the proposed BSMP would have a significant impact related to police protection services if it would:

- Result in the construction of new or expanded police protection facilities that would cause a substantial physical adverse environmental impact.

⁴ Rodriguez, Arnoldo, Director, Development Services Department. Personal communication to Matthew Pruter. August 16, 2017.

⁵ Rodriguez, Arnoldo, Director, Development Services Department. Personal communication to Matthew Pruter and Harriet Ross. July 27, 2017.

⁶ Rodriguez, Arnoldo, Director, Development Services Department. Personal communication to Matthew Pruter and Harriet Ross. July 27, 2017.

Methodology and Assumptions

The YCPD does not have an adopted officer-to-resident ratio, so the analysis below is generally based on an understanding of the City’s compliance with Policy 9.4-G-3 of the Yuba City General Plan, which applies a nationally accepted standard – 1.25 officers per 1,000 residents. The Yuba City General Plan also provides a response standard of 3 minutes for all priority one⁷ calls, and there is reference to an unofficial standard of 20 minutes for non-emergency responses. The YCPD has a goal to provide one new officer for every 1,000 new residents, one new vehicle for every 2,000 new residents, and one new dispatcher, CSO, and supporting vehicle and equipment for every 5,000 new residents.

For purposes of this analysis, the Yuba City General Plan criterion of 1.25 officers per 1,000 residents will be used for staffing, while the YCPD criteria for all other law enforcement resources will be used. Based on this, the YCPD would be better equipped and staffed to maintain the performance standard for emergency response times of less than three minutes for all priority one calls and 20 minutes for non-emergency calls.⁸

Using the Yuba City General Plan population generation rate of 2.67 persons per household, the 2,517 new units anticipated under the proposed BSMP would add 6,718 residents within the BSMP site. This would necessitate approximately eight new officers, three new vehicles, and one new dispatcher and CSO, along with the supporting vehicle and equipment. **Table 3.13-1** provides estimates for the number of officers and other staff that would be needed to accommodate each phase of the development accommodated by the proposed BSMP.

**TABLE 3.13-1
 BSMP ESTIMATED LAW ENFORCEMENT REQUIREMENTS^a**

Phase	BSMP Population (Residents) ^b	Officers / 1,000 Residents	Officers	Vehicles / Residents	Vehicles	Dispatchers and CSOs / Residents	Dispatchers and CSOs
Phase 1 (Newkom Ranch)	1,717	1.25/1,000	2.2	1/2,000	0.9	1/5,000	0.3
Phase 2 (Kells East Ranch)	720	1.25/1,000	0.9	1/2,000	0.4	1/5,000	0.1
Remainder BSMP	4,282	1.25/1,000	5.4	1/2,000	2.1	1/5,000	0.9
Total BSMP	6,719	1.25/1,000	8	1/2,000	3	1/5,000	1

NOTES:

- a Figures for Total BSMP are rounded to the nearest unit. The per-phase figures are presented in a way to indicate the proportion of resource responsibility per BSMP phase.
- b BSMP population determined by using a factor of 2.67 persons per household, which was multiplied by 2,517 dwelling units projected for the proposed BSMP.

SOURCE: City of Yuba City, 2004. *Yuba City General Plan*, Adopted Resolution #04-049. April 8, 2004. pp. 3-8, Table 3-3.

⁷ For the purposes of Yuba City Police Department, Priority One calls are for emergencies and all other calls are non-emergency calls.
⁸ Rodriguez, Arnoldo, Director, Development Services Department. Personal communication to Matthew Pruter. August 16, 2017.

Impacts and Mitigation Measures

Impact 3.13-1: Development pursuant to the proposed BSMP could result in the construction of new or expanded police protection facilities that could cause a substantial physical adverse environmental impact.

Full Master Plan

YCPD would be responsible for police protection services throughout the BSMP site. The proposed BSMP would generate a total of approximately 2,517 housing units and 6,719 residents. This increase in housing units and population would create an additional demand for police protection services within the BSMP site. Based on this projected growth, the proposed BSMP would require eight new officers, three new vehicles, one new dispatcher, and one CSO.

Development pursuant to the proposed BSMP would be required to pay the appropriate taxes and fees that would contribute to the City's General Fund. In addition, as previously noted the City would require establishment of a CFD for the BSMP development that would provide the funding necessary to provide for the additional staff and equipment. Together, these funds would adequately fund the sworn and non-sworn police staffing increases described above.

While the proposed BSMP would require additional police staff and equipment that could require new or expanded facilities to accommodate the additional officers and equipment, it is unknown where or when the construction of the new facilities would occur. To the extent that the facilities would be constructed within the BSMP site, the environmental resource sections in Chapter 3 of this EIR disclose the environmental impacts of all development that could occur pursuant to the proposed BSMP. In the event that such facilities were constructed elsewhere in Yuba City, the new or expanded police facilities would require environmental review prior to development. Any potential impacts would be disclosed and mitigated, if feasible, through this process. The identification of any specific impacts that could remain significant and unavoidable would be speculative at this time. Therefore, the increase in demand for additional police protection facilities would result in a **less-than-significant** impact.

Newkom Ranch

The proposed Newkom Ranch development would include 643 dwelling units and 1,777 residents. This increase in housing units and population would create an additional demand for police protection services within the Newkom Ranch site. Based on this projected growth, the Newkom Ranch site would require 2.2 new officers, roughly one new vehicle, and the equivalent of 0.3 new dispatchers and CSO, along with the supporting vehicles and equipment.

For the same reasons provided above for the entirety of the proposed BSMP, the increase in demand for additional police protection facilities to serve the Newkom Ranch phase would result in a **less-than-significant** impact.

Kells East Ranch

The proposed Kells East Ranch development would include approximately 270 housing units and 720 residents. This increase in housing units and population would create an additional demand

for police protection services within the Kells East Ranch site. Based on this projected growth, the Kells East Ranch site would require roughly one new officer, the equivalent of 0.4 new vehicles, and the equivalent of 0.1 new dispatchers and CSO, along with the supporting vehicles and equipment.

For the same reasons provided above for the entirety of the proposed BSMP, the increase in demand for additional police protection facilities to serve the Kells East Ranch phase would result in a **less-than-significant** impact.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative context for police protection services is the City of Yuba City, which would include the BSMP site following its annexation into the City.

Impact 3.13-2: Development pursuant to the proposed BSMP, in combination with other cumulative development in the City of Yuba City, could require, or result in, the construction of new or expanded facilities related to the provision of police protection, such that a substantial physical adverse environmental impact could result.

The Yuba City General Plan projects a 2025 population of 105,730 residents for the City, and the more recent 2013-2021 Housing Element projects a 2021 Yuba City population of 75,800 residents.⁹ Consequently, the Housing Element 2021 population projection would result in an increase of 9,959 residents above the 2013 City population of 65,841, and the General Plan 2025 population would result in an increase of 39,889 residents above the 2013 City population of 65,841. As described above, using the Yuba City General Plan population generation rate of 2.67 persons per household, the 2,517 new residential units anticipated under the proposed BSMP would add 6,719 residents within the BSMP site, which was not included in the growth assumptions of the General Plan. Therefore, buildout of the General Plan along with buildout of the BSMP site, which would be included within Yuba City, would be anticipated to result in a 2025 Yuba City population of 112,448, an increase of 46,607 residents above the 2013 City population of 65,841. Using the criteria provided in Table 3.13-1, buildout of the General Plan and the BSMP site would require the addition of approximately 58 new officers, approximately 23 new vehicles, approximately nine new dispatchers, and approximately nine new CSOs, along with the supporting vehicles and equipment. The General Plan EIR states that additional police staff and facilities would be needed to accommodate the anticipated population growth.¹⁰ The location of the additional facilities necessary for the full buildout of the City has not been identified and therefore the environmental impacts have not yet been studied. As a result, the cumulative impacts of constructing police facilities to maintain levels of service could be **potentially significant**.

⁹ City of Yuba City, 2014. *2013-2021 Housing Element Update*. February 2014. pp. 23. Table 3.5-1.

¹⁰ City of Yuba City, 2003. *Yuba City General Plan Draft Environmental Impact Report*. October 2003. SCH # 2001072105. pp. 3-93.

As described above, buildout of the proposed BSMP would require eight new officers, three new vehicles, one new dispatcher, and one CSO, along with supporting vehicles and equipment. While the proposed BSMP would require additional police staff and equipment that could require new or expanded facilities to accommodate the additional officers and equipment, the required addition of seven new officers, one dispatcher, and one CSO and associated new or expanded facilities would not make a cumulatively considerable contribution to physical construction of new police facilities required to accommodate buildout of the General Plan and the BSMP area as described above. In addition, any new or expanded police facilities would require environmental review prior to development. Any potential impacts would be disclosed, and mitigated if necessary, during this process. Therefore, project's contribution to the cumulative impact would be less than considerable, and the impact is considered **less than significant**.

Mitigation Measure

None required.

3.13.2 Fire Protection

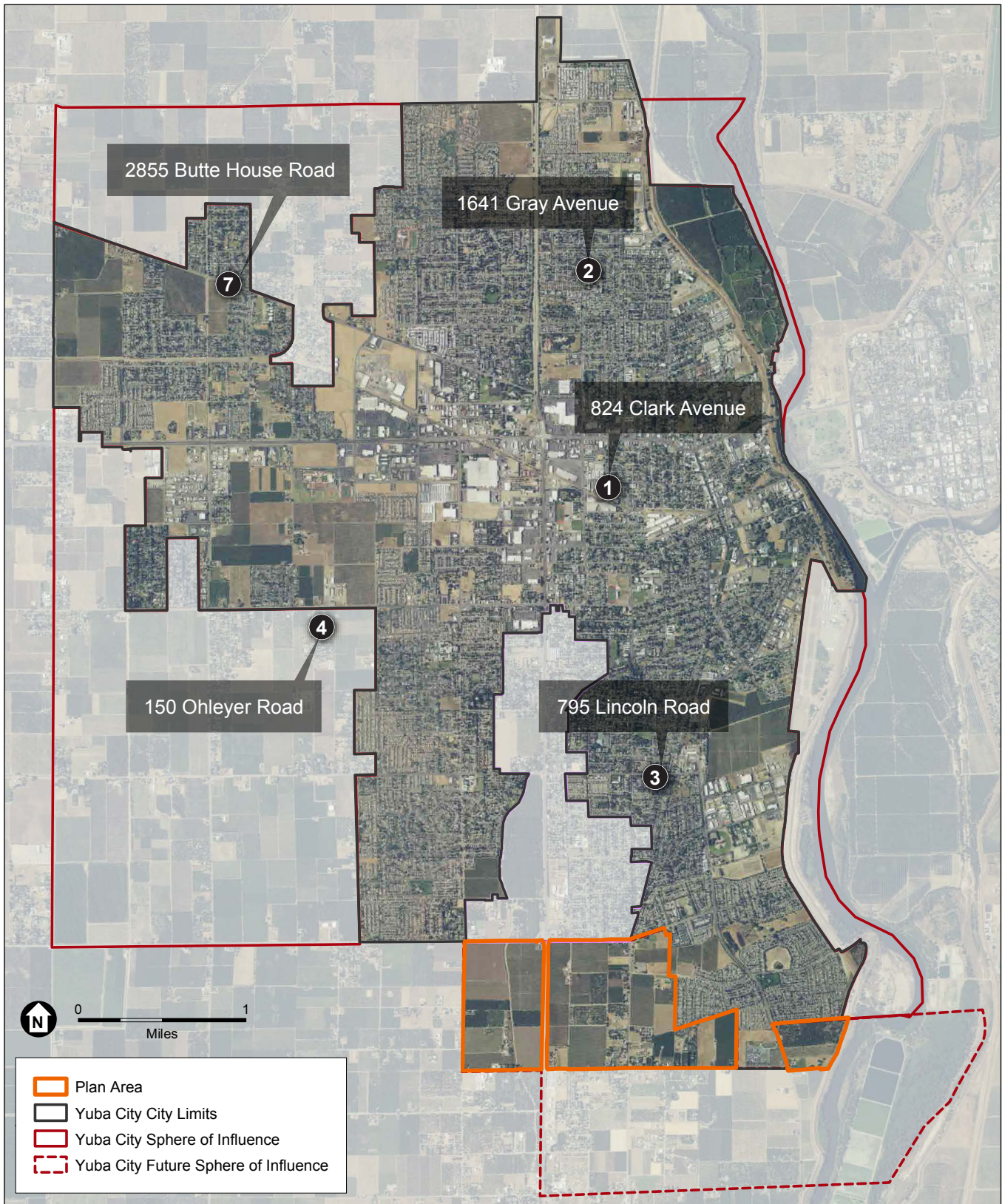
Environmental Setting

YCFD currently provides fire protection and emergency medical services in the City and BSMP site, and would continue to serve the BSMP site with implementation of the proposed BSMP project. YCFD has 54 personnel, which includes chief officers, fire officers, firefighters and administrative support staff. Fire suppression is the primary duty of YCFD, but other key roles include fire prevention and education services. YCFD also has an Advanced Technical Rescue team, a Hazardous Materials (Hazmat) Team, a Tactical Emergency Medical Services Team, a Fire Investigation Team, and a Public Education Team.¹¹

YCFD operates from five fire stations in the City: Station 1 at 824 Clark Avenue, Station 2 at 1641 Gray Avenue, Station 3 at 795 Lincoln Road, Station 4 at 150 Ohleyer Road, and Station 7 at 2855 Butte House Road (see **Figure 3.13-2**). Station 3 at 795 Lincoln Road (at the northeast corner of Railroad Avenue and Lincoln Road) would serve the BSMP site. The nearest Sutter County Fire Department (SCFD) station is the Oswald-Tudor Fire Station, which serves county service area-F (CSA) (located to the south, west, and north of CSA-G) and could assist the BSMP site as well. This station is located at 1280 Barry Road (at the southeast corner of SR 99 and Barry Road). No new fire stations are proposed or under construction at this time.

YCFD serves the BSMP site under a contract with SCFD. SCFD operates throughout Sutter County in four CSAs and two fire protection districts. The BSMP site (and all of Yuba City) is within CSA-G, which is bounded by Eager Road to the north, the Feather River to the east, Stewart Road to the south, and South Township Road to the west. To augment services and maintain shorter emergency response times, YCFD maintains reciprocal mutual aid agreements with the Marysville Fire Department and Sutter County Fire Department.

¹¹ Yuba City Fire Department, 2017. About Us. Available: http://www.yubacity.net/city_hall/departments/fire_department/about_us/. Accessed July 17, 2017.



SOURCE: City of Yuba City, 2016; ESA, 2017

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Figure 3.13-2
 Yuba City Fire Department Stations

Regulatory Framework

Federal

There are no federal regulations regarding fire protection services that pertain to the proposed BSMP.

State

The California Master Mutual Aid Agreement and the Essential Services Buildings Act, described above under Police Protection, are also relevant to fire protection services. In addition, the following State laws and regulations pertain to the provision of fire protection services for the proposed BSMP project.

California Division of Occupational Safety and Health (Cal/OSHA)

In accordance with the California Code of Regulations (CCR), Title 8, Sections 1270 (“Fire Prevention”) and 6773 (“Fire Protection and Fire Equipment”), the Cal/OSHA has established minimum standards for fire suppression and EMS. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, requirements for the sizing of fire hoses, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

California Fire Code (CFC)

The CFC is found within Chapter 9 of the CCR Title 24. It is created by the California Building Standards Commission, and based on the International Fire Code (IFC), and contained within the California Building Code (CBC). The 2016 CFC became effective January 1, 2017. The CFC establishes the minimum requirements to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations. All construction within the BSMP site would be required to comply with CFC standards.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the CBC), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, childcare facility standards, and fire suppression training.

Local

City of Yuba City General Plan

The following guiding and implementing policies from the City of Yuba City General Plan are relevant to fire protection.

Guiding Policy 9.4-G-2 Minimize the risk of personal injury, property damage, and environmental damage from fire, hazardous chemicals releases, natural and human made disasters.

Guiding Policy 9.4-G-3 Maintain current police and fire response times and staffing ratios.

Implementing Policies

- 9.4-I-1 Maintain the Fire Department performance objectives and response standards set forth in General Plan Table 9-6 (presented here as **Table 3.13-2**).
- 9.4-I-4 Require adequate access for emergency vehicles, including adequate street width and vertical clearance on new streets.
- 9.4-I-6 Review proposed development applications for compliance with adopted fire safety standards and staffing ratios. Construction of a new fire station in the southwest section of the City will be required to maintain standards. Construction of this facility will take place in conjunction with new development in the southwest area.
- 9.4-I-7 Continue to conduct building and fire code enforcement to ensure safe structures.
- 9.4-I-8 Support community training and volunteer programs to enhance emergency preparedness.

**TABLE 3.13-2
 YUBA CITY GENERAL PLAN FIRE PERFORMANCE OBJECTIVES AND STANDARDS**

Goal	Performance Objective	Response Time Standard¹
Structure Fires		
Provide effective response force of YCFD personnel, including a Chief Officer and mutual aid responders.	Stop a serious fire from escalating beyond the location where it is found (i.e., conducting a search and rescue for victims, confining fire damage to the area near or in the room of origin, and limiting heat and smoke damage to the area or floor of origin).	First unit shall arrive within 6 minutes, 90 percent of the time; remaining units, carrying a sufficient number of firefighters, including the Incident Commander, shall arrive within 10 minutes, 90 percent of the time.
Pre-Hospital Medical Incidents		
Provide an effective response force, including at least one person certified and capable of providing Advanced Life Support.	Arrive soon enough to assess patients and prioritize care to minimize death and disability; stabilize patients to prevent additional suffering; and intervene successfully in life-threatening emergencies.	First unit shall arrive within 6 minutes, 90 percent of the time.
Wildland Fires		
Provide effective response force of YCFD personnel, including a Chief Officer and mutual aid responders.	Stop escalation of an initial wildland fire beyond the area where found. Typically this means controlling the fire to the area of origin without spread to adjacent structures or escalating to a size requiring additional resources to obtain control.	First unit shall arrive within 6 minutes, 90 percent of the time; remaining units, carrying a sufficient number of firefighters, including the Incident Commander, shall arrive within 10 minutes, 90 percent of the time.
Hazardous Materials and Technical Rescue		
Provide a trained and effective initial response force to incidents involving hazardous materials, technical rescue, water rescue, confined space, and trench rescue.	Assess the incident, and if possible, stabilize or recognize that additional assistance is needed. This may include personal with specialized training and certification from YCFD and/or other agencies.	First unit and a chief officer shall arrive within 6 minutes, 90 percent of the time.

NOTES:

1. Response time standards are based on total flex time.

SOURCE: City of Yuba City, 2014. *Yuba City General Plan*, Adopted Resolution #04-049. April 8, 2004.pp. 9.23, Table 9-6.

The proposed BSMP would provide the necessary funding and support for YCFD to continue serving the City and the larger CSA-G adequately. The BSMP would pay all applicable fees, in addition to entering a CFD, to give YCFD its fair share of funding to support the appropriate fire protection capabilities, as indicated in Table 3.13-2 (Table 9-6 in the Yuba City General Plan). These efforts would also support the volunteer and community training programs that YCFD currently manages, further supplementing fire protection. Ultimately, required funds would allow for YCFD to maintain appropriate response times and adequate staffing levels. In addition, YCFD would also have the opportunity to review all development within the BSMP site to ensure that fire safety standards are met and adequate emergency vehicle access is provided on site.

Yuba City Municipal Code – Development Impact Fees

As described above under Police Protection, Title 8, Chapter 10 of the Yuba City Municipal Code identifies development fees required to finance public improvements, including fire protection services and facilities. The City recently adopted CFD NO. 2017-1, which provides additional funding for services provided to residential units for police protection, fire protection, and parks and recreational facilities.¹² It should be noted that a separate CFD will be established for the BSMP.

Analysis, Impacts, and Mitigation

Significance Criteria

Implementation of the proposed BSMP would have a significant impact related to fire protection if it would:

- Result in the construction of new or expanded facilities related to the provision of fire protection that would cause a substantial adverse physical environmental impact.

Methodology and Assumptions

The proposed BSMP would result in an increase in the number of residents, employees and non-residential uses in the BSMP site. Pursuant to General Plan Policy 9.4-1-6, increases in population and commercial activity in the BSMP site could result in a need for additional YCFD staff, and/or a need for additional fire protection equipment or facilities. This analysis utilizes the estimated overall response time to determine the impact of the proposed BSMP. Estimated response time is used in this methodology because the General Plan indicates that this criterion is central to achieving the four goals for structure fires, pre-hospital medical incidents, wildland fires, and hazardous materials and technical rescue efforts, as outlined in Table 3.13-2. As mentioned in the regulatory setting, YCFD has an unofficial standard of having the first unit arrive within 6 minutes, 90 percent of the time for all calls. It is assumed that if calls for service at fire stations that would serve the proposed BSMP would exceed this threshold, new fire stations, staff, and equipment would be needed to assist with the additional demand for fire protection services.

¹² Rodriguez, Arnoldo, Director, Development Services Department. Personal communication to Matthew Pruter and Harriet Ross. July 27, 2017.

Impacts and Mitigation Measures

Impact 3.13-3: Development pursuant to the proposed BSMP could result in the construction of new or expanded fire protection facilities that would cause a substantial adverse physical environmental impact.

Full Master Plan

The proposed BSMP would result in increased employees, residents, and visitors within the BSMP site, and this increased activity would increase demand for fire protection and emergency services. These increased activities and new uses could result in an incremental increase in calls for fire and emergency medical services beyond the amount currently experienced in the BSMP site.

The proposed BSMP has been designed to allow for residential and non-residential growth that would be consistent with the growth anticipated in the Yuba City General Plan. This growth would not exceed the demand of the fire stations already anticipated within the 2035 General Plan.

The YCFD station closest to the BSMP site is Station 3, located at 795 Lincoln Road and approximately 1.4 miles to the north. It is anticipated that additional calls would occur at this station as a result of development pursuant to the proposed BSMP and, as such, additional staff and equipment would be needed to maintain the General Plan response time standard. Despite the increased population and development anticipated under the proposed BSMP, the YCFD has indicated that implementation of the BSMP would not require a new fire station.¹³

All new development within the BSMP site would be required to pay the appropriate taxes and fees to finance the City's General Fund. In addition, the City would require establishment of a CFD for BSMP development to provide the funding necessary to provide for the additional staff and equipment. Together, these funds would provide the necessary funding for the fire protection staffing increases described above.

All new development within the BSMP site would be required to meet YCFD standards related to access, fire hydrants, automatic sprinkler systems, fire alarm systems, water flow, and other UFC/CFC requirements. YCFD would review project construction plans and inspect the construction work as it progresses to ensure the BSMP meets State and local Building and Fire Code requirements.

Because YCFD would be able to maintain a 6-minute response time with implementation of the proposed project, and implementation of the proposed project would not result in the construction of new or expanded facilities related to the provision of fire protection, this impact would be **less than significant**.

Newkom Ranch

The Newkom Ranch phase of the proposed project would result in increased employees, residents, and visitors within that portion of the BSMP site, and this increased activity would

¹³ Daley, Pete, Interim Fire Chief, Yuba City Fire Department. Personal communication with Matthew Pruter. July 21, 2017.

increase demand for fire protection and emergency services. Despite the increased population and development anticipated under Newkom Ranch phase of the proposed project, the YCFD has indicated that implementation of the BSMP would not require a new fire station.¹⁴

For the same reasons provided above for the entirety of the proposed BSMP, implementation of the Newkom Ranch phase of the proposed project would not require, or result in, the construction of new or expanded facilities related to the provision of fire protection, this impact would be **less than significant**.

Kells East Ranch

The Kells East Ranch phase of the proposed project would result in increased employees, residents, and visitors within that portion of the BSMP site, and this increased activity would increase demand for fire protection and emergency services. Despite the increased population and development anticipated under Kells East Ranch phase of the proposed project, the YCFD has indicated that implementation of the BSMP would not require a new fire station.¹⁵

For the same reasons provided above for the entirety of the proposed BSMP, implementation of the Kells East Ranch phase of the proposed project would not require, or result in, the construction of new or expanded facilities related to the provision of fire protection, this impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative context for fire protection services is the City of Yuba City, which would include the BSMP site following its annexation into the City.

Impact 3.13-4: Development pursuant to the proposed BSMP, in combination with other cumulative development within the boundaries of the City of Yuba City, could result in the construction of new or expanded fire protection facilities that could cause a substantial adverse physical environmental impact.

The Yuba City General Plan projects a 2025 population of 105,730 residents for the City, and the more recent 2013-2021 Housing Element projects a 2021 Yuba City population of 75,800 residents.¹⁶ Consequently, the Housing Element 2021 population projection would result in an increase of 9,959 residents above the 2013 City population of 65,841, and the General Plan 2025 population would result in an increase of 39,889 residents above the 2013 City population of 65,841. As described above, using the Yuba City General Plan population generation rate of 2.67

¹⁴ Daley, Pete, Interim Fire Chief, Yuba City Fire Department. Personal communication with Matthew Pruter. July 21, 2017.

¹⁵ Daley, Pete, Interim Fire Chief, Yuba City Fire Department. Personal communication with Matthew Pruter. July 21, 2017.

¹⁶ City of Yuba City, 2014. *2013-2021 Housing Element Update*. February 2014. pp. 23. Table 3.5-1.

persons per household, the 2,517 new units anticipated under the proposed BSMP would add 6,719 residents within the BSMP site, which was not included in the growth assumptions of the General Plan. Therefore, buildout of the General Plan along with buildout of the BSMP site, which would be included within Yuba City, would be anticipated to result in a 2025 Yuba City population of 112,448, an increase of 46,607 residents above the 2013 City population of 65,841. Increased development within the City would require additional fire protection staff and equipment, which could lead to the need additional fire protection facilities. The location of the additional fire protection facilities necessary for the full buildout of the City has not been identified and therefore the environmental impacts have not yet been studied. As a result, the cumulative impacts of constructing fire protection facilities to maintain levels of service could be **potentially significant**.

As described above, buildout of the proposed BSMP would require additional fire protection staff and equipment to maintain the General Plan response time standard. However, YCFD has indicated that implementation of the BSMP would not require a new fire station. Consequently, implementation of the BSMP would not make a cumulatively considerable contribution to physical construction of new fire facilities required to accommodate buildout of the General Plan. Therefore, the proposed project's contribution to the cumulative impact would be less than considerable, and the impact is considered **less than significant**.

Mitigation Measure

None required.

3.13.3 Schools

Environmental Setting

YCUSD is the main provider of primary and secondary education in both the BSMP site and the City of Yuba City. YCUSD generally includes Yuba City and large portions of Sutter County immediately surrounding and to the south of the City. In general, the YCUSD boundaries include portions of Eckhart Road and Pease Road to the north, the Feather River to the east, Messick Road to the south, and portions of North and South Township Road and Ohleyer Road on the west. In total, YCUSD operates six elementary schools, one middle school, five kindergarten through eighth grade (K-8) schools, two high schools, one continuation high school, and one alternative school. Enrollment, as of the 2014-2024 Facilities Master Plan, is approximately 12,819 students, with 122 students in pre-K, 6,022 students in grades K-5, 2,899 students in grades 6-8, and 3,776 students in grades 9-12.¹⁷

Regulatory Framework

Federal

There are no federal regulations regarding schools that are applicable to the proposed BSMP.

¹⁷ Yuba City Unified School District. 2014. *Facilities Master Plan – 2014-2024*. August 12, 2014. pp. 32.

State

Leroy F. Greene School Facilities Act of 1998 - Senate Bill 50 (SB 50)

The California Legislature passed Senate Bill (SB) 50 in 1998, which authorized school districts to impose fees on developers of new residential, commercial, and industrial construction to offset impacts of increased school capacities. SB 50 was codified in California Government Code sections 65995.5 through 65997.

Pursuant to Government Code sections 65995.5 through 65995.7, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. Three levels of development fees may be levied upon new construction. Level 1 fees are the maximum amount of fees that can be imposed on new development as set by the State Allocation Board. In general, Level 2 and Level 3 fees apply to new residential construction only. Both Level 2 and Level 3 funds only may be levied if the school districts have conducted and adopted a school facility needs analysis. Specifically, Government Code 65997 establishes a State preemption of school mitigation. Under the terms of this statute, payment of school development fees is considered, for the purposes of CEQA, to mitigate in full any impacts to school facilities associated with a development project. Government Code 65997(b) restricts the ability of local agencies to deny project approvals on the basis that public school facilities (e.g., classrooms and auditoriums) are inadequate.

The YCUSD collects school impact fees on new residential and commercial development within the YCUSD's boundaries, including that developed in the BSMP site. Prior to issuance of a building permit for a development within the BSMP site, the City would require that project applicants submit the appropriate school impact fees to YCUSD and that YCUSD has confirmed receipt of payment.

California Education Code

The California Education Code authorizes the California Department of Education ("Department") to develop site selection standards for school districts. These standards are found in the CCR and require that districts select a site that conforms to certain net acreage requirements established in the Department's 2000 "School Site Analysis and Development" guidebook. The Guide includes the assumption that the land purchased for school sites would be in a ratio of approximately 2 to 1 between the developed grounds and the building site. For example, for a school that houses kindergarten through sixth grade and has an enrollment of 600 children, the recommended acreage is 9.2 acres.

The Department's 2000 Guide includes exceptions to its recommended site size that allow for smaller school sites. Additionally, Department policy specifies that if the "availability of land is scarce and real estate prices are exorbitant" the site size may be reduced. It is the Department's policy that if a school site is less than the recommended acreage required, the district shall demonstrate how the students would be provided an adequate educational program including physical education as described in the district's adopted course of study. Through careful planning,

a reduced project area school site could follow the recent trend of school downsizing and meet the Department's criteria.

State Procedures for Site Acquisition for State-Funded School Districts

CCR, Title 5, Division 1, Chapter 13, Subchapter 1, Article 2 outlines requirements for the placement of schools in State funded school districts, specifically addressing siting and safety standards for proposed school sites. While environmental impacts related to the development of potential school sites within the BSMP site are evaluated in this EIR, any such site would be subject to Title 5 siting requirements, such as evaluation of soil and geologic conditions, flooding potential, location relatively to utilities and high pressure mains, etc.

Local

Yuba City Unified School District

YCUSD's Facilities Master Plan identifies specific facility needs and prioritizes these needs districtwide, and it is developed with the goal of providing excellent schools and services for the staff and students of YCUSD. YCUSD holds the following loading standards for each classroom identified in order to determine classroom and school capacities:

- Grades K-3: 24 students per classroom
- Grades 4-12: 29 students per classroom

These loading standards are based on the current loading factors used this year and may change based on the level of funding for schools in the future. If space is not available, then the attendance patterns will likely need to change if the additional facilities are not provided.

City of Yuba City General Plan

The following guiding and implementing policies from the City of Yuba City General Plan are relevant to schools.

Guiding Policy 6.2-G-1 Provide superior educational opportunities for children and all members of the community.

Guiding Policy 6.2-G-2 Ensure that adequate school sites are made available in conjunction with new growth in the planning area.

Guiding Policy 6.2-G-3 Maintain good communication with area school districts on all matters pertaining to the need for and the provision of school sites and facilities. Integrate the land and infrastructure planning efforts of the City and the school districts.

Implementing Policies

6.2-I-1 Cooperate with school districts to ensure safe and convenient access for school children.

- 6.2-I-2 Assist the various school districts in developing school sites and facilities to serve all neighborhoods in the City, and to respond to the educational needs of various sectors of the population.
- 6.2-I-3 Cooperate with school districts to ensure that, within the limits of the law, educational facilities with sufficient permanent capacity are constructed to meet the needs of current and projected enrollment.
- 6.2-I-4 Require that residential development pay fees to school districts for the acquisition of school sites to provide adequate, permanent classroom space or, alternatively, provide land.
- 6.2-I-5 Work closely with school districts to ensure that all new school facilities are within close proximity to the neighborhoods they are intended to serve, as illustrated in Figure 6-3 and on the General Plan Diagram.
- 6.2-I-6 Require subdividers to reserve school sites as shown on the General Plan Diagram for school district acquisition for a reasonable period of time.
- 6.2-I-8 Support school district efforts to mitigate significant impacts of new projects on school facilities, consistent with State law. State law limits the fee that can be imposed on residential development to mitigate school impacts and prohibits denial of a project on the basis of inadequacy of school facilities or school impact fees.

The City of Yuba City would ensure that development within the BSMP site would be accompanied by regular communication and collaboration with YCUSD to determine school facility needs for the future students within BSMP site, and support would be provided to provide sufficient facilities. Development within the BSMP site would be required to pay fair share fees to adequately finance school facilities. In addition, Lot 1, located in the northwest corner of the BSMP site, is identified in the proposed BSMP as the location of a future a K-8 school to serve future students within BSMP site.

Analysis, Impacts, and Mitigation

Significance Criteria

Implementation of the proposed BSMP would have a significant impact related to schools if it would:

- Generate students that would exceed the design capacity of existing or planned schools that would result in the need for new or physically altered school facilities, or changes in school assignments, that would cause substantial adverse physical environmental impacts.

Methodology and Assumptions

Based on the 2014-2024 Facilities Master Plan for the YCUSD, this analysis utilizes the following per unit rates for student generation: 0.291 for elementary school students, 0.076 for middle school students, and 0.152 for high school students. These are rates that have been developed by the YCCUSD to accommodate for the range of housing common to Yuba City. See **Table 3.13-3** for estimated student generation resulting from development pursuant to the proposed BSMP.

**TABLE 3.13-3
 ESTIMATED YCUSD STUDENT GENERATION UNDER THE PROPOSED BSMP**

	Proposed Housing Units	Generation Rate (Students per Housing Unit)	Projected Student Population
Newkom Ranch Phase			
Elementary School	643	0.291	187
Middle School	643	0.076	49
High School	643	0.152	98
TOTAL Newkom Ranch Phase	643	0.519	334
Kells East Ranch Phase			
Elementary School	270	0.291	78
Middle School	270	0.076	20
High School	270	0.152	41
TOTAL Kells East Ranch Phase	270	0.519	140
Final Phase			
Elementary School	1,604	0.291	467
Middle School	1,604	0.076	122
High School	1,604	0.152	244
TOTAL Final Phase	1,604	0.519	833
FULL BUILDOUT			
Elementary School	2,517	0.291	732
Middle School	2,517	0.076	191
High School	2,517	0.152	383
TOTAL FULL BUILDOUT	2,517	0.519	1,306

SOURCE: Yuba City Unified School District. 2014. *Facilities Master Plan – 2014-2024*. August 12, 2014.

Potential BSMP School Site

At the time of the Facilities Master Plan approval, YCUSD staff indicated that existing school facilities within the district were adequate to serve the initial new student needs of the Newkom Ranch and Kells East Ranch developments.¹⁸ YCUSD staff indicated that enrollment at Barry Elementary School and Riverbend Elementary School could exceed capacity with the addition of students from the remainder of the BSMP site.¹⁹ As a result, Lot 1, located in the northwest corner of the BSMP site, is identified in the proposed BSMP as the location of a future a K-8 school to serve future students within BSMP site to be built when necessary to serve the student population. Future project applicants within the BSMP site would be required to work with YCUSD to ensure that there is adequate capacity for students from the BSMP site. If YCUSD determines that the K-8 school designated for Parcel 1 is not required, other land uses, such as

¹⁸ Yuba City Unified School District. 2014. *Facilities Master Plan – 2014-2024*. August 12, 2014.

¹⁹ Kernan, Pat, Counsel for Yuba City Unified School District, Kingsley Bogard LLP. Personal communication with Matthew Pruter. May 3, 2017.

single-family and multi-family residential, could be developed instead of a school. However, any changes to this parcel would require a master plan amendment subject to CEQA review.

Impacts and Mitigation Measures

Impact 3.13-5: Development pursuant to the proposed BSMP could generate students that would exceed the design capacity of existing or planned schools that would result in the need for new or physically altered school facilities, the construction of which could cause substantial adverse physical environmental impacts.

Full Master Plan

Existing YCUSD school facilities are projected to serve needs in the BSMP site. Within the BSMP site, students located to the east of Railroad Avenue would attend Riverbend Elementary School for grades K-8, and students located west of Railroad Avenue would attend Barry Elementary School for grades K-8. All students in the BSMP site would attend Yuba City High School. The most current enrollment data – for the 2013-14 school year – is included in Table 3.13-4).

**TABLE 3.13-4
 YCUSD SCHOOLS AND CAPACITIES IN THE BSMP AREA**

School Name	Design Capacity	Current Enrollment	Excess Capacity
K-8 Schools			
Riverbend	1,230	1,219	11
Barry	670	562	108
Total	1,900	1,781	119
High Schools			
Yuba City	2,668	1,709	959

SOURCE: Yuba City Unified School District. 2014. *Facilities Master Plan – 2014-2024*. August 12, 2014.

Based on an increase of 2,517 residential units, the proposed BSMP is estimated to result in a total of 1,306 students, as noted in Table 3.13-3.

Approximately 732 elementary school students, 191 middle school students (or 923 K-8 students),²⁰ and 383 high school students are estimated to be generated by the proposed BSMP. In terms of elementary school students, as shown in Table 3.13-4, Barry and Riverbend elementary schools are collectively 119 students below their design capacity under existing conditions. Therefore, the BSMP would generate 804 elementary school students who could not be accommodated within these two schools.

²⁰ As many of YCUSD’s lower grade schools are K-8, this is the additive figure of total K-8 BSMP students who could attend either type of school.

The development of Lot 1 as a K-8 school site under the BSMP could accommodate these students. While environmental impacts related to the development of Lot 1 for school purposes are evaluated in this EIR, the school would be subject to Title 5 requirements and additional CEQA review when a more definitive school site development proposal is prepared.

Yuba City High School is approximately 959 students below its design capacity and could accommodate the 383 additional students expected to be generated by development of the proposed BSMP.

The developers of BSMP have come to an agreement with YCUSD that the plan area will annex into YCUSD CFD No. 1, which funds school improvements. The YCUSD CFD No. 1 rate structure includes a component that replaces school fees, so properties will be subject to the CFD but will not be required to pay school impact fees. With annexation into CFD No. 1, impact of the proposed BSMP on school facilities would be reduced to a **less-than-significant** level.

Newkom Ranch

Based on an increase of 643 residential units, the Newkom Ranch phase is estimated to result in a total of 334 students, as noted in Table 3.13-4.

Approximately 187 elementary school students, 49 middle school students (or 236 K-8 students),²¹ and 98 high school students are estimated to be generated by the Newkom Ranch phase. In terms of elementary school students, as shown in Table 3.13-2, Barry and Riverbend elementary schools are collectively 159 students below their design capacity under existing conditions. Therefore, the Newkom Ranch phase would generate 28 elementary school students who could not be accommodated within these two schools. The development of Lot 1 as a K-8 school site under the BSMP could accommodate these students. While environmental impacts related to the development of Lot 1 for school purposes are evaluated in this EIR, the school would be subject to Title 5 requirements and additional CEQA review when a more definitive school site development proposal is prepared.

Yuba City High School is approximately 959 students below its design capacity and could accommodate the 98 additional students expected to be generated by development of the Newkom Ranch site.

The developers of Newkom Ranch have come to an agreement with YCUSD that the plan area will annex into YCUSD CFD No. 1, which funds school improvements. The YCUSD CFD No. 1 rate structure includes a component that replaces school fees, so properties will be subject to the CFD but will not be required to pay school impact fees. With annexation into CFD No. 1, impact of the Newkom Ranch on school facilities would be reduced to a **less-than-significant** level.

²¹ As many of YCUSD's lower grade schools are K-8, this is the additive figure of total K-8 BSMP students who could attend either type of school.

Kells East Ranch

Based on an increase of 270 residential units, the Kells East Ranch phase is estimated to result in a total of 140 students, as noted in Table 3.13-4.

Approximately 78 elementary school students, 20 middle school students (or 98 K-8 students),²² and 41 high school students are estimated to be generated by the Kells East Ranch phase. In terms of elementary school students, as shown in Table 3.13-2, Barry and Riverbend elementary schools are collectively 159 students below their design capacity under existing conditions. Therefore, the Kells East Ranch phase would be accommodated within these two schools.

Yuba City High School is approximately 959 students below its design capacity and could accommodate the 41 additional students expected to be generated by development of the Kells East Ranch site.

The developers of Kells East Ranch have come to an agreement with YCUSD that the plan area will annex into YCUSD CFD No. 1, which funds school improvements. The YCUSD CFD No. 1 rate structure includes a component that replaces school fees, so properties will be subject to the CFD but will not be required to pay school impact fees. With annexation into CFD No. 1, impact of the Kells East Ranch on school facilities would be reduced to a **less-than-significant** level.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative context for impacts to schools is the YCUSD service area. YCUSD covers more than 215 square miles, and generally includes Yuba City and large portions of Sutter County surrounding the City.

Impact 3.13-6: Development pursuant to the proposed BSMP, in combination with other cumulative development, would result in the need for new or physically altered school facilities which could cause substantial adverse physical environmental impacts.

The proposed BSMP, combined with other planned development within the YCUSD service area, would result in increases to enrollment for YCUSD. When added together, existing YCUSD schools would not adequately serve all the students from this proposed development projects.

Table 3.13-5 provides the most current enrollment and capacity data from YCUSD.

Existing facilities would likely be expanded and new school sites would also likely be built to satisfy the increased demand. The location and configuration of these school facilities has not yet been determined or studied. Therefore, the cumulative impact of providing adequate school facilities could be **potentially significant**.

²² As many of YCUSD's lower grade schools are K-8, this is the additive figure of total K-8 BSMP students who could attend either type of school.

**TABLE 3.13-5
 YCUSD SCHOOLS AND CAPACITIES**

School Name	Design Capacity	Current Enrollment	Excess Capacity
K-8 Schools			
Andros Karperos	1,331	1,363	-32
April Lane (K-5)	558	519	39
Barry	670	562	108
Bridge Street (K-5)	630	505	125
Butte Vista	1,022	973	49
Central Gaither	241	181	60
King Avenue (K-5)	404	370	34
Lincoln (K-5)	616	565	51
Lincrest (K-5)	736	732	4
Park Avenue (K-5)	736	595	141
Riverbend	1,230	1,219	11
Tierra Buena	848	769	79
Gray Avenue (6-8)	1,044	685	359
Total	10,066	9,038	1,028
High Schools			
Albert Powell Alternative	325	234	91
River Valley	2088	1742	346
Yuba City Alternative	50	96	-46
Yuba City	2668	1709	959
Total	5,131	3,781	1,350

SOURCE: Yuba City Unified School District. 2014. *Facilities Master Plan – 2014-2024*. August 12, 2014.

As discussed above, approximately 732 elementary school students, 191 middle school students (or 923 K-8 students), and 383 high school students are estimated to be generated by the proposed BSMP. In terms of elementary school students, as shown in Table 3.13-2, Barry and Riverbend elementary schools are collectively 159 students below their design capacity under existing conditions. Therefore, the BSMP would generate 764 elementary school students who could not be accommodated within these two schools. The development of Lot 1 as a K-8 school site under the BSMP could accommodate these students. While environmental impacts related to the development of Lot 1 for school purposes are evaluated in this EIR, the school would be subject to Title 5 requirements and additional CEQA review when a more definitive school site development proposal is prepared. As a result, the proposed BSMP would not result in a cumulatively considerable contribution to the need for school facilities or to the impacts of constructing these facilities. Therefore, the cumulative impact of providing adequate school facilities would be **less than significant**.

Mitigation Measure

None required.

3.13.4 Parks and Recreation Facilities

Environmental Setting

Yuba City has 22 City-owned parks and recreational areas, managed by the City's Parks and Recreation Department. The City currently has four community parks, 15 neighborhood parks, and three passive or mini parks.

Feather River Parkway Strategic Plan

The Feather River serves as the eastern boundary for Yuba City. The Feather River Parkway Strategic Plan (2002) is a comprehensive plan that was developed to establish a framework for improvements for lands on the western bank of the Feather River. The waterfront area of the Feather River has a large amount of undeveloped open space that is located within a floodplain and is visually inaccessible due to the existing levee. The plan establishes a framework of uses for these areas. Proposed uses include a trail system, beaches, river viewing pavilions, boating facilities, and active recreational facilities. The plan also examines issues of waterfront accessibility, park space creation, and connections between the waterfront and the City.

Regulatory Framework

Federal

There are no federal regulations regarding parks and open space that are applicable to the proposed BSMP.

State

State Public Park Preservation Act

The primary instrument for protecting and preserving parkland is the Public Park Preservation Act of 1971. Under the PRC section 5400-5409, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

Quimby Act

California Government Code Section 66477, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee are based upon the residential density and housing type, land cost, and other factors. Land dedicated and fees collected pursuant to the Quimby Act may be used for developing new, or rehabilitating existing park or recreational facilities.

Local

Yuba City– Park Acquisition and Development Impact Fees

Title 8, Chapter 10, of the Yuba City Municipal Code sets forth the City’s Development Impact Fee (DIF) program. This fee is intended to implement the goals and objectives of the City’s General Plan and mitigate impacts caused by new and anticipated growth within the General Plan boundaries (i.e., the SOI). Among other public services and facilities, the DIF program covers the City’s park and recreational facilities. Per the Municipal Code, a DIF is assessed when a property(ies) is zoned/rezoned, a condition use permit is issued, a subdivision map is approved, a building permit is issued, or issuance or approval of other permits for construction or reconstruction. DIF are not assessed on lot line adjustments, parcel mergers, or building permits for remodeling or reconstruction if the structure’s use is not changed.

Pursuant to California Government Code section 66000, et seq. – more commonly known as AB 1600 – the City annually reviews its DIF program and reassesses the fees accordingly. Based on the most recent AB 1600 review, the DIFs for “Parks and Recreation” in 2017 were \$7,167.20 per single-family residential unit and \$5,149.67 per multiple-family unit. DIFs for parks and recreational facilities are not assessed for non-residential land uses.

It is noted here that the City does not provide a fee credit for neighborhood parks, as defined herein. The City requires the project applicant to incorporate and provide the require amount of neighborhood parkland in the project at the ratio described below.

City of Yuba City General Plan – Parks, Schools, & Community Facilities Element

The following guiding and implementing policies from the City of Yuba City General Plan Parks, Schools, & Community Facilities Element (2008) are relevant to parks and recreation facilities.

Guiding Policy 6.1-G-1 Create a hierarchy of new open spaces that accommodates a diverse range of recreational needs.

Guiding Policy 6.1-G-2 Develop new parkland to meet the 2008 park acreage standards for new residents.

Guiding Policy 6.1-G-3 Ensure adequate funding for parks and recreation facilities acquisition, development, and maintenance.

Guiding Policy 6.1-G-4 Provide varied recreational opportunities accessible to all City residents.

It is the City’s goal to ensure that parks in Yuba City are easily accessible to its citizens, including the physically disabled, and to provide recreational equipment that people of all ages and abilities can use.

Implementing Policies

6.1-I-1 Establish and maintain a standard of 5 acres of public parks per 1,000 residents. Specific standards are as follows: Maintain the existing standard of 0.375 acres

of Neighborhood / Mini Parks resulting from prior plan standards, together with the forward requirement upon adoption for:

- 1.5 acres of Community Parks,
- 1.5 acres of City parks, and
- 2 acres of Specialized Recreation Area / Open Space / Trails per 1,000 residents.

- 6.1-I-2 Establish minimum new site sizes of 5 to 20 acres for Community Parks and 20 acres for City Parks in Yuba City.
- 6.1-I-3 Require residential developers to either build required parks to meet Quimby Act ratio of 5.0 acres/1,000 or pay in-lieu fees in order to contribute to the City's park system.
- 6.1-I-4 Create a park dedication standard for new development in order to be consistent with and implement the Quimby Act.
- 6.1-I-5 Establish a program for tracking in-lieu fee contributions to the City's park system from developers.
- 6.1-I-6 Establish dedication and reservation requirements for the development of landscaped and dedicated open spaces, parkways, trail systems, and special community service facilities in new residential developments.
- 6.1-I-7 Cooperate with the Yuba City Unified School District to promote joint development and use of school sites located within the City and within the UGB [urban growth boundary].
- 6.1-I-8 Under review of the Parks & Recreation Department and Commission, prepare, recommend, adopt and implement a 20-year Parks and Community Facilities Master Plan, to be reviewed and updated periodically.
- 6.1-I-9 Require an appropriate level of maintenance service with respect to all parks, trails, open space and recreational facilities. The maintenance and upkeep of parks, trails, open space and recreational facilities is necessary for the economic health of the community.
- 6.1-I-10 Implement the Feather River Parkway Strategic Plan in a manner consistent with the plans and programs put forth in that document and consistent with policies in the Open Space and Conservation Chapter (Chapter 8). Proposed actions include:
- Environmental Education as a top priority;
 - Improved pedestrian access to the riverfront;
 - Provide a mix of active- and non-active recreational and open space in those areas delineated in the Feather River Parkway Strategic Plan; and
 - Ensure that the open spaces proposed in the Feather River Parkway Strategic Plan be designed in a manner flexible enough to accommodate a variety of activities.

- 6.1-I-11 As illustrated in Figure 6-3, locate and develop two large City parks in the western portion of the planning area to accommodate a variety of activities.
- 6.1-I-12 Evaluate feasibility and community interest in taking advantage of any proposed parks abutting agricultural fields to create an “Agricultural Heritage Park” marked by orchard rows and other local agricultural products. A successful model for this type of facility is the California Citrus Park located in Riverside, California. The park incorporates hands-on exhibits, working citrus farms, preserved orchards, a museum, and other cultural amenities.
- 6.1-I-13 Allocate portion of new parks, adjacent to the proposed high school, for active recreational uses, such as sports fields.
- 6.1-I-14 Allocate portions of new parks for passive uses, including walking, strolling, picnicking, and unorganized field games.
- 6.1-I-15 Incorporate the following design characteristics into the creation of the new City parks:
- Park edges that provide subtle transitions from residential developments.
 - Visual permeability, created by leaving space between trees at park edges in order to create an open, landscaped, accessible environment.
 - Multi-purpose bike/pedestrian pathways along the edges and through the parks.
- 6.1-I-16 Place neighborhood and community parks at the core of new neighborhoods
- 6.1-I-17 As depicted in Figure 6-1, co-locate community parks and school sites where possible.
- 6.1-I-18 Incorporate the following design characteristics into the creation of community, neighborhood, and pocket parks:
- Permeability; so interior portions of the park can be viewed from the street;
 - Lighting, in order to maintain safety;
 - Pedestrian access, and in Neighborhood Parks, limited parking;
 - Pathways leading from parks to local neighborhoods; and
 - Lush landscaping.
- 6.1-I-19 Develop a unified and consistently signed and marked trail system throughout the City, including “rails-to-trails” programs, bikeways, pathways, sidewalks, and other trails.
- This non-motorized transportation network will connect new neighborhoods, existing neighborhoods, parks, community activity centers, and community facilities.
- 6.1-I-20 On non-motorized portions of roadways, create a landscaped, signed environment and safe connections to destination points, using crosswalks, planting buffers, and pedestrian crossing signals as necessary.

- 6.1-I-21 On non-motorized portions of roadways, create a landscaped, signed environment and safe connections to destination points, using crosswalks, planting buffers, and signal preemption as necessary.

The Yuba City General Plan Parks, Schools, & Community Facilities element 2008 update provides a goal of providing 5 acres of public parkland per 1,000 residents, developed and distributed as described below. According to the 2008 update, the City is currently not meeting this goal. However, as noted in its Park Demand analysis, it anticipates meeting the standards upon full buildout of the General Plan. See **Table 3.13-6** for citywide parkland calculations. The Yuba City General Plan provides the following park categories and requirements:

- **Neighborhood Park:** A park or playground at least two acres in size, developed primarily to serve the recreational needs of citizens living within a half mile radius of the park. These facilities include pocket parks, and neighborhood playgrounds. Prior to a 2008 general plan amendment, the City's standard for this type of park was 1.0 acre per 1,000 residents. However, while the General Plan does not require the dedication of parks, the inclusion of neighborhood parks is negotiated between the City and developer during the entitlement process. The City has negotiated with developer for the BSMP to provide 1.0 acre per 1,000 residents.
- **Community Park:** A larger park or facility developed to meet the park and recreational needs of those living or working within a three-mile radius. Community parks vary from 5 to 20 acres and typically have play fields and community recreation facilities. The standard for this type of park is 1.5 acres per 1,000 residents.
- **City Park:** A park having a wide range of improvements not usually found in neighborhood and community parks and designed to meet the recreational needs of the entire city population. A city park must be over 80 acres in size. Recreational facilities may include a nature area, golf course, zoo, or lawn and play areas. Structures, such as gymnasiums, community centers, and public or private educational institutions may also be permitted. City parks may be themed, such as a park dedicated to the agricultural heritage of the area. The standard for this type of park is 1.5 acres per 1,000 residents.
- **Special Recreation Area:** A recreation area or facility devoted to a very specific activity or use. A linear park or trail is one example. Other parks with a mix of public and private passive and active space, such as parts of the Feather River Park, are also examples. Plazas and green space within commercial developments also fall into this category. The standard for this type of park is 2.0 acres per 1,000 residents.

The City has also agreed to count open space areas located along Gilsizer Slough as half credit for the overall parkland credit count for the proposed BSMP.²³

²³ Rodriguez, Arnolde, Director, Development Services Department. Personal communication to Matthew Pruter and Harriet Ross. July 27, 2017.

**TABLE 3.13-6
 2008 EXISTING AND PLANNED PARKLAND**

Parkland Type	2008 Acres	Planned Acres	Total	Percent of Total System	2008 Acres per 1,000 Residents ¹	Planned Acres per 1,000 Residents ²
Specialized Recreation Areas	189.9	55.44	245.34	38	3.03	1.9 ³
City Parks	0	195	195	30	0	1.5
Community Parks	49.85	112.15	162	25	0.79	1.24
Neighborhood/Mini Parks ⁴	48.76	0	48.76	7	0.77	0.375
Total	288.25	362.59	651.10	100	4.56	5

NOTES:

1. Uses a 2008 Population of 62,974 (Source: California Department of Finance. 2012. E-4 Population Estimates for Cities, Counties, and the State, 2001-2010, with 2000 & 2010 Census Counts. Revised November 9, 2012.)
2. Assumes a buildout population of 130,000; data are rounded.
3. Includes additional land in the Feather River Corridor toward the 2 acres per 1,000 residents ratio and assumes it will be organized, designed and used as a Specialized Recreation facility type.
4. Assumes that existing Neighborhood / Mini Parks depicted in Figure 6-1 will remain under standards in effect prior to 2008. Any new parks of this type can be added as part of any new subdivision development as privately funded and privately maintained non-required parks not subject to impact fees or Quimby Act ratios. Any additional acreage in this category (if any) is not included in the existing or planned parkland totals in Table 6.3.

SOURCE: City of Yuba City, 2008. *Yuba City General Plan*, Adopted Resolution #04-049, Chapter 6. Revised September 28, 2008.

The proposed BSMP would be consistent with the goals and policies presented in the Yuba City General Plan. As the proposed BSMP develops on an incremental basis over time in response to market demand, parkland would be dedicated for its projected 6,720 residents. These parks and trails would be designed to meet City standards and would encourage a wide variety of recreational activities, including walking, bicycling, and other forms of sports and exercise. The BSMP would also contribute adequate funding by paying development fees and contributing to a CFD.

Analysis, Impacts, and Mitigation

Significance Criteria

Implementation of the proposed BSMP would have a significant impact related to parks and open space if it would:

- Cause or accelerate a substantial physical deterioration of existing area parks or recreational facilities; or
- Create a need for construction or expansion of recreational facilities beyond what was anticipated in the General and/or Community Plans that would result in physical environmental impacts.

Methodology and Assumptions

This analysis considers whether an increase in use of public parks and recreation facilities resulting from the proposed BSMP would cause the substantial physical deterioration of those facilities (e.g., damage to vegetation, accelerated wear on sports facilities and fields, or erosion along trails) or in the need for new or expanded facilities the construction or operation of which

would result in substantial adverse physical effects. This analysis further considers whether implementation of the proposed BSMP would diminish or otherwise adversely affect recreational opportunities and existing facilities within the BSMP site based on facility capacity.

To address the first issue raised above, jurisdictions commonly use an “acres of park per 1,000 residents” target (as identified in the Quimby Act described above) to determine whether a residential project would necessitate construction of new parks to serve additional residents, which in turn, could result in physical environmental effects. This analysis incorporates an assessment of the potential for physical deterioration of parks in the BSMP site through parkland ratios provided by the City.

To account for parkland demand, this analysis uses the Yuba City General Plan population generation rate of 2.67 persons per household. Also in accordance with the General Plan, this analysis uses an assumption of 5.0 acres per 1,000 residents in determining parkland demand.

Table 3.13-7 provides the parkland requirements for each of the phases and the full buildout of the BSMP.

**TABLE 3.13-7
 PARKLAND REQUIREMENTS**

Residential Land Use Designation	Population	Parkland Standard (acres per 1,000 population*)	Minimum Acreage Required (acres)
Newkom Ranch Phase			
Single Family Residential	1,227	6.0	7.36
Multifamily Residential	550	6.0	3.30
TOTAL Newkom Ranch Phase	1,777	6.0	10.66
Kells East Ranch Phase			
Single Family Residential	426	6.0	2.56
Multifamily Residential	308	6.0	1.85
TOTAL Kells East Ranch Phase	734	6.0	4.40
Final Phase			
Single Family Residential	2,190	6.0	13.14
Multifamily Residential	2,128	6.0	12.77
TOTAL Final Phase	4,317	6.0	25.90
FULL BUILDOUT			
Single Family Residential	3,843	6.0	23.06
Multifamily Residential	2,985	6.0	17.91
TOTAL	6,828		40.97

**TABLE 3.13-7
 PARKLAND REQUIREMENTS**

Residential Land Use Designation	Population	Parkland Standard (acres per 1,000 population*)	Minimum Acreage Required (acres)
NOTE: For parks, population is calculated using 2.9 persons per household for single family residential and 2.5 persons per household for multifamily residential. In other sections, population was calculated used 2.67 residents per household. * Includes 1.5 acres of community parks, 1.5 acres of city parks, 2.0 acres of passive/open space, and 1.0 acres of neighborhood parks per 1,000 residents. SOURCE: City of Yuba City, 2008. <i>Yuba City General Plan</i> , Adopted Resolution #04-049, Chapter 6. Revised September 28, 2008. pp. 6-5.			

Impacts and Mitigation Measures

Impact 3.13-7: Development pursuant to the proposed BSMP could cause existing parks within the BSMP site to physically deteriorate, requiring additional parks to be constructed and/or expanded.

Full Master Plan

The proposed BSMP would facilitate up to 2,517 new housing units and yield 6,828 new residents in the BSMP site. Using the parkland demand standard of 5 acres of parkland (plus 1 acre of on-site neighborhood park) per 1,000 residents, the proposed BSMP would generate a demand for a total of 40.97 acres of parklands. Table 3.13-7 provides a detailed breakdown of parkland demand for the BSMP site by residential land use type.

Development within the BSMP site would generate additional residents, which would increase the use of existing community parks, neighborhood parks, and regional parks. However, the proposed BSMP identifies approximately 84 acres of eligible parks and open space, of which the City has given credit for 21 acres of on-site parkland, and the remaining is open space, including passive recreation areas along Gilsizer Slough. A total of 65.39 acres of park credit is granted. Please see **Table 3.13-8** showing the acreages dedicated for parks and open space and credits granted.

**TABLE 3.13-8
 PARKS AND OPEN SPACE DEDICATION AND CREDITS BY PARK TYPE**

Type	Acreage Required	Acreage Provided	City Credited Acreage¹	Standard Met (Y/N)	Shortage/ Surplus (acres)
Community Park	10.24	11.27	9.74	N	-0.50
City Park	10.24	0.00	0.00	N	-10.24
Passive/Open Space	13.66	61.91	44.50	Y	+30.85
Neighborhood Park	6.83	11.38	11.15	Y	+4.55
TOTAL	40.97	84.56	65.39		+24.66

NOTE:
¹ Community Park: 1.70 acres given 100 percent credit, 3.83 acres given 90 percent credit, and 5.74 acres given 80 percent credit
 Passive/Open Space: 27.09 acres given 100 percent credit; 34.82 acres given 50 percent credit
 Neighborhood Park: 9.04 acres given 100 percent credit, 2.34 acres given 90 percent credit

As shown in Table 3.13-8, the proposed BSMP project, as a whole, would satisfy the City's park requirements. The requirement for 40.97 acres of parks would be satisfied through the provision of 21 acres of neighborhood and community parks, as well as partial credit for dedicated open space commitments (along Gilsizer Slough). The proposed BSMP would also contribute to a new CFD established for the BSMP. In addition, the continued development of the Feather River Parkway would provide additional active parklands near the BSMP site that serve to benefit the wider region. For these reasons, the impact would be **less than significant**.

Newkom Ranch

The Newkom Ranch phase would facilitate up to approximately 643 new housing units and yield 1,777 new residents in the Newkom Ranch site. Using the parkland demand standard of 5 acres of parkland per 1,000 residents (plus 1 acre of on-site neighborhood park), this phase would generate a demand for a total of 11 acres of parklands. Table 3.13-7 provides a detailed breakdown of parkland demand for the BSMP site by residential land use type.

Development within the Newkom Ranch phase would generate additional residents, which would increase the use of existing community parks, neighborhood parks, and regional parks. However, this phase contains 17 acres of park development, of which the City gives 15 acres of credits. This is more than is required. Because the Newkom Ranch phase would satisfy the City's 5 acre per 1,000 resident park requirement, the impact would be **less than significant**.

Kells East Ranch

The Kells East Ranch phase would facilitate up to approximately 270 new housing units and yield 734 new residents in the Kells East Ranch site. Using the parkland demand standard of 5 acres of parkland per 1,000 residents (plus 1 acre of on-site neighborhood park), this phase would generate a demand for a total of 4 acres of parklands. Table 3.13-7 provides a detailed breakdown of parkland demand for the BSMP site by residential land use type.

Development within the Kells East Ranch site would generate additional residents which would increase the use of existing community parks, neighborhood parks, and regional parks. However, this phase contains 37 acres of park development, of which the City gives 23 acres of credit.

Because the Kells East Ranch phase would satisfy the City's 5 acre per 1,000 resident park requirement, the impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative context for parks and recreation includes the City of Yuba City. This includes development within Yuba City and its surrounding Planning Area or SOI, consistent with the Yuba City General Plan.

Impact 3.13-8: Development pursuant to the proposed BSMP, in combination with other cumulative development in Yuba City, could cause existing parks in the City to physically deteriorate.

The proposed project, along with other cumulative development in Yuba City, would result in an increase in the population of Yuba City and cause an increased demand for parks. However, as the proposed project is developed, the developments would have to pay the appropriate fees and build the sufficient number and acreage of parks to provide for the additional population growth for the City. By constructing the required facilities for parks in accordance with City standards, substantial physical deterioration of parks would not occur as a result of the growth anticipated for buildout of the Yuba City General Plan. Therefore, there would be no considerable impact on parks or recreation facilities and this cumulative impact would be **less than significant**.

Mitigation Measure

None required.

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3.14 Transportation and Traffic

This section analyzes the potential transportation and circulation impacts resulting from the implementation of the proposed BSMP project. Analyses are conducted for the two initial phases of development (i.e., “Newkom Ranch” and “Kells East Ranch”), which are referred to as “Phase I and II”. Analyses are also conducted for buildout of the proposed BSMP. This section analyzes potential impacts on the roadway, transit, bicycle, and pedestrian systems under existing and cumulative conditions. The “existing plus project” scenario analyzes the impacts of the project (Phases I and II, and the BSMP) on the existing environmental setting. The cumulative conditions section analyzes the project’s cumulative effects when viewed in combination with other reasonably foreseeable projects. This section also includes an evaluation of the Vehicle Miles of Travel (VMT) associated with the project. **Appendix G** of the Draft EIR includes the data supporting the impact analysis.

This section is organized into three main subsections. The first subsection describes the environmental setting, which is the baseline condition upon which project impacts are evaluated. The second subsection describes the federal, State, and local transportation policies that apply to the project. The third subsection describes the standards of significance and methods of analysis, as well as project and cumulative impacts and any necessary and appropriate mitigation measures.

Several comment letters were received in response to the NOP related to the scope of the transportation analysis from responsible agencies, and individuals. Those comments, as well as comments provided in person during a scoping meeting in January 2017, cited transportation-related concerns regarding traffic levels on Railroad Avenue, speeding on Stewart Road, and congestion near Riverbend Elementary School. The analysis contained herein addresses those comments that are relevant to the study.

The analysis included in this section was developed based on the proposed BSMP land use and circulation plans, information provided in the City of Yuba City and Sutter County General Plans,^{1,2} the Sacramento Area Council of Governments 2036 Metropolitan Transportation Plan/Sustainability Communities Strategy (MTP/SCS),³ the *State Route 99 Transportation Corridor Concept Report*,⁴ and the 2010 US Census.

3.14.1 Environmental Setting

This section describes the existing transportation network in the vicinity of the BSMP site, including the roadway, bicycle pedestrian, and transit systems.

¹ City of Yuba City, 2004. *Yuba City General Plan*. April 8, 2004.

² Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

³ Sacramento Area Council of Governments, 2011. *Yuba County Airport Land Use Compatibility Plan*. Adopted March 17, 2011.

⁴ California Department of Transportation, 2010. *State Route 99 Transportation Corridor Concept Report*. August 3, 2010.

Roadway System

The roadway network includes local streets and intersections, plus State highways.

Study Area

An extensive study area was selected for analysis, given the size of the BSMP site, expected traffic generation characteristics, and existing/projected traffic conditions in the area. The study locations analyzed include the following 32 existing intersections.

- | | |
|---------------------------------------|---------------------------------------|
| 1. SR 99/SR 20 | 17. South Walton Avenue/Lincoln Road |
| 2. SR 99/Sunsweet Boulevard | 18. South Walton Avenue/Bogue Road |
| 3. SR 99/Bridge Street | 19. South Walton Avenue/Stewart Road |
| 4. SR 99/Franklin Road | 20. South Walton Avenue/Reed Road |
| 5. SR 99/Hunn Road | 21. Lincoln Road/Phillips Road |
| 6. SR 99/Richland Road | 22. Lincoln Road/Railroad Avenue |
| 7. SR 99/Lincoln Road | 23. Lincoln Road/Garden Highway |
| 8. SR 99/Smith Road | 24. Bogue Road/Phillips Road |
| 9. SR 99/Bogue Road | 25. Bogue Road/Railroad Avenue |
| 10. SR 99/Stewart Road | 26. Bogue Road/Garden Highway |
| 11. SR 99/Reed Road | 27. Phillips Road/Smith Road |
| 12. SR 99/Walnut Avenue | 28. Stewart Road/Wallace Drive |
| 13. SR 99/Barry Road | 29. Stewart Road/Muir Road |
| 14. North Walton Avenue/Bridge Street | 30. Stewart Road/Railroad Avenue |
| 15. South Walton Avenue/Franklin Road | 31. Stewart Road/Garden Highway |
| 16. Walton Avenue/Richland Road | 32. Garden Highway/Shanghai Bend Road |

Additional intersections created by the proposed BSMP project are also studied under “plus project” conditions.

The study intersections are operated and maintained by multiple jurisdictions, including the City of Yuba City, Caltrans, and Sutter County. Therefore, the study intersections are subject to differing level of service (LOS) standards based on each relevant jurisdiction’s LOS policy.

Table 3.14-1 identifies the relevant jurisdiction and LOS standard for each study intersection.

Figure 3.14-1 shows the study area and study intersections relative to the location of the BSMP site.

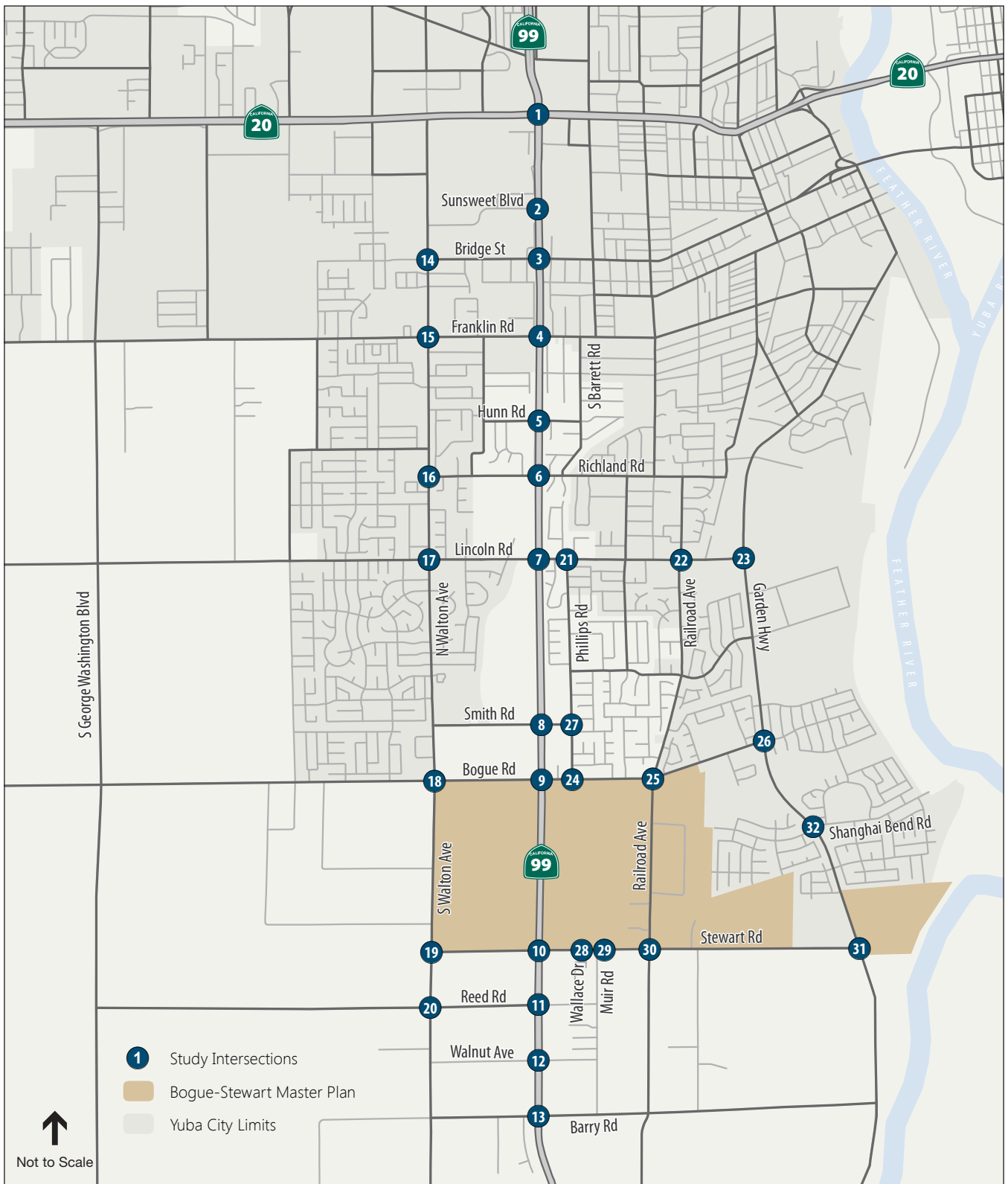
**TABLE 3.14-1
 LEVEL OF SERVICE STANDARDS – INTERSECTIONS**

Intersection	Jurisdiction	LOS Standard
1. SR 99/SR 20	Caltrans	E
2. SR 99/Sunsweet Boulevard	Caltrans	E
3. SR 99/Bridge Street	Caltrans	E
4. SR 99/Franklin Road	Caltrans	E
5. SR 99/Hunn Road	Caltrans	E
6. SR 99/Richland Road	Caltrans	E
7. SR 99/Lincoln Road	Caltrans	E
8. SR 99/Smith Road	Caltrans	D
9. SR 99/Bogue Road	Caltrans	D
10. SR 99/Stewart Road	Caltrans	D
11. SR 99/Reed Road	Caltrans	D
12. SR 99/Walnut Avenue	Caltrans	D
13. SR 99/Barry Road	Caltrans	D
14. North Walton Avenue/Bridge Street	City of Yuba City	D
15. South Walton Avenue/Franklin Road	City of Yuba City	D
16. South Walton Avenue/ Richland Road	City of Yuba City	D
17. South Walton Avenue/Lincoln Road	City of Yuba City	D
18. South Walton Avenue/Bogue Road	City of Yuba City	D
19. South Walton Avenue/Stewart Road	Unincorporated Sutter County	D
20. South Walton Avenue/Reed Road	Unincorporated Sutter County	D
21. Lincoln Road/Phillips Road	Sutter County/City of Yuba City	D
22. Lincoln Road/Railroad Avenue	City of Yuba City	D
23. Lincoln Road/Garden Highway	City of Yuba City	D
24. Bogue Road/Phillips Road	Unincorporated Sutter County	D
25. Bogue Road/Railroad Avenue	Sutter County/City of Yuba City	D
26. Bogue Road/Garden Highway	City of Yuba City	D
27. Phillips Road/Smith Road	Unincorporated Sutter County	D
28. Stewart Road/Wallace Drive	Unincorporated Sutter County	D
29. Stewart Road/Muir Road	Unincorporated Sutter County	D
30. Stewart Road/Railroad Avenue	Unincorporated Sutter County	D
31. Stewart Road/Garden Highway	Sutter County/City of Yuba City	D
32. Garden Highway/Shanghai Bend Road	City of Yuba City	D

NOTES:

- 1 Level of Service (LOS) standard based on relevant jurisdiction's LOS policy.
- 2 Sources: City of Yuba City and Sutter County General Plans, and State Route 99 Transportation Corridor Concept Report (Caltrans, 2010).
- 3 For side-street stop controlled intersections, LOS standard applies to the worst case delay movement.

SOURCE: Fehr & Peers, 2017.



SOURCE: Fehr & Peers, 2017

Bogue-Stewart Master Plan and EIR . 140720

Figure 3.14-1
Study Area

As shown on Figure 3.14-1, the BSMP site is situated in unincorporated Sutter County. Since the project is being processed by the City of Yuba City, it follows that these properties would be annexed into the City if approved by the City and LAFCO. Accordingly, most, if not all roadways adjacent/within the BSMP site would be within the jurisdiction of Yuba City (versus Sutter County) under ‘plus project’ conditions. This is important when considering the differences in how Yuba City and Sutter County analyze their roadway systems.

Yuba City has chosen to focus their analyses at intersections, which is typical for a City as intersections are the nodes that control the flow of traffic. Sutter County analyzes conditions at intersections, but also evaluates daily roadway segment operations. The previous table shows that a number of intersections currently within unincorporated Sutter County were selected for analysis. The following Sutter County roadway segments have also been selected for study because they are near the project site, are expected to be used by the project, and would remain as County roadways (note that County roadways closer to the BSMP site are not analyzed on a daily basis because they would become City roadways under ‘plus project’ conditions).

- South Walton Avenue south of Stewart Road
- Railroad Avenue south of Stewart Road
- Garden Highway south of Stewart Road
- Bogue Road from George Washington Boulevard to Sanborn Road

Key Roadways

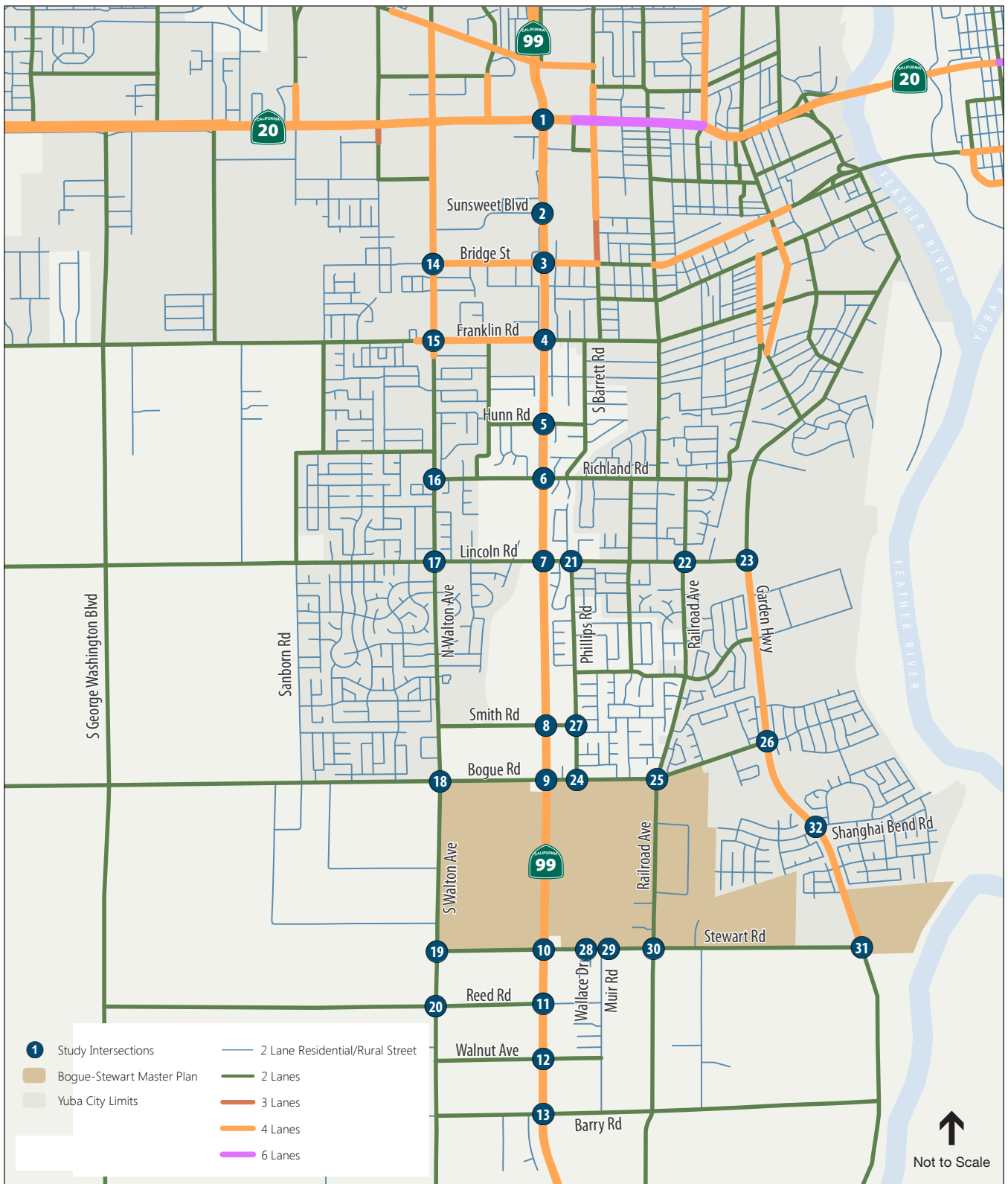
Figure 3.14-2 displays the existing number of travel lanes on the roadways in the study area. As shown, the majority of roadways in the study area are currently two lanes. SR 99, SR 20, and portions of Garden Highway, Franklin Road, and Bridge Street are four lanes. Key roadways within the immediate vicinity of the BSMP site are described below:

State Route 99 (SR 99) – is a north-south state highway that extends throughout the Central Valley and beyond. South of SR 20 and throughout the study area, it is a four-lane divided highway. The speed limit gradually increases from 45 mph south of SR 20 to 65 mph south of Lincoln Road. In 2015, SR 99 carried 32,800 Average Annual Daily Trips (AADT) south of SR 20 according to the Caltrans traffic volume website,⁵ with the volume gradually decreasing to 21,400 AADT south of Bogue Road.

Bogue Road – is a two-lane, east-west roadway that begins east of Garden Highway and extends westerly throughout the study area and into unincorporated Sutter County. It is classified as a major arterial in City of Yuba City General Plan. It has a speed limit of 35 mph east of SR 99 and 45 mph west of SR 99. Portions of the street feature front-on residential. According to the City’s website,⁶ Bogue Road east of Railroad Avenue carried 9,900 vehicles per day in August 2016.

⁵ California Department of Transportation, 2019. Traffic Census Program. Available: www.dot.ca.gov/trafficops/census/volumes2015/Route99.html. Accessed April 18, 2019.

⁶ City of Yuba City, 2016. Traffic Volume Data. Available: www.yubacity.net/city_hall/departments/public_works/engineering/traffic_volume_data/.



SOURCE: Fehr & Peers, 2017

Bogue-Stewart Master Plan and EIR . 140720

Figure 3.14-2
Existing Number of Lanes

Stewart Road – is a two-lane, east-west roadway that begins at Garden Highway and extends westerly throughout the study area, terminating at South Walton Avenue. It is classified as a rural minor collector in the Sutter County General Plan. It has a speed limit of 35 mph east and west of SR 99. Portions of the street east of SR 99 feature front-on residential.

South Walton Avenue – is a two- to four-lane, north-south roadway that begins at SR 20 and extends southerly throughout the study area, terminating at Oswald Road. Portions of the road within Yuba City are classified as a major arterial. It has a speed limit of 35 mph north of Bogue Road and 45 mph south of Bogue Road. Portions of the street feature front-on residential.

Garden Highway – is a two- to four-lane, north-south arterial street that extends throughout Yuba City and beyond. It is classified as a major arterial in the Yuba City General Plan. Within the study area, it is a four-lane divided roadway with a posted speed limit of 45 mph. According to the City’s website, Garden Highway north of Shanghai Bend Road carried 11,300 vehicles per day in August 2016.

Railroad Avenue – is a two-lane roadway that extends from Richland Road southerly through Yuba City, into Sutter County south of Barry Road. Within Yuba City (i.e., north of Bogue Road), it is defined as a collector street. It is defined as a minor rural collector in the Sutter County General Plan, and was reported in 2010 to carry 2,250 vehicles per day between Bogue Road and Stewart Road.

Trucks are permitted to travel on SR 99. According to the Yuba City website,⁷ portions of Garden Highway, South and North Walton Avenue, and Railroad Avenue within the City limits are designated as City truck routes. Additionally, portions of Bogue Road and Lincoln Road on either side of SR 99 in unincorporated Sutter County are designated as County truck routes.

Analysis Periods

Traffic operations were analyzed for the following periods:

- Weekday AM Peak Hour – is defined as the consecutive 60-minute period that has the greatest traffic volume within the 7:00 to 9:00 AM peak period;
- Weekday PM Peak Hour – is defined as the consecutive 60-minute period that has the greatest traffic volume within the 4:00 to 6:00 PM peak period; and
- Daily (Weekday) – operations on Sutter County roadway segments are analyzed based on the facility type and daily volume.

Traffic Data Collection

Traffic counts were collected in April 2016 while adjacent schools were in session. **Figure 3.14-3** presents the existing lane configurations and traffic control devices at the study intersections. As shown, 15 of the 32 study intersections are controlled by traffic signals. The remainder feature either side-street or all-way stop control.

⁷ City of Yuba City, 2015. City of Yuba City Designated Truck Routes. Available: www.yubacity.net/UserFiles/Servers/Server_239174/File/Public%20Works/Engineering/Technical%20Documents/yuba-city-existing-truck-routes.pdf.

At the majority of study intersections, the AM peak hour of traffic occurred from 7:30 to 8:30 AM and the PM peak hour of traffic occurred from 4:30 to 5:30 PM.

Many of the traffic counts along SR 99 included measurements of heavy vehicle composition. A heavy vehicle is defined as any vehicle having more than four wheels on the ground. The following depicts the proportion of heavy vehicle traffic observed on the SR 99 corridor:

- During the AM peak hour, heavy vehicles comprised 17 percent of all northbound through trips and 9 percent of all southbound through trips on SR 99 at Bogue Road.
- During the PM peak hour, heavy vehicles comprised 5 percent of all northbound through trips and 8 percent of all southbound through trips on SR 99 at Bogue Road.

Traffic Operations

This section analyzes traffic operations on roadway facilities using the concept of LOS. Roadway LOS is a qualitative description of traffic flow from the perspective of motorists, and is an indication of the comfort and convenience associated with driving. The *Highway Capacity Manual* (HCM)⁸ defines six levels of service from LOS A (representing the least congested traffic conditions) to LOS F (representing the most congested traffic conditions).

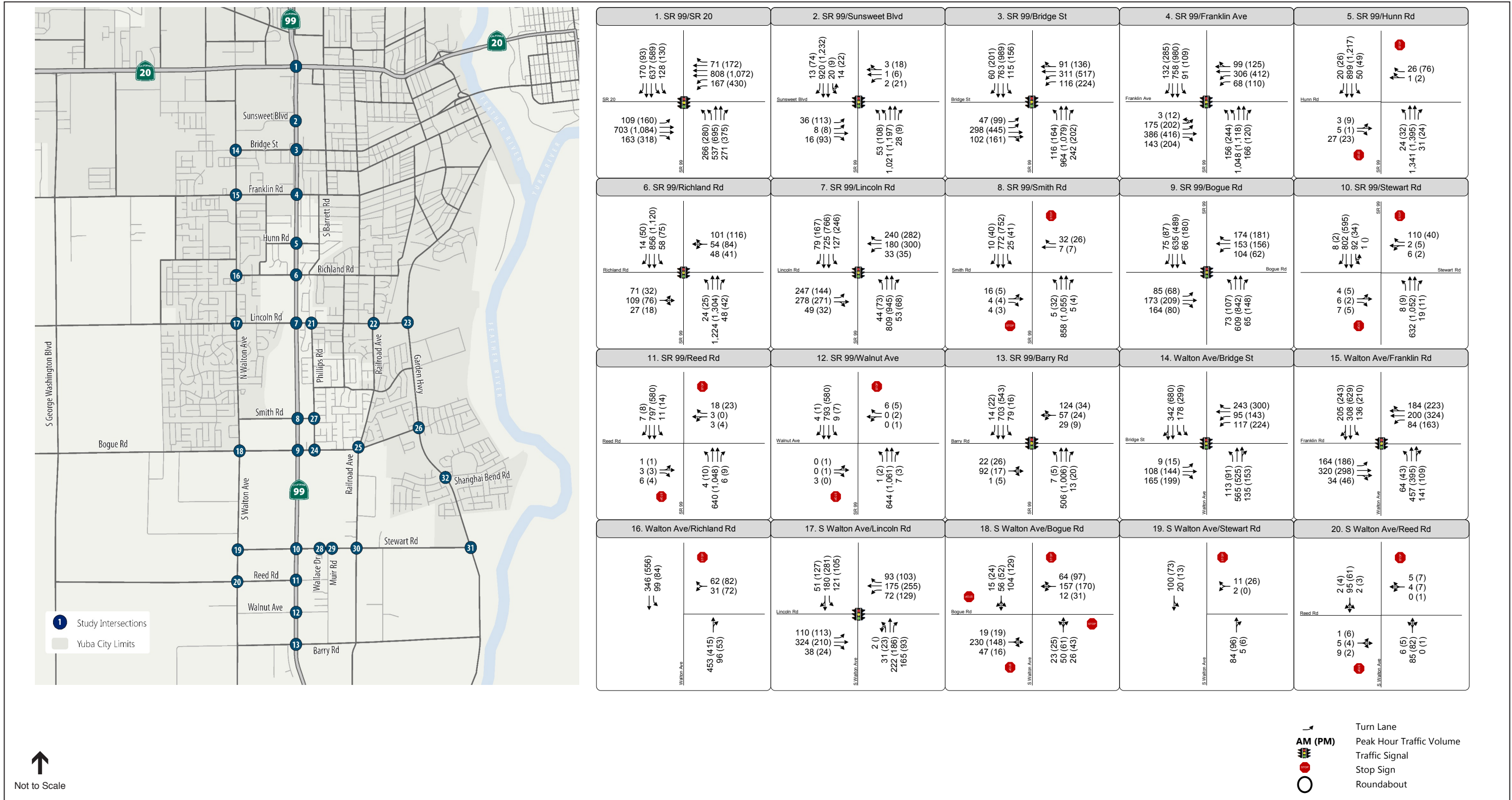
All intersections along SR 99 were analyzed using the SimTraffic micro-simulation model. SimTraffic accounts for the effects of vehicular queuing on intersection operations, traffic signal timing/progression plans, pedestrian/bicycle travel, and other influences that can affect delay and queuing. Field-measured peak hour factors (i.e., surges in traffic within the peak hour) for the corridor were applied. Data regarding truck percentages were entered into the model based on field measurements. Per standard practice, an average of ten runs with different random seed values were used to yield reported results.

In addition to including all study intersections on SR 99, the SimTraffic model also included five intersections located near SR 99. These intersections were chosen because they could be affected by the highway and/or are otherwise congested, for which micro-simulation is the preferred analysis tool. Synchro was used to analyze the remaining intersections based on methods described in the *Highway Capacity Manual*.⁹ It should be noted that the 6th Edition of the HCM was released for use in 2017. However, analysis methods in this update were not used in this analysis because the supporting software programs were not yet available at the time the study was being prepared.

At all study intersections, the average delay and LOS is reported for the AM and PM peak hours. Vehicular queuing is also reported for certain critical intersections along the SR 99 corridor.

⁸ Transportation Research Board, 2010. *Highway Capacity Manual*.

⁹ Transportation Research Board, 2010. *Highway Capacity Manual*.



SOURCE: Fehr & Peers, 2017

Bogue-Stewart Master Plan and EIR . 140720

Figure 3.14-3
 Peak Hour Intersection Traffic Controls, Lane Configurations, and Traffic Controls - Existing Conditions

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Intersections

Table 3.14-2 presents the delay ranges associated with each LOS category for signalized and unsignalized intersections and roundabouts.

**TABLE 3.14-2
 INTERSECTION LEVEL OF SERVICE DEFINITIONS**

Level of Service	Average Delay (seconds per vehicle) ¹		Description
	Signalized Intersections	Unsignalized Intersections and Roundabouts	
A	0 – 10.0	0 – 10.0	Minimal control delay.
B	10.1 – 20.0	10.1 – 15.0	Insignificant traffic delays.
C	20.1 – 35.0	15.1 – 25.0	Increased traffic delays; queues may build.
D	35.1 – 55.0	25.1 – 35.0	Longer traffic delays; increased queuing.
E	55.1 – 80.0	35.1 – 50.0	Very long traffic delays.
F	> 80.0	> 50.0	Stop-and-go conditions.

NOTES:

1. Average control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay.

SOURCE: Transportation Research Board. 2010. *Highway Capacity Manual*. Pp. 18-6, 19-2, 20-3, 21-1.

The peak hour warrant for consideration of a traffic signal (as specified in the *California Manual of Uniform Traffic Control Devices [CA MUTCD]*)¹⁰ is used to evaluate the need for a traffic signal at unsignalized study intersections.¹¹ Consistent with guidance from the CA MUTCD, since the Yuba City urbanized area has a population over of 10,000 people, the urban warrant criteria is used at intersections in which the posted speed limit of the major street was 40 mph or less. When the posted speed limit was 45 mph or greater, the rural warrant criteria is applied as recommended by the CA MUTCD.

Table 3.14-3 displays the AM and PM peak hour LOS at each study intersection under existing conditions.

¹⁰ California Department of Transportation, 2016. *California Manual of Uniform Traffic Control Devices*.

¹¹ This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a subset of the standard traffic signal warrants. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The responsible state or local agency should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.

**TABLE 3.14-3
 PEAK HOUR INTERSECTION LEVEL OF SERVICE – EXISTING CONDITIONS**

Intersection	LOS Standard	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
1. SR 99/SR 20	E	Signal	25	C	38	D
2. SR 99/Sunsweet Boulevard	E	Signal	11	B	17	B
3. SR 99/Bridge Street	E	Signal	30	C	45	D
4. SR 99/Franklin Road	E	Signal	32	C	37	D
5. SR 99/Hunn Road	E	SSSC	7 (29)	A (D)	8 (92)	A (F)
6. SR 99/Richland Road	E	Signal	23	C	24	C
7. SR 99/Lincoln Road	E	Signal	29	C	32	C
8. SR 99/Smith Road	D	SSSC	8 (18)	A (C)	8 (16)	A (C)
9. SR 99/Bogue Road	D	Signal	22	C	26	C
10. SR 99/Stewart Road	D	SSSC	6 (17)	A (C)	4 (19)	A (C)
11. SR 99/Reed Road	D	SSSC	4 (14)	A (B)	4 (25)	A (D)
12. SR 99/Walnut Avenue	D	SSSC	2 (5)	A (A)	4 (14)	A (B)
13. SR 99/Barry Road	D	Signal	27	C	28	C
14. North Walton Avenue/Bridge Street	D	Signal	23	C	27	C
15. South Walton Avenue/Franklin Road	D	Signal	37	D	44	D
16. South Walton Avenue/Richland Road	D	SSSC	3 (23)	A (C)	3 (19)	A (C)
17. South Walton Avenue/Lincoln Road	D	Signal	27	C	22	C
18. South Walton Avenue/Bogue Road	D	AWSC	11	B	12	B
19. South Walton Avenue/Stewart Road	D	SSSC	1 (9)	A (A)	2 (9)	A (A)
20. South Walton Avenue/Reed Road	D	SSSC	1 (10)	A (A)	1 (10)	A (B)
21. Phillips Road/Lincoln Road	D	SSSC	5 (20)	A (C)	4 (25)	A (C)
22. Railroad Avenue/Lincoln Road	D	AWSC	16	C	22	C
23. Garden Hwy/Lincoln Road	D	Signal	9	A	12	B
24. Phillips Road/Bogue Road	D	SSSC	2 (11)	A (B)	2 (12)	A (B)
25. Railroad Avenue/Bogue Road	D	AWSC	17	C	17	C
26. Garden Hwy/Bogue Road	D	Signal	19	B	C	20
27. Phillips Road/Smith Road	D	SSSC	1 (5)	A (A)	2 (5)	A (A)
28. Wallace Drive/Stewart Road	D	SSSC	1 (3)	A (A)	1 (4)	A (A)
29. Muir Road/Stewart Road	D	SSSC	1 (3)	A (A)	1 (5)	A (A)
30. Railroad Avenue/Stewart Road	D	AWSC	12	B	A	8
31. Garden Hwy/Stewart Road	D	Signal	15	B	B	11
32. Garden Hwy/Shanghai Bend Road	D	Signal	18	B	19	B

NOTES:

1. For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS is reported for the entire intersection LOS and the most-delayed individual movement (shown in parenthesis).
2. SSSC = Side Street Stop
3. AWSC = All Way Stop Control

SOURCE: Fehr & Peers, 2017

This table indicates the following:

- During the AM peak hour, all signalized intersections operate at LOS C or better with the exception of the South Walton Avenue/Franklin Avenue intersection, which operates at LOS D; and
- During the PM peak hour, several signalized study intersections operate at LOS D including: SR 99/SR 20, SR 99/Bridge Street, SR 99/Franklin Road, and South Walton Avenue/Franklin Avenue.

Table 3.14-4 presents the results of the signal warrant analysis at unsignalized study intersections for AM and PM peak hour conditions.

**TABLE 3.14-4
 PEAK HOUR INTERSECTION SIGNAL WARRANTS – EXISTING CONDITIONS**

Intersection	Traffic Control	Warrant Met	
		AM Peak Hour	PM Peak Hour
5. SR 99/Hunn Road	SSSC	No	Yes
8. SR 99/Smith Road	SSSC	No	No
10. SR 99/Stewart Road	SSSC	Yes	No
11. SR 99/Reed Road	SSSC	No	No
12. SR 99/Walnut Avenue	SSSC	No	No
16. South Walton Avenue/Richland Road	SSSC	No	No
18. South Walton Avenue/Bogue Road	AWSC	No	No
19. South Walton Avenue/Stewart Road	SSSC	No	No
20. South Walton Avenue/Reed Road	SSSC	No	No
21. Phillips Road/Lincoln Road	SSSC	No	No
22. Railroad Avenue/Lincoln Road	AWSC	No	Yes
24. Phillips Road/Bogue Road	SSSC	No	No
25. Railroad Avenue/Bogue Road	AWSC	No	No
27. Phillips Road/Smith Road	SSSC	No	No
28. Wallace Drive/Stewart Road	SSSC	No	No
29. Muir Road/Stewart Road	SSSC	No	No
30. Railroad Avenue/Stewart Road	AWSC	No	No

NOTES:

- 1 Warrant 3B, Peak Hour signal warrant. *California Manual on Uniform Traffic Control Devices*, Caltrans, 2016.
- 2 SSSC = Side Street Stop Control
- 3 AWSC = All Way Stop Control

SOURCE: Fehr & Peers, 2017

This table indicates the following:

- During the AM peak hour, the peak hour volume warrant is met at the SR 99/Stewart Road intersection; and
- During the PM peak hour, the peak hour volume warrant is met at the SR 99/Hunn Road and Railroad Avenue/Lincoln Road intersections.

Sutter County Roadways

Table 3.14-5 presents the ADT and LOS on the four study segments within Sutter County. As shown, each segment currently operates at LOS A.

**TABLE 3.14-5
 SUTTER COUNTY ROADWAY SEGMENT OPERATIONS – EXISTING CONDITIONS**

Segment ¹	Functional Class ²	Operations	
		Average Daily Traffic (ADT) ³	LOS ⁴
South Walton Avenue south of Stewart Road	Two-Lane Major Rural Collector	2,200	A
Railroad Avenue south of Stewart Road	Two-Lane Minor Rural Collector	1,300	A
Garden Highway south of Stewart Road	Urban Minor Arterial	5,200	A
Bogue Road from George Washington Boulevard to Sanborn Road	Two-Lane Rural Major Collector	2,400	A

NOTES:

- 1 Segments currently in Sutter County that would be used to a considerable degree by project trips and remain as a County roadway were studied.
- 2 Based on Table 6.14-1 of the Sutter County General Plan Draft EIR.
- 3 Based on Table 6.14-7 of the Sutter County General Plan Draft EIR. For study segment of South Walton Avenue, ADT is estimated by applying a 9 percent k-factor to PM peak hour volume.
- 4 Per Table 6.14-7 of the Sutter County General Plan Draft EIR, the following ADT/LOS ranges are provided:
 Rural Two-Lane: LOS C = 10,600 ADT or less, LOS D = 10,600- 16,400, and LOS E = 16,400 – 25,200.
 Urban Arterial: LOS C = 17,500 ADT or less, LOS D = 17,500- 19,700, and LOS E = 19,700 – 21,900.

SOURCE: Fehr & Peers, 2017

Bicycle Network

Bicycle facilities are typically described in terms of the following classes:

- Class I Multi-use Off-Street paths – are paved trails that are separated from roadways, and allow for shared use by both cyclists and pedestrians;
- Class II On-Street Bike Lanes – are designated for use by bicycles by striping, pavement legends, and signs;
- Class III On-Street Bike Routes – are designated by signage for shared bicycle use with vehicles but do not necessarily include any additional pavement width for bicyclists; and
- Class IV Protected Bikeways – are generally located within or adjacent to a roadway, but are barrier-separated from vehicular travel lanes. They may be one-way or two-way.

Figure 3.14-4 displays existing bicycle facilities within the study area. As shown, Class I, II and III bike facilities are present within the study area. A Class I multi-use trail parallels the Feather River east of the BSMP site. Class II bike lanes are present on various roadways within City limits including portions of Railroad Avenue, Garden Highway, Shanghai Bend Road, and South Walton Avenue. Class III facilities exist on certain City streets (e.g., Phillips Road) near the BSMP site.

Pedestrian Network

Figure 3.14-5 displays existing pedestrian facilities within the immediate vicinity of the BSMP site. As shown, sidewalks are mostly continuous along developed roadways such as Garden Highway, but are sporadic along roadways featuring partial development or vacant properties. Crosswalks are located at the signalized SR 99/Bogue Road intersection, as well as signalized intersections along Garden Highway.

Transit Network

Figure 3.14-6 illustrates existing bus routes, stops, and stations within the immediate vicinity of the BSMP site. Yuba-Sutter Transit provides fixed-route and demand-responsive bus service to the study area via the following routes:

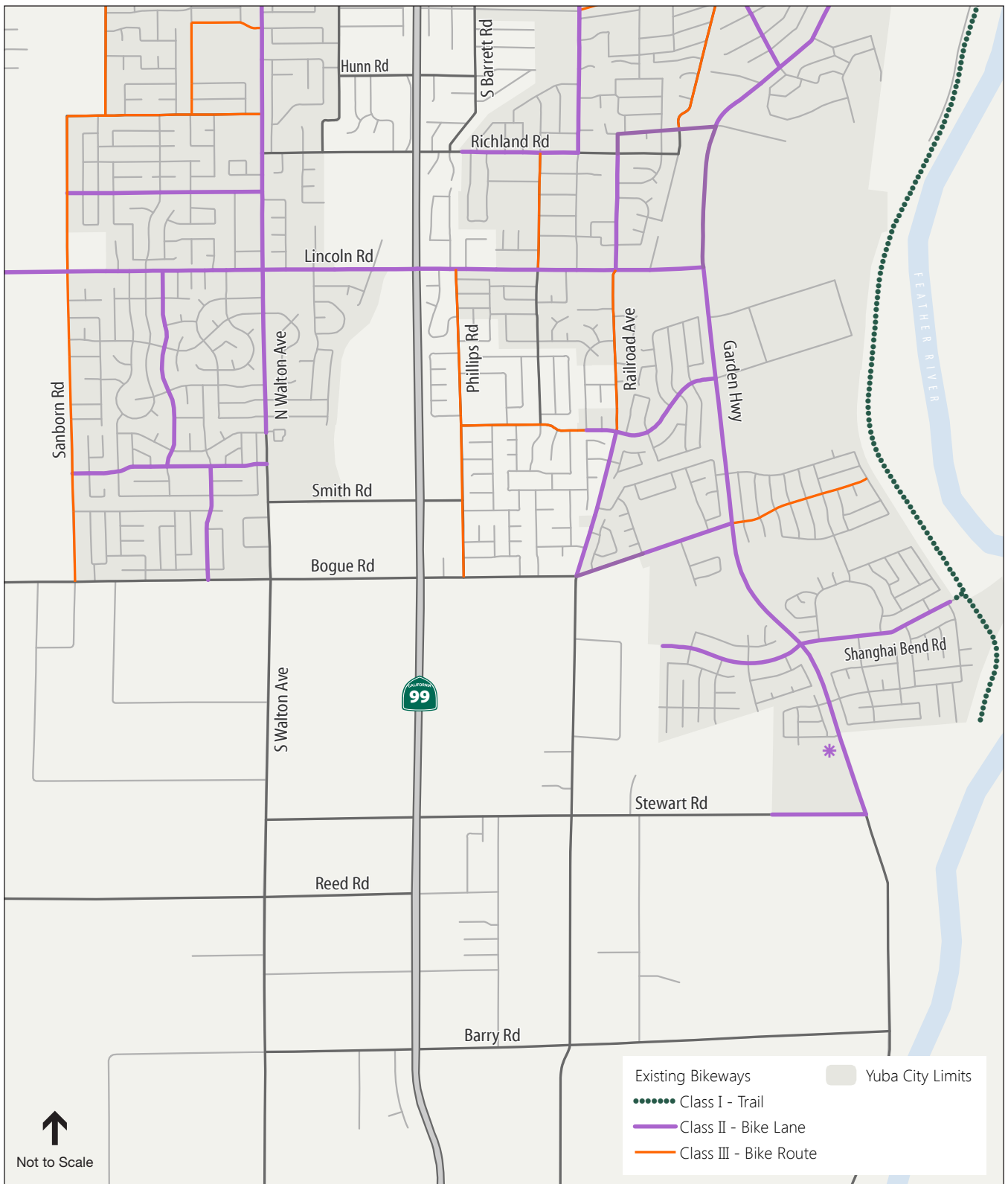
- Route 5: This route runs in a clockwise direction southerly along Garden Highway, westerly along Bogue Road, and northerly along South Walton Avenue/Sanborn Avenue. This route operates on weekdays and Saturdays between approximately 6 AM and 6 PM, operating on one-hour headways; and
- A commuter park-and-ride lot is located on the north side of Bogue Road west of Phillips Road. The Yuba-Sutter Transit Commuter Express Route, which services downtown Sacramento, stops at this location. On weekdays, six southbound buses stop at this station (en route to downtown Sacramento) between 5:30 and 7:00 AM, and seven northbound buses stop at this station between 4:25 and 6:15 PM.

3.14.2 Regulatory Setting

This section provides a discussion of applicable federal, State, and local regulations pertaining to transportation that may be applicable to the proposed BSMP project.

Federal

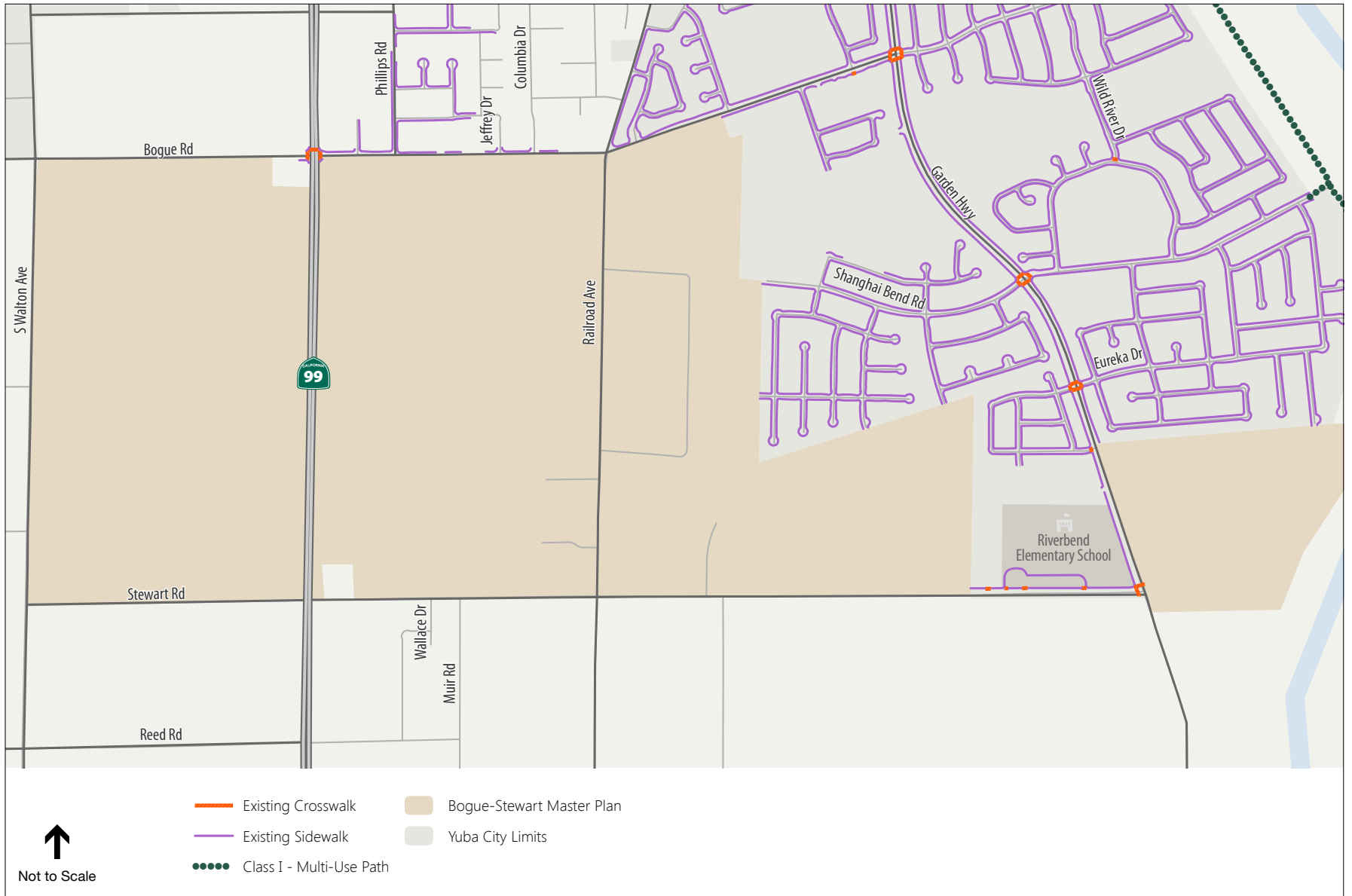
There are no applicable federal regulations that apply directly to the proposed BSMP project. However, federal regulations relating to the Americans with Disabilities Act, Title VI, and Environmental Justice relate to transit service.

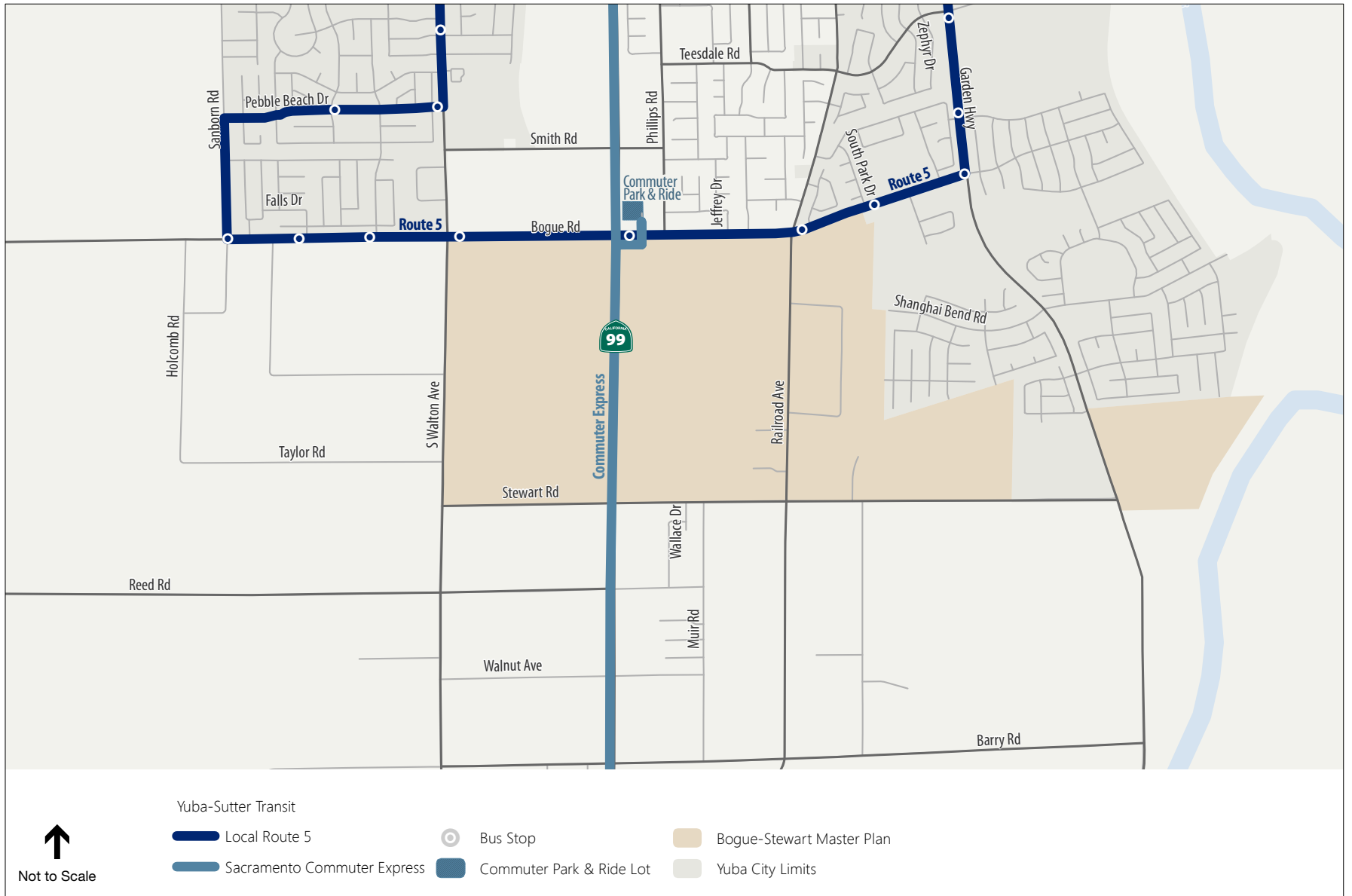


SOURCE: Fehr & Peers, 2017

Bogue-Stewart Master Plan and EIR . 140720

Figure 3.14-4
Existing Bicycle Facilities





State

In 2010, Caltrans prepared the *State Route 99 Transportation Corridor Concept Report*.¹² That document defines the corridor “concept LOS” as the minimum acceptable service condition over the next 20 years”. The LOS policies contained in that document, which are described below, are directly applicable to the proposed BSMP project and are relied upon in this study.

Senate Bill 743

Senate Bill 743, passed in 2013, requires the California Governor’s Office of Planning and Research (OPR) to develop new guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, “automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any.” OPR is currently updating its CEQA Guidelines to implement SB 743 and is proposing that VMT be the primary metric used to identify transportation impacts.

Certification of these revisions to the Guidelines by the Secretary of the California Natural Resources Agency will trigger requirements for their use by lead agencies.¹³ As this is a substantive change to CEQA practice, there has been considerable statewide interest and comment on OPR’s latest (January 2016) on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA¹⁴ (Revised Proposal). As of today, the date for formal adoption of these Guidelines is uncertain. Accordingly, this EIR discloses the project’s effects on VMT but does not apply a VMT significance threshold due to the lack of available guidance for how such a threshold should be developed.

Local

City of Yuba City General Plan

The following guiding and implementing policies from the City of Yuba City General Plan (2004) are relevant to transportation and traffic in the context of the BSMP:

Connectivity

Guiding Policy 5.2-G-1 Promote safe and efficient vehicle circulation.

Guiding Policy 5.2-G-2 Make efficient use of existing transportation facilities, and through the arrangement of land uses, improved alternate transportation modes, and provision of more direct routes for pedestrians, and bicyclists, strive to reduce the total vehicle-miles traveled per household.

¹² California Department of Transportation, 2010. *State Route 99 Transportation Corridor Concept Report*

¹³ Public Resources Code Section 21099(b)(2).

¹⁴ Governor’s Office of Planning and Research, 2016. Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, Implementing Senate Bill 743 (Steinberg, 2013), January 20, 2016.

- Guiding Policy 5.2-G-6** Design arterial roadways to carry high-volume, higher-speed traffic, thereby minimizing through traffic on residential streets. Develop a system of arterial roadways in the form of a grid of four-lane arterials that will distribute traffic evenly and will avoid excessive concentrations of traffic in any given area.
- Guiding Policy 5.2-G-7** Maximize the carrying capacity of arterial roadways by controlling the number of intersections and driveways, prohibiting residential access, and requiring sufficient off-street parking to meet the needs of each project.
- Guiding Policy 5.2-G-8** Provide center turn lanes in areas with existing front-on residential. Planted medians are preferred in areas without existing front-on development.
- Guiding Policy 5.2-G-10** Design and reconfigure collector and local roadways to improve circulation and to connect residential and commercial areas of the City.
- Guiding Policy 5.3-G-1** Continue to expand and improve the existing transit network to provide convenient and efficient public transportation to workplaces, shopping, and other destinations.
- Guiding Policy 5.3-G-2** Preserve options for future transit use when designing improvements for roadways.
- Guiding Policy 5.4-G-1** Develop a system of sidewalks and bikeways that promote safe walking and bicycle riding for transportation and recreation.

Implementing Policies

- 5.2-I-1 Locate arterials and collectors according to the general alignments shown in Figure 5-1. Minor variations from the depicted alignments will not require a General Plan amendment.
- 5.2-1-3 Adopt street standards that provide flexibility in design, especially in residential neighborhoods. Revise right of way and pavement standards to reflect adjacent land use and/or anticipated traffic, and permit reduced right of way dimensions where necessary to maintain neighborhood character.
- 5.2-I-4 Require all new developments to provide right-of-way and improvements consistent with street designations on Figure 5-1 and City street section standards.
- 5.2-I-5 Continue to require that new development pays a fair share of the costs of street and other traffic and transportation improvements based on traffic generated and impacts on service levels.
- 5.2-I-6 Require city-wide traffic impact fees on all new development to ensure that transportation improvements keep pace with new development.

- 5.2-I-7 When constructing or modifying roadways, plan for usage of the roadway space by all users, including motor vehicles, transit vehicles, bicyclists, and pedestrians.
- 5.2-I-12 Develop and manage the roadway system to obtain LOS D or better for all major roadways and intersections in the City. This policy does not extend to residential streets (i.e., streets with direct driveway access to homes) or bridges across the Feather River nor does the policy apply to state highways and their intersections, where Caltrans policies apply. Exceptions to LOS D policy may be allowed by the City Council in areas such as downtown, where allowing a lower LOS would result in clear public benefits. Specifics exceptions granted by the Council shall be added to the list of exceptions below:
- SR 20 (SR 99 to Feather River Bridge) – LOS F is acceptable;
 - SR 20 (Feather River Bridge) – LOS F is acceptable;
 - Bridge Street (Twin Cities Memorial Bridge) – LOS F is acceptable; and
 - Lincoln Road (New Bridge across the Feather River) – LOS F is acceptable.
- No new development will be approved unless it can be shown that required level of service can be maintained on the affected roadways.
- 5.2-I-13 Develop and manage residential streets (i.e., streets with direct driveway access to homes) limit average daily vehicle traffic volumes to 2,500 or less and 85th percentile speeds to 25 miles per hour or less.
- 5.2-I-15 Improve intersections as needed to maintain LOS standards and safety on major arterials.
- 5.2-I-19 Provide on-street parking along parkways where there is ‘front on’ development.
- 5.2-I-20 Require a minimum average distance of one quarter mile between parkway intersections, except in commercial areas or high volume traffic areas.
- 5.2-I-21 Implement traffic calming measures to slow traffic on local and collector residential streets and prioritize these measures over congestion management. Include roundabouts, traffic circles, and other traffic calming devices among these measures.
- 5.2-I-22 Provide for greater street connectivity by:
- Incorporating in subdivision regulations requirements for a minimum number of access points to existing local or collector streets for each development (e.g., at least two access points for every 10 acres of development);
 - Encouraging circles and roundabouts over signals;
 - Requiring the bicycle and pedestrian connections from cul-de-sacs to nearby public areas and main streets; and
 - Requiring new residential communities in undeveloped land planned for urban uses to provide stubs for future connections to the edge of the property

line. Where stubs exist on adjacent properties, new streets within the development should connect to these stubs.

Transit

Implementing Policies

- 5.3-I-2 Work with Yuba-Sutter Transit to situate transit stops and hubs at locations that are convenient for transit users, and promote increased transit ridership through the provision of shelters, benches, and other amenities.
- 5.3-I-3 Coordinate with Caltrans and Yuba-Sutter Transit to identify and implement Park & Ride sites with convenient access to public transit.
- 5.3-I-4 Require new development to provide transit improvements, where needed. This includes:
- Direct pedestrian access to transit stops;
 - Bus turnouts and shelters; and
 - Lane width to accommodate buses.
- 5.3-I-5 Ensure that new development is designed to make transit a viable choice for residents. Design options include:
- Have neighborhood focal points with sheltered bus stops;
 - Locate medium-density development whenever feasible near streets served by transit; and
 - Link neighborhoods to bus stops by continuous sidewalks or pedestrian paths.

Bikeways/Pedestrian Circulation

Implementing Policies

- 5.4-I-2 Develop bicycle routes that provide access to schools, parks, and the Feather River Parkway.
- 5.4-I-8 Give bikes equal treatment in terms of provision for safety and comfort on arterials and collectors as motor vehicles.

The proposed BSMP provides for a variety of roadway types and cross-sections, which meet various guiding and implementing policies pertaining to the roadway system. The planned circulation system includes arterial roadways to deliver traffic to SR 99 including limited driveway access along them. Center turn lanes or medians are provided on the majority of proposed BSMP roadways. The proposed BSMP would not cause an inconsistency with the City's planned roadway network, as right-of-way would be dedicated to widen roadways as necessary. The tentative plan maps show stub streets connecting into adjacent residential areas. The proposed BSMP circulation system includes several roundabouts on collector streets to 'calm traffic'. The proposed BSMP project would expand the City's roadway network, which would

require a General Plan Amendment to show modified roadways on Figure 5-1 of the Yuba City General Plan.

The proposed BSMP includes an extensive set of bicycle and pedestrian facilities within and along the boundary of the proposed BSMP. The proposed BSMP does not currently provide sufficient detail to enable evaluation of it against all of the above implementing policies pertaining to bicycle and pedestrian facilities. The proposed BSMP also does not indicate the location and type of improvements along public streets that would be provided to accommodate public transit within or adjacent to the proposed BSMP.

Review of the proposed BSMP against the above guiding and implementing policies revealed several areas, in which the project may be inconsistent with a General Plan policy. These include:

- Due to its geographic location, the proposed BSMP may not reduce total vehicle-miles traveled per household (Guiding Policy 5.2-G-2). This is evaluated in detail later in this section; and
- Due to the lack of detail regarding proposed improvements to accommodate transit service, the proposed BSMP may not result in convenient and efficient public transit (Guiding Policies 5.3-G-1 and G-2 and several implementing policies).

Subsequent reviews of proposed tentative subdivision maps, retail, office, parks, and the schools would be necessary to evaluate consistency with policies pertaining to localized bicycle and pedestrian circulation improvements.

Sutter County General Plan

The following policies from the Sutter County General Plan (2016) are relevant to transportation and traffic:

Policy

- M 2.5 **Level of Service on County Roads.** Develop and manage the County roadway segments and intersections to maintain LOS D or better during peak hour, and LOS C or better at all other times. Adjust for seasonality. These standards shall apply to all County roadway segments and intersection, unless otherwise addressed in an adopted specific plan or community plan.
- M 2.8 **City Coordination.** Coordinate with the cities of Yuba City and Live Oak to provide acceptable and compatible levels of service on roadways that cross County/City boundaries and when establishing future road alignments within the cities spheres of influence.
- M 2.9 **External Development Mitigation.** Coordinate with the cities and neighboring counties to require new development within those jurisdictions to analyze and fully mitigate their impacts to Sutter County roadways through construction of improvements and/or fair share funding of improvements within Sutter County.

The Sutter County General Plan also includes policies relating to development of roadway, bicycle, pedestrian, and transit system enhancements. However, since the proposed BSMP would be annexed into the City of Yuba City, policies of the City pertaining to these travel modes would govern. However, the above policies pertaining to analysis of County roads, coordination with Sutter County, and mitigation responsibilities are applicable to the proposed BSMP.

SACOG MTP/SCS

SACOG is responsible for the preparation of, and updates to, the 2016 MTP/SCS and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. The MTP/SCS provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (7-year horizon) in more detail. The current MTP/SCS was adopted by the SACOG board in 2016.

3.14.3 Analysis, Impacts, and Mitigation

Significance Criteria

The following describes the significance criteria used to identify project-specific and cumulatively considerable impacts to the transportation and circulation system for Phases I and II and the proposed BSMP project as whole.

Signalized Intersections and Roundabouts

Impacts to signalized intersections and roundabouts are considered significant if:

- Project-generated traffic generated would degrade LOS from acceptable to unacceptable; or
- The LOS is already, or is projected to be, unacceptable and project-generated traffic increases the average vehicle delay by 5 seconds or more; or
- Project-generated traffic causes the maximum vehicle queue in a left- or right-turn lane on a Caltrans facility¹⁵ to exceed the available turn lane storage (or exacerbates current/projected insufficient turn lane storage).

Unsignalized Intersections

Impacts to unsignalized intersections are considered significant if:

- Project-generated traffic degrades the LOS from acceptable (without the project) to unacceptable (with the project) and the peak hour signal warrant is met; or
- The LOS is already, or is projected to be, unacceptable, project-generated increases the average vehicle delay by 5 seconds or more, and the peak hour signal warrant is met; or

¹⁵ This criterion applies to northbound and southbound left- and right-turn lanes on SR 99 in the project vicinity (i.e., at SR 99/Bogue Road and SR 99/Stewart Road). It does not apply to the minor-street approaches to SR 99 because such queue spill backs would extend onto City streets and not affect the state highway system.

- Project-generated traffic causes the maximum vehicle queue in a left- or right-turn lane on a Caltrans facility to exceed the available turn lane storage (or exacerbates current/projected insufficient turn lane storage).

Transit

Impacts to the transit system are considered significant if the proposed BSMP project would:

- Adversely affect public transit operations; or
- Fail to adequately provide access to transit.

Bicycle Facilities

Impacts to bicycle facilities are considered significant if the proposed BSMP project would:

- Adversely affect existing or planned bicycle facilities; or
- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

Impacts to pedestrian circulation are considered significant if the proposed BSMP project would:

- Adversely affect existing or planned pedestrian facilities; or
- Fail to adequately provide for access by pedestrians.

Construction-Related Traffic Impacts

The proposed BSMP project would have a temporarily significant impact during construction if it would:

- Degrade an intersection or roadway to an unacceptable level; or
- Cause inconveniences to motorists due to prolonged road closures; or
- Result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists.

Emergency Vehicle Access

Impacts to emergency vehicle access are considered significant if the proposed BSMP project would:

- Adversely affect emergency response times during either construction or project operation.

Methodology and Assumptions

This section presents the assumptions and methodologies used for the impact analysis.

Vehicle Miles Traveled

Like most other cities, the City of Yuba City does not have an adopted standard or numerical threshold pertaining to project-generated VMT. However, Guiding Policy 5.2-G-2 of the City's General Plan specifies that the City will strive to reduce the total VMT per household through efficient use of transportation facilities, improved alternative modes of travel, and provision of

more direct routes for bicyclists and pedestrians. Nevertheless, this Draft EIR presents the VMT of Phases 1 and 2, as well as project buildout under both existing and cumulative conditions using the City’s travel demand model. The VMT estimates (see **Table 3.14-6**) represent the project’s “effect on VMT,” because the project would introduce new non-residential uses and construct new roadway infrastructure, which would alter background travel patterns.

**TABLE 3.14-6
 VEHICLE MILES TRAVELED**

Model Run	Model-Wide VMT	Change from No Project Condition
1. Base Year	2,495,712	N/A
2. Base Year Plus Phase 1 and 2	2,574,700	78,988
3. Base Year Plus Project Buildout	2,719,035	223,323
4. Cumulative No Project	4,552,912	N/A
5. Cumulative Plus Phase 1 and 2	4,649,789	96,877
6. Cumulative Plus Project Buildout	4,772,787	219,875

SOURCE: Fehr & Peers. 2018. VMT Calculations.

Planned Land Uses

According to the *Bogue-Stewart Master Plan Land Use Plan*, the proposed BSMP project would result in the development of the following trip-generating land uses:

- 1,758 single-family dwelling units,
- 759 multi-family dwelling units,
- 473,300 square feet of retail space,
- 108,500 square feet of office space,
- 575,000 square feet of business, technology, and light industrial,
- 84.2 acres of parks and open space, and
- Kindergarten-8th Grade Public School.

For analysis purposes, the 575,000 square feet of business, technology, and light industrial was assumed to consist of 230,000 square feet of light industrial, 230,000 square feet of manufacturing, and 115,000 square feet of office space. The proposed BSMP project would generate an estimated 923 Kindergarten through 8th Grade students. Based on residential locations, approximately one-third would be expected to attend Riverbend Elementary School, with the remaining two-thirds attending a new school to be located in the northwest corner of the BSMP site. The new school would be developed to have capacity to accommodate a greater number of students as additional development occurs in the southwest area of Yuba City.

The Newkom Ranch (Phase I) component of the proposed BSMP would consist of the following trip-generating land uses:

- 427 single-family dwelling units,
- 216 multi-family dwelling units,
- 108,500 square feet of office space,
- 229,800 square feet of retail space, and
- Active Park consisting of playfields.

The Kells East Ranch (Phase II) component of the proposed BSMP would consist of the following trip-generating land uses:

- 147 single-family dwelling units,
- 123 multi-family dwelling units,
- 161,200 square feet of retail space, and
- Active Park consisting of playfields.

As described previously, Newkom Ranch and Kells East Ranch are jointly analyzed and referred to as “Phase I and II”. Together, they consist of the following land uses:

- 574 single-family dwelling units,
- 339 multi-family dwelling units,
- 108,500 square feet of office space,
- 391,000 square feet of retail space, and
- Active Park consisting of playfields.

When compared to the proposed BSMP as a whole, Phase I and II represent approximately 36 percent of the residential buildout, and 43 percent of the non-residential buildout. As a consequence of the development process, the proposed BSMP assumes that five existing single-family dwelling units would be voluntarily sold and demolished to make way for new development.

The Newkom Ranch component of the proposed BSMP would be located east of SR 99, south of Bogue Road, north of Stewart Road, and west of Railroad Avenue. The Kells East Ranch component of the proposed BSMP would be located west of SR 99, south of Bogue Road, north of Stewart Road, and east of Gilsizer Slough. The remainder of the proposed BSMP includes additional properties further west of Kells East Ranch (extending to South Walton Avenue), and additional properties further east of Newkom Ranch (including on both sides of Railroad Avenue and a property east of Garden Highway).

Planned Transportation System

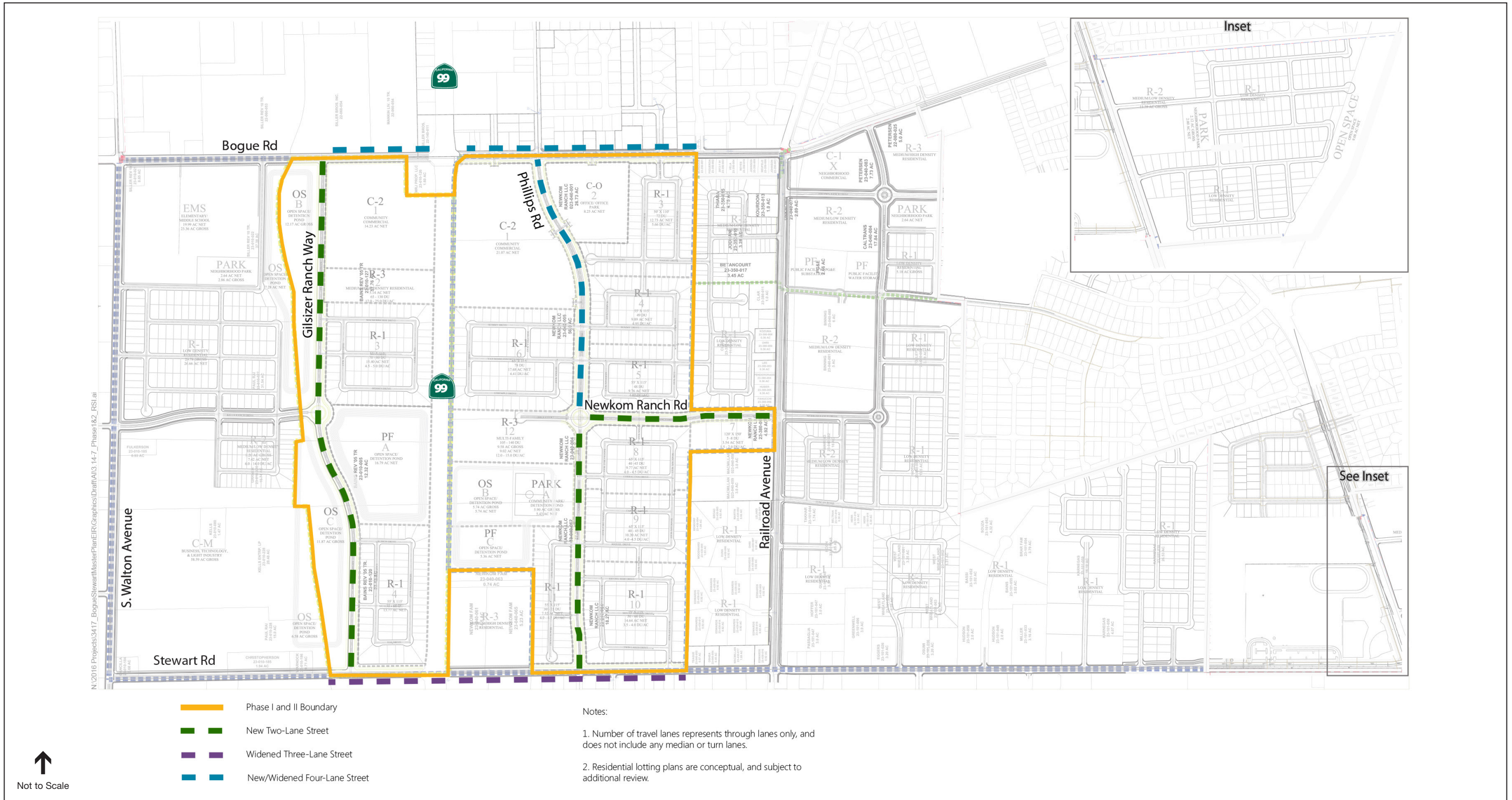
Since development of the proposed BSMP project would be phased, the timing of roadway improvements would also be phased. **Figure 3.14-7** displays the planned roadway network that would be constructed under “Existing Plus Phase I and II” conditions. The end of this chapter includes an evaluation of the extent to which transportation demands projected on these roadways under cumulative conditions require these proposed cross-sections. The following roadway improvements would be constructed according to the *Bogue-Stewart Master Plan Land Use Plan*:¹⁶

- Bogue Road would be widened to consist of two through lanes in each direction separated by a left-turn lane or landscaped median from Gilsizer Ranch Way to the easterly edge of the Newkom Ranch area (west of Railroad Avenue);
- Phillips Road would be extended southerly from Bogue Road to Newkom Ranch Drive as a five-lane major collector street (two lanes in each direction separated by a two-way left-turn lane). It would continue southerly to Stewart Road as a three-lane collector street (one lane in each direction separated by a two-way left-turn lane);
- Newkom Ranch Drive would be constructed from the Phillips Road extension easterly to Railroad Avenue as a three-lane collector street (one lane in each direction separated by a two-way left-turn lane);
- Gilsizer Ranch Way would be constructed southerly from Bogue Road to Stewart Road as a three-lane collector street (one lane in each direction separated by a two-way left-turn lane); and
- Stewart Road would be widened from SR 99 to the westerly limits of the Kells East Ranch property to be an “Urban Edge” roadway consisting of two westbound travel lanes, a median turn lane, and one eastbound travel lane. It would also be widened to a major collector from SR 99 easterly to the Newkom Ranch east boundary and consist of two westbound travel lanes, a median turn lane, and one eastbound travel lane.

Phase I and II would not modify any sections of Railroad Avenue or South South Walton Avenue.

By virtue of the Bogue Road widening, the SR 99/Bogue Road and Phillips Road/Bogue Road intersections would be modified to include additional eastbound and westbound approach lanes. The proposed BSMP includes a roundabout at the Phillips Road/Newkom Ranch Drive intersection. Since the proposed BSMP does not identify any other specific improvements (e.g., traffic signals) at any existing intersections, for analysis purposes new intersections were assumed to be controlled by stop signs. The 21-acre retail parcel located in the southeast quadrant of the SR 99/Bogue Road intersection was assumed to be accessed by a right-turn only driveway on Bogue Road and one or more full-access driveways on the Phillips Road extension. Additionally, the widening of Bogue Road would require movements at the two driveways into gas station/convenience center on Bogue Road to continue to be restricted to right-turns only. All movements would continue to be permitted at Ramona Avenue.

¹⁶ MHM Inc. 2018. *Bogue-Stewart Master Plan, Land Use Plan*.



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Figure 3.14-8 displays the planned roadway network that would be constructed under “Existing Plus BSMP” conditions. The following roadway improvements would be constructed in addition to those built with Phase I and II:

- The Bogue Road widening would be extended westerly to South Walton Avenue such that the facility is a continuous four-lane arterial (consisting of two through lanes in each direction separated by a left-turn lane or landscaped median);
- Bogue Road between the Newkom Ranch Plan boundary and Railroad Avenue would be widened to consist of one westbound travel lane a median turn lane and two eastbound travel lanes. From east of Railroad Avenue to the east boundary of the BSMP site, it would be widened to be a four-lane arterial (two through lanes in each direction separated by a left-turn lane or landscaped median);
- Railroad Avenue would be widened from Bogue Road to Stewart Road to be a three-lane collector street (one lane in each direction separated by a two-way left-turn lane);
- The Stewart Road widening would extend westerly to South Walton Avenue as an “Urban Edge” roadway consisting of two westbound travel lanes, a median turn lane, and one eastbound travel lane. The Stewart Road widening would also extend easterly to Riverbend Elementary School as a collector street to consist of one lane in each direction separated by a median turn lane;
- South Walton Avenue would be widened from Bogue Road to Stewart Road to be an “Urban Edge” roadway consisting of two northbound travel lanes, a median turn lane, and one southbound travel lane;
- Kells Ranch Drive would be constructed from South Walton Avenue easterly to Gilsizer Ranch Way as a three-lane collector street (one lane in each direction separated by a two-way left-turn lane);
- Changaris Ranch Way would be constructed as a north-south collector street (one lane in each direction separated by a two-way left-turn lane) between Bogue Road and Newkom Ranch Drive to the east of Railroad Avenue; and
- Shanghai Bend Road would be extended westerly from its current terminus as a two-lane undivided collector street to Changaris Ranch Way.

The proposed BSMP also includes various other smaller public collector and residential streets. However, they have been omitted from the above discussion due to their location, length, and anticipated function. The traffic analysis considers all planned arterial and collector streets within the proposed BSMP.

On-street parking would be permitted on residential streets and certain collector streets including: Shanghai Bend Road, Halprin Ranch Drive, Phillips Road (along the Newkom Park frontage), Newkom Ranch Drive, Railroad Avenue, Stewart Road (east of Dante Way to Garden Highway). On-street parking would be prohibited on all arterial streets.

All collector and arterial streets would include six-foot Class II bike lanes in each direction. All new streets would include a minimum of five-foot sidewalks on both sides of the street. Some

streets would have ten-foot multi-use paths such as Gilsizer Ranch Way. Existing streets along the edge of the proposed (e.g., Bogue Road, Stewart Road, South Walton Avenue) would include sidewalks on both sides of the street if right-of-way is available, or may include a sidewalk or multi-use path on the project side of the street only.

Trip Generation, Distribution, and Assignment

The proposed BSMP would add new residential and non-residential land uses to the southerly area of the City of Yuba City. The residential uses would generate new “trip productions” made for a variety of purposes ranging from work, shopping, school, recreational, and other purposes. The non-residential uses would attract trips from both project residents as well as existing nearby residents due to the current lack of retail and employment in the area. Accordingly, project implementation would not only generate new trips, but it would also change travel patterns of existing nearby residents. Additionally, it would widen certain streets and construct new streets, which could also alter travel patterns.

For these reasons, the City of Yuba City travel demand model was selected as the most appropriate tool to analyze the project’s effects on the roadway system. The following discussion provides an in-depth description of this process.

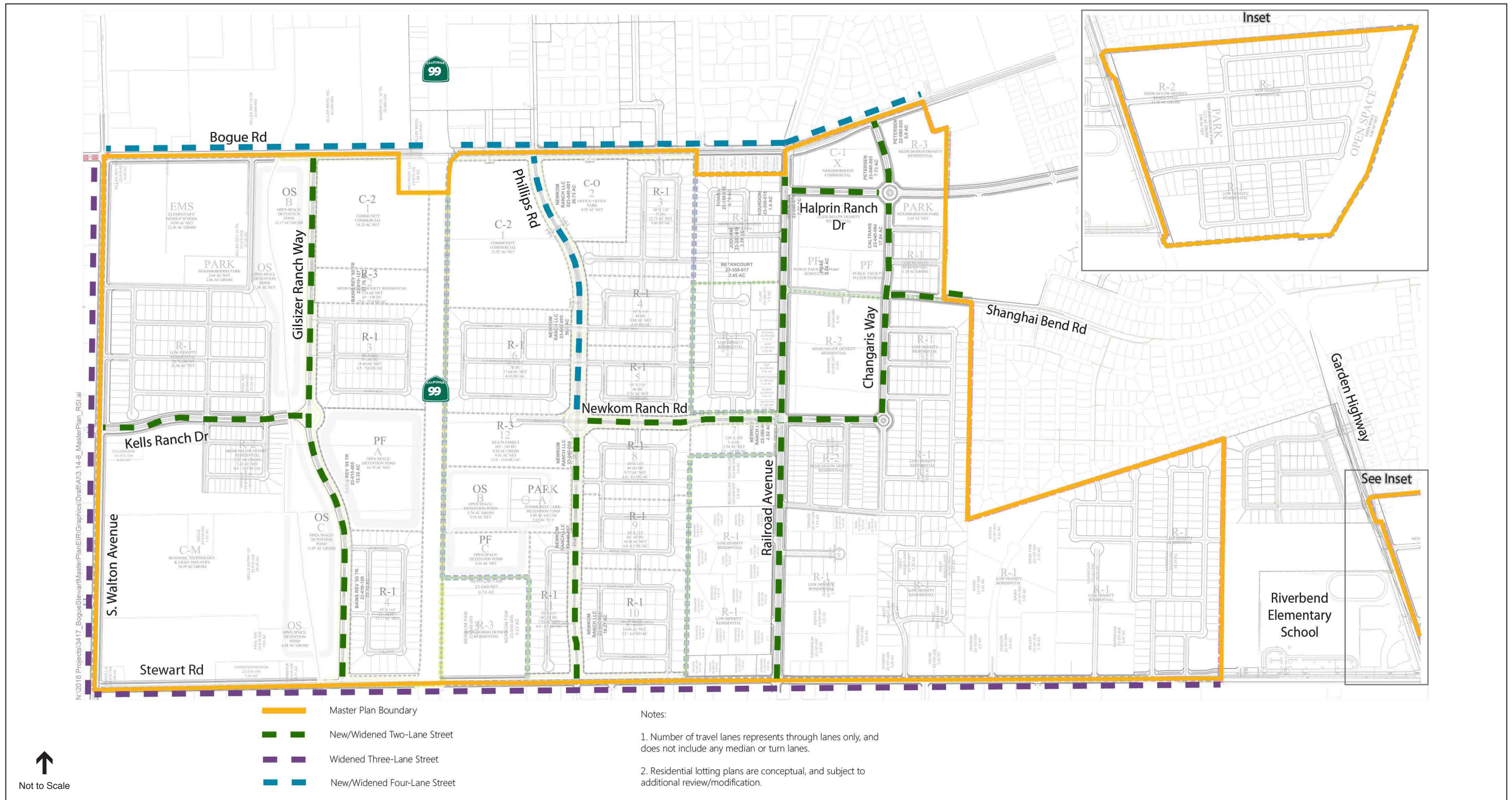
Trip Generation

The proposed BSMP trip generation was estimated using the City of Yuba City travel demand model. To ensure that the trip generation estimates were reasonable (e.g., considers internalization of trips between complementary land uses), model output was compared to trip generation estimates from the Institute of Transportation Engineers (ITE), as described below.

Table 3.14-7 displays the daily, AM peak hour, and PM peak hour trip generation of Phase I and II based on trip generation estimates from the *Trip Generation Manual*.¹⁷ The table displays gross trips generated by the project, internal trips anticipated to be made within each phase of the project, and pass-by/diverted-link trips to the retail uses. Pass-by trips are made by motorists already on Bogue Road who enter a retail center en route to a different primary destination. Diverted link trips represent motorists on SR 99 who depart the highway to enter either of the retail sites from Bogue Road. Pass-by and diverted link percentages were obtained from the *Trip Generation Handbook*.¹⁸ The table indicates that Phases I and II would generate 25,200 new daily trips, 1,050 new AM peak hour trips, and 2,130 new PM peak hour trips.

¹⁷ Institute of Transportation Engineers, 2012. *Trip Generation Manual*.

¹⁸ Institute of Transportation Engineers, 2012. *Trip Generation Manual*.



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**TABLE 3.14-7
 PROJECT TRIP GENERATION – PHASE I AND II CONDITIONS**

Land Use	ITE Land Use Code	Quantity	Trip Rate ¹			Trips		
			Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
Single-Family Residential	210	575 du	9.52	0.75	1.00	5,475	432	575
Multi-Family Residential	220	338 du	6.65	0.51	0.62	2,248	172	210
Community Commercial	820	391 ksf	53.52	1.20	4.79	20,925	468	1,871
Office	710	108.5 ksf	12.88	1.88	1.84	1397	204	200
Active Park	N/A	2 soccer fields	71.50	1.00	17.50	143	2	35
Gross Trips						30,188	1,278	2,891
Internal Trips ²						-1,696	-142	-182
Pass-by/Diverted Link Trips ³						-3,289	-82	-580
Net External Trips						25,203	1,054	2,129

NOTES:

- 1 Trip rates based on *Trip Generation Manual* (Institute of Transportation Engineers, 2012) for all land uses with the exception of the two soccer fields, whose trip generation was estimated based on the assumption of two teams practicing at fields. Trip rates for residential uses based on weighted average trip rate and trip rates for other uses based on fitted curve equation based on amount of land use within each phase.
- 2 Internal trips estimated using MXD model. These trips represent travel within each phase of the project. Internalization of trips between Phases I and II not shown above, but would most likely involve travel by vehicle.
- 3 Based on *Trip Generation Handbook* (Institute of Transportation Engineers, 2012) and subject to availability of traffic from which pass-by can be taken, approximately 16 percent of daily, 18 percent of AM peak hour, and 31 percent of PM peak hour non-internal retail trips are assumed to be pass-by or diverted link.

SOURCE: Fehr & Peers, 2017.

Table 3.14-7 shows that for Phases I and II, approximately six percent of daily trips, 11 percent of AM peak hour trips, and six percent of PM peak hour trips were estimated to be internal to each phase of the proposed BSMP. These internalization estimates were derived from the Mixed-Use Trip Generation Model (MXD), which was developed for the US Environmental Protection Agency to estimate internal trip-making and external trips by non-auto travel modes. This model was developed by transportation professionals and academic researchers to more accurately estimate the external vehicular trip generation of mixed-use land development projects than prior methods (e.g., ITE internalization spreadsheet). The model was developed based on empirical evidence at 240 mixed-use projects located across the U.S. The model considers various built environment variables such as land use density, regional location, proximity to transit, and various design variables when calculating the project’s internal trips, and external trips made by auto, transit, and non-motorized modes. The MXD model has been applied in numerous EIRs throughout California. Appendix G of the Draft EIR contains MXD model output.

The trip generation estimates presented in Table 3.14-7 were compared against output from the base year City of Yuba City travel demand model for reasonableness. Specifically, the model’s estimate of traffic entering/exiting the boundaries of Phases I and II versus the external new trips shown on Table 3.14-7 were compared. The results of this comparison are shown in

Table 3.14-8. This table shows that the model’s estimation of external trips very closely matches (i.e., within about one percent) the ITE /MXD results during the PM peak hour. During the AM peak hour, the travel demand model tends to overestimate external trips, because the analysis results are based on model output the analysis presented herein is conservative for AM peak hour conditions. The model also accurately estimates daily traffic, with a difference of only 929 fewer daily trips (3.7 percent). This difference, when spread across the various public gateway streets and private driveways, has a nominal effect on predictions of overall traffic circulation conditions.

**TABLE 3.14-8
 TRIP GENERATION COMPARISON – EXISTING PLUS PHASE I AND II CONDITIONS**

Analysis Method	Daily Trips ¹	AM Peak Hour Trips ¹	PM Peak Hour Trips ¹
Yuba City Base Year Travel Demand Model	24,274	1,427	2,104
ITE Trip Rates/MXD Model	25,203	1,054	2,129
Percent Difference	- 3.7	+ 35.4	- 1.2

NOTES:

¹ Comparison is of external vehicle trips departing Phase I and II boundaries versus external trips from Table 3.14-7. Because models cannot estimate pass-by/diverted link trips, ITE/MXD results shown above exclude pass-by and diverted link trips. This comparison is valid because model output shows very few through trips traveling through (i.e., non-project related) new streets constructed as part of Phases I and II.

SOURCE: Fehr & Peers, 2017.

Table 3.14-9 displays the daily, AM peak hour, and PM peak hour trip generation of the proposed BSMP based on ITE trip rates. This table employs similar technical approaches in terms of internalization and pass-by/diverted-link trips as the Phase I and II analysis. This table indicates that the proposed BSMP would generate approximately 42,400 new external daily trips, 2,650 new external AM peak hour trips, and 3,470 new external PM peak hour trips. Due to the larger size and greater diversity of land uses in the proposed BSMP as a whole (as compared to Phases I and II only), a greater percentage of project trips are anticipated to remain internal to the project site. Please footnote 4 in Table 3.14-9 for anticipated percentages.

Table 3.14-10 compares the travel demand model’s estimates of gross trips versus results using ITE trip rates. During the AM peak hour and on a daily basis, ITE trip rates and City’s model estimates are within about one percent of each other. During the PM peak hour, ITE trip totals are about ten percent higher than the City’s model. Investigation of this difference concluded that the primary cause is the use of higher ITE trip rates for light industrial and manufacturing uses.

Given that the City’s travel demand model employs a set of trip rates that enabled it to be validated to existing travel conditions within the City, the use of the City’s travel demand model provides a reasonable and defensible analysis of project impacts.

**TABLE 3.14-9
PROJECT TRIP GENERATION – BSMP CONDITIONS**

Land Use	ITE Land Use Code	Quantity	Trip Rate ¹			Trips		
			Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
Single-Family Residential	210	1,759 du	9.52	0.75	1.00	16,746	1,319	1,759
Multi-Family Residential	220	758 du	6.65	0.51	0.62	5,041	387	470
Community Commercial	820	391 ksf	53.52	1.20	4.79	20,925	468	1,871
Neighborhood Commercial	826	82.3 ksf	44.32	1.20	2.66	3,648	99	219
Office	710	223.5 ksf	12.88	1.88	1.84	2,879	420	411
Active Park	N/A	2 soccer fields	71.50	1.00	17.50	143	2	35
Light Industrial	110	230 ksf	7.03	0.79	0.75	1,616	182	172
Manufacturing	140	230 ksf	3.79	0.70	0.71	872	161	163
Elementary School	520	615 students ²	1.29	0.45	0.15	793	277	92
Existing Residential	210	-5 du	9.52	0.75	1.00	-48	-4	-5
Gross Trips						52,615	3,311	5,187
Internal Trips ³						- 6,787	- 579	- 1,218
Pass-by/Diverted Link Trips ⁴						- 3,420	- 84	- 499
Net External Trips						42,408	2,648	3,470

NOTES:

- 1 Trip rates based on *Trip Generation Manual* for all land uses with the exception of the two soccer fields, whose trip generation was estimated based on the assumption of two teams practicing at fields. Trip rates for residential uses based on weighted average trip rate and trip rates for other uses based on fitted curve equation based on amount of land use within each phase.
- 2 Initial student enrollment shown for Existing plus BSMP conditions. However, school capacity would enable accommodation of a greater number of students to support new development in other areas of Yuba City.
- 3 Internal trips estimated to be 12.9 percent on a daily basis, 17.5% during the AM peak hour, and 23.5% during the PM peak hour based on MXD model results.
- 4 Based on *Trip Generation Manual* and subject to availability of traffic from which pass-by can be taken, approximately 16 percent of daily, 18 percent of AM peak hour, and 31 percent of PM peak hour non-internal retail trips are assumed to be pass-by or diverted link.

SOURCES: Fehr & Peers, 2017; Institute of Transportation Engineers. 2012. *Trip Generation Manual*.

**TABLE 3.14-10
TRIP GENERATION COMPARISON – EXISTING PLUS BSMP CONDITIONS**

Analysis Method ¹	Daily Trips ²	AM Peak Hour Trips ²	PM Peak Hour Trips ²
Yuba City Base Year Travel Demand Model	49,065	3,184	4,184
ITE Trip Rates/MXD Model	49,195	3,227	4,688
Percent Difference	- 0.3	- 1.3	- 10.8

NOTES:

- 1 This comparison focuses on gross trips (versus external trips in Table 3.14-8, 52,615-3,420 = 49,195) because external trips in the model will also include non-project through travel, which would result in double-counting.
- 2 Because models cannot estimate pass-by/diverted link trips, ITE/MXD results shown above exclude pass-by and diverted link trips.

SOURCE: Fehr & Peers, 2017.

Trip Distribution/Assignment

The base year version of the Yuba City travel demand model includes the entire city limits of Yuba City, as well as portions of the City of Marysville, Yuba County, and Sutter County. The westerly area of the model (i.e., generally west of SR 99) underwent a subarea model validation in 2015 as part of the El Margarita Master Plan. That validation process concluded that the base year model is suitable for use in representing existing conditions. By adding the project to the model (and adding the predicted difference in trips at study facilities to existing volumes), the existing plus project condition is obtained.

The particular location of the BSMP site introduced a minor challenge from a traffic modeling perspective. Specifically, the proposed BSMP would be situated near the southwesterly edge of the model boundary (i.e., not centrally located). Within the model, travel to/from the south on SR 99 (toward Sacramento) is represented by an external gateway approximately five miles south of the project site. External gateways generate a fixed number of vehicle trips to match existing traffic conditions. Those trips are either internal-external (I-X), external-internal (X-I), or external-external (X-X).¹⁹ To account for additional project-related travel to/from the south on SR 99, it was necessary to adjust the total number of trips generated at the SR 99 external gateway as well as the percentage that are I-X, X-I, and X-X. To inform this estimate, turning movements generated by a representative primarily residential area located on the west side of SR 99 accessed by the Lincoln Road, Smith Road, and Bogue Road intersections were evaluated. By reviewing AM and PM peak hour turning movement volumes at these intersections, it was estimated that 30 percent of trips were to/from the north, 51 percent of trips were to/from the east, and 19 percent of trips were to/from the south. This data was complemented by review of 2010 US Census data pertaining to inter-county work commute travel (i.e., percentage of Sutter County workers that are employed in Sacramento County). Based on analysis of these combined data sources, the SR 99 external gateway traffic volume has been increased by three percent during the AM peak hour and nine percent during the PM peak hour.²⁰

The model was then run, and the following ‘difference method’ calculation procedure was used to develop “Existing Plus BSMP” traffic forecasts.

$\text{Existing Plus BSMP Forecasts} =$ $\text{Existing Volume} + (\text{Base Year Plus BSMP Model Forecasts} - \text{Base Year Model Forecasts})$
--

Trip-based models (such as this one) are not capable of estimating pass-by or diverted-link trips. Accordingly, it was necessary to make a series of ‘off-model’ adjustments to reflect trips that divert off SR 99 to access the retail centers (i.e., diverted-link trips) as well as pass-by trips on Bogue Road that access the retail centers en route to a different primary destination.

¹⁹ Internal-to-external represents a trip that begins within the model and then exits an external gateway. External-to-external represents a trip that begins at an external gateway, travels through the entire model area, and then exits at another external gateway.
²⁰ Without making these adjustments, it would have not been possible for an ‘existing plus project’ model run to show an increase in traffic on SR 99 south of Barry Road.

This same process described above was repeated to develop “Existing plus Phase I and II” conditions forecasts.

Figure 3.14-9 displays the approximate distribution of project trips under existing plus Phase I and II conditions. This figure shows that 6 percent of project trips would be distributed to/from the south on SR 99. This percentage is reasonable when considering the following:

- Most trips to/from the south would be lengthy and typically associated with commute to work purposes;
- It is unlikely that many retail trips would be attracted from the south due to their relatively short trip length. However, the project could import some office workers from the south; and
- About 30 percent of all daily external project trips are associated with residential uses and home-based-work trips comprise about 25 percent of all home-based trips. Since these proportions are multiplicative, about 7.5 percent of all daily external project trips are home-based work trips. Given this, the estimate of 6 percent of all trips being distributed to/from the south on SR 99 is reasonable.

Figures 3.14-10 displays the distribution of project trips under existing plus BSMP conditions. These percentages are based on the relative increase in daily trips between the base year and base year plus project versions of the City’s travel demand model. The percentages consider changes in background (non-BSMP) travel patterns. It should be noted that percentages may vary somewhat from these percentages during the AM and PM peak hours. This figure indicates that the majority of external project trips would be distributed to/from the north on SR 99 (38 percent), Garden Highway (19 percent), South Walton Avenue (15 percent) and Railroad Avenue (12 percent).

Figures 3.14-11a, 3.14-11b and **3.14-11c** display the Existing Plus BSMP AM and PM peak hour traffic volumes, controls, and lane configurations at the study intersections. **Figures 3.14-12a, 3.14-12b** and **3.14-12c** display the Existing Plus Phase I and II AM and PM peak hour traffic volumes, controls, and lane configurations at the study intersections.

Vehicle Miles of Travel

This section describes the methodologies used to estimate the VMT associated with Phases I and II, and the BSMP as a whole. VMT is presented for informational purposes in this section. However, the values shown here are used as inputs to air quality, noise, and greenhouse gas emissions evaluations elsewhere in this EIR.

VMT is considered a useful metric in understanding how a project can affect the efficiency of the transportation system. By definition, one VMT occurs when a vehicle is driven one mile. In addition, a given VMT value represents vehicular miles of travel for entire weekday. Lastly, VMT values in this section represent the full length of a given trip, and are not truncated at city, county, or region boundaries.

Table 3.14-11 displays the VMT of Phases I and II, and the proposed BSMP as a whole under existing conditions. These values represent the project’s effect on VMT. Because the project includes retail and employment, it would alter travel patterns of existing residents. Similarly, the project would change background travel patterns by virtue of constructing new roadways. By calculating the net change in model-wide VMT due to the project, these effects can be measured. This table shows that Phase I and II would generate approximately 79,000 VMT, while the proposed BSMP would generate a total of 223,300 VMT. When comparing the VMT values against gross daily trips, Phase I and II would appear somewhat more efficient because it would only represent 35 percent of the total BSMP VMT despite generating 57 percent of the total gross daily trips. This difference is most likely attributed to the proposed BSMP including substantially greater numbers of residential units than Phase I and II (i.e., 2,517 versus 912 units). Home-based work trips are among the longest types of trips.

**TABLE 3.14-11
 VMT ESTIMATION – EXISTING PLUS PROJECT CONDITIONS**

Scenario	Gross Daily Trips	VMT
Phase I and II	30,178	78,988
BSMP	52,615	223,323

NOTES:

1 Calculated using City of Yuba City travel demand model.

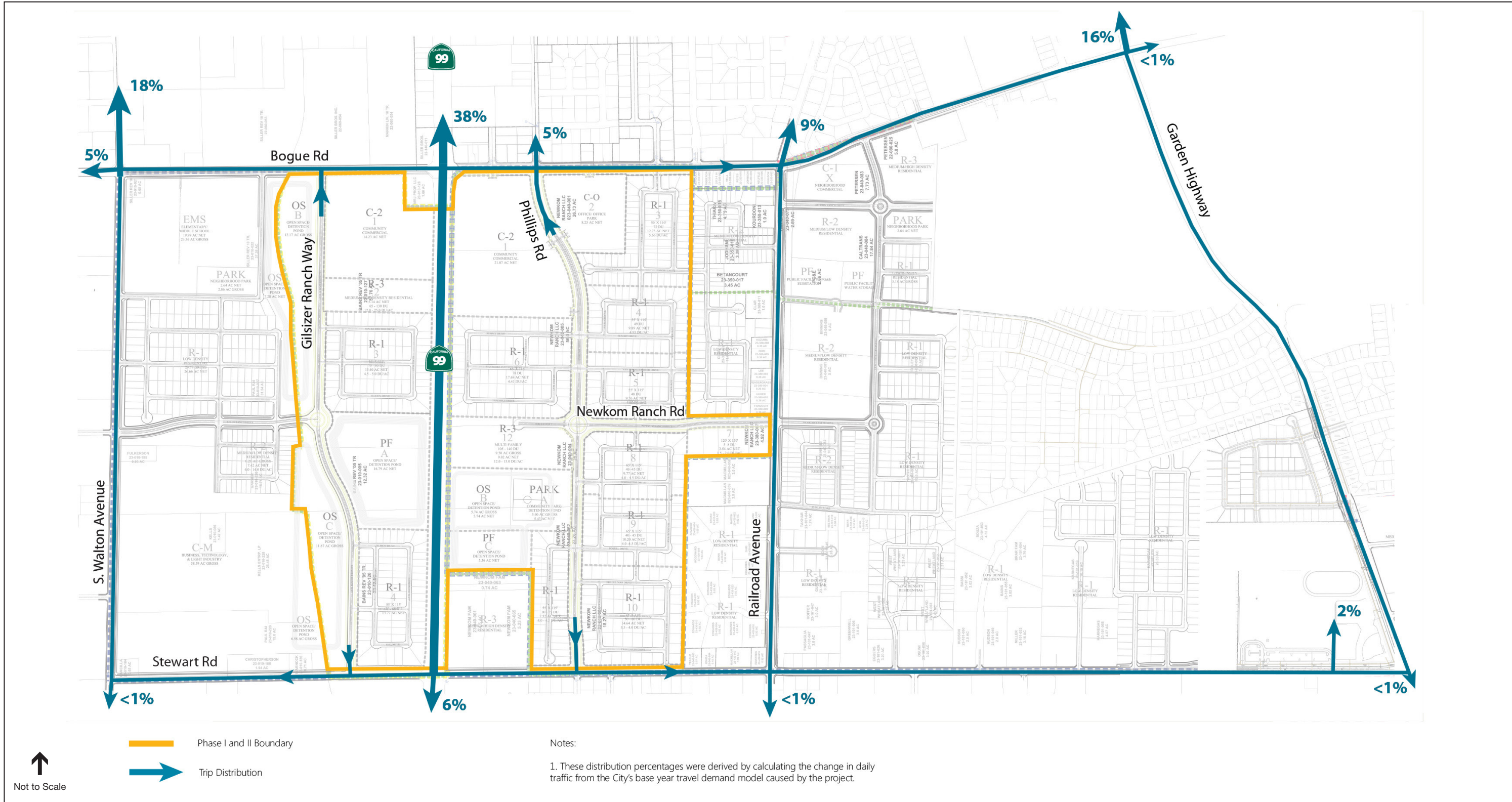
SOURCE: Fehr & Peers, 2017.

Intersection and Roadway Operations

Table 3.14-12 presents the AM and PM peak hour LOS at each study intersection under existing plus BSMP conditions. **Table 3.14-13** displays the signal warrant analysis results during the AM and PM peak hours at unsignalized study intersections under existing plus BSMP conditions. **Table 3.14-14** presents the AM and PM peak hour maximum queue length estimates at selected study intersections on SR 99 under existing plus BSMP conditions.

Table 3.14-15 presents the AM and PM peak hour LOS at each study intersection under Existing Plus Phase I and II conditions. Table 3.14-13 also shows the results of the signal warrant analysis under Existing plus Phase I and II conditions. **Table 3.14-16** presents the AM and PM peak hour maximum queue length estimates at selected study intersections on SR 99 under existing plus Phase I and II conditions.

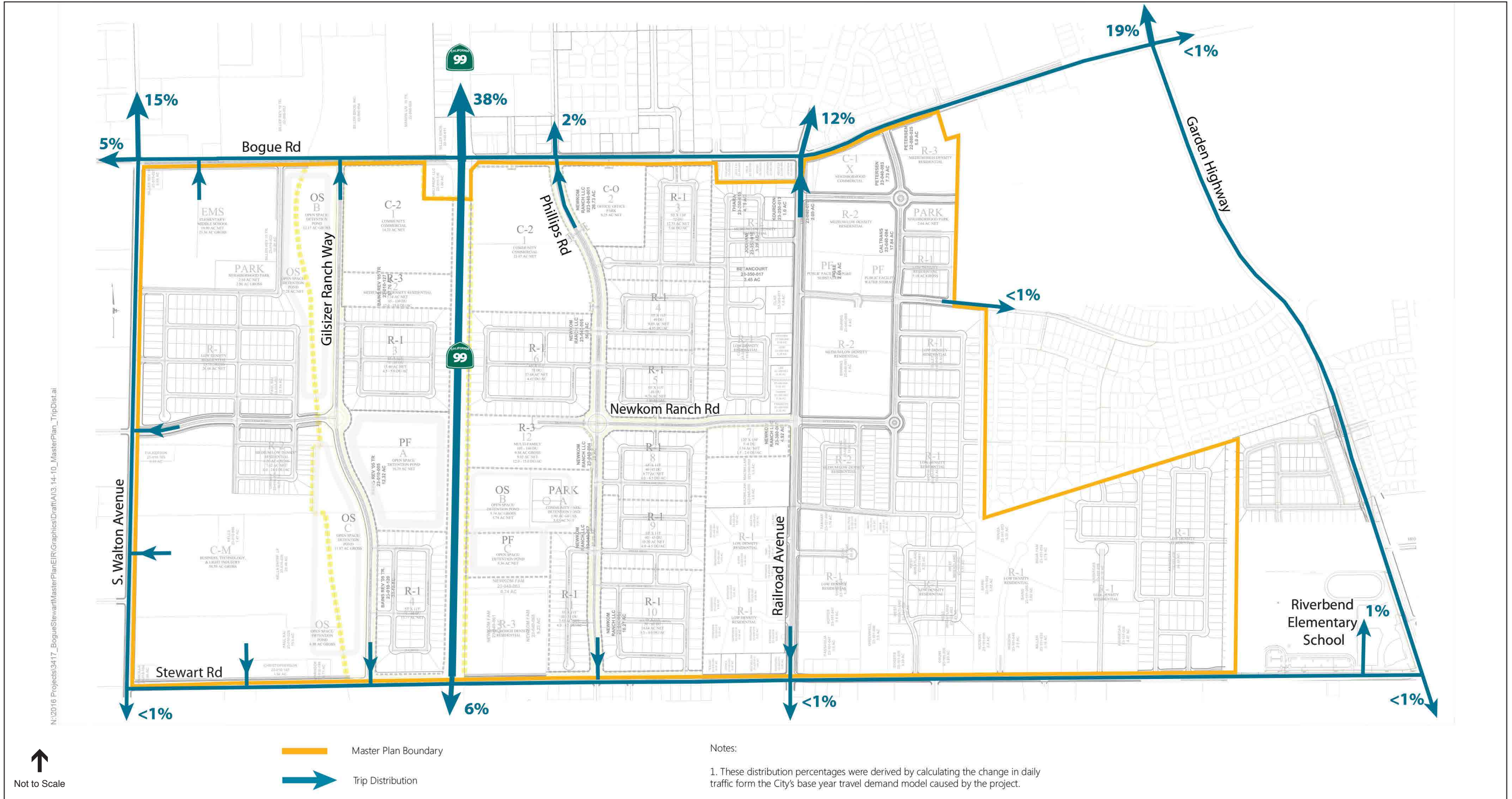
Table 3.14-17 displays the volume of daily traffic on Sutter County roadways under both scenarios.



SOURCE: Fehr & Peers, 2017

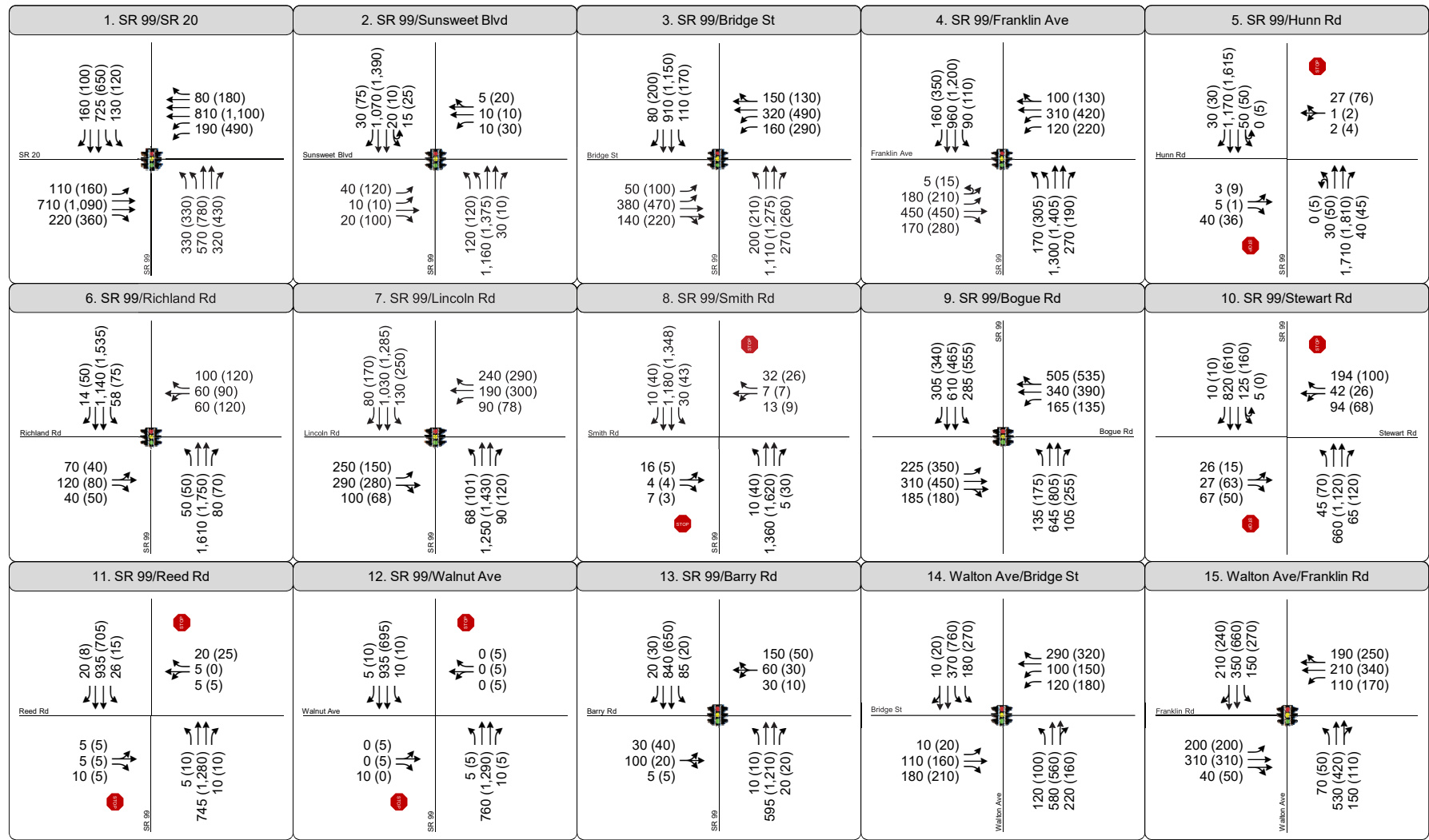
Bogue-Stewart Master Plan and EIR . 140720

Figure 3.14-9
Distribution of Phase I and II Project Trips



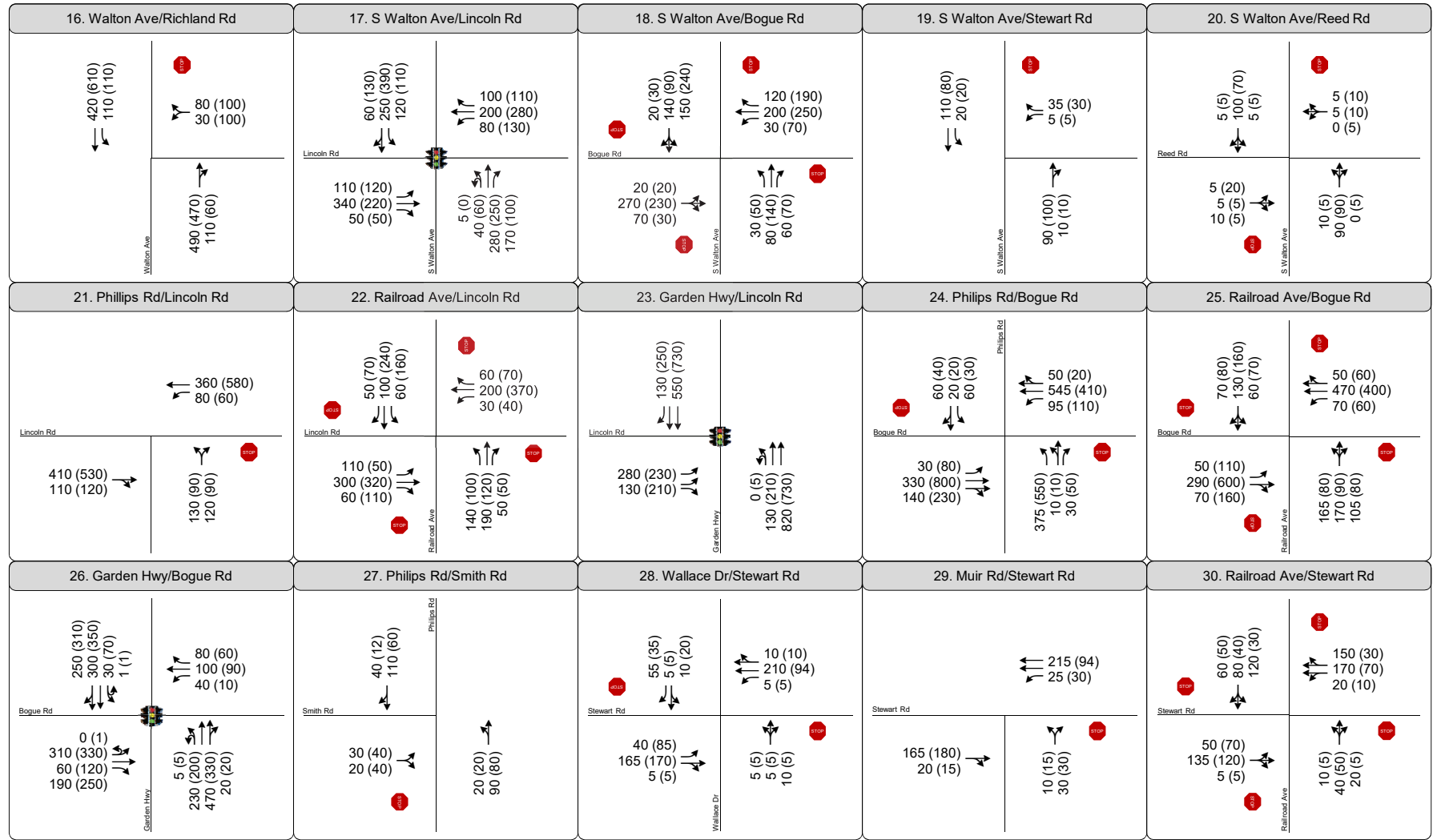
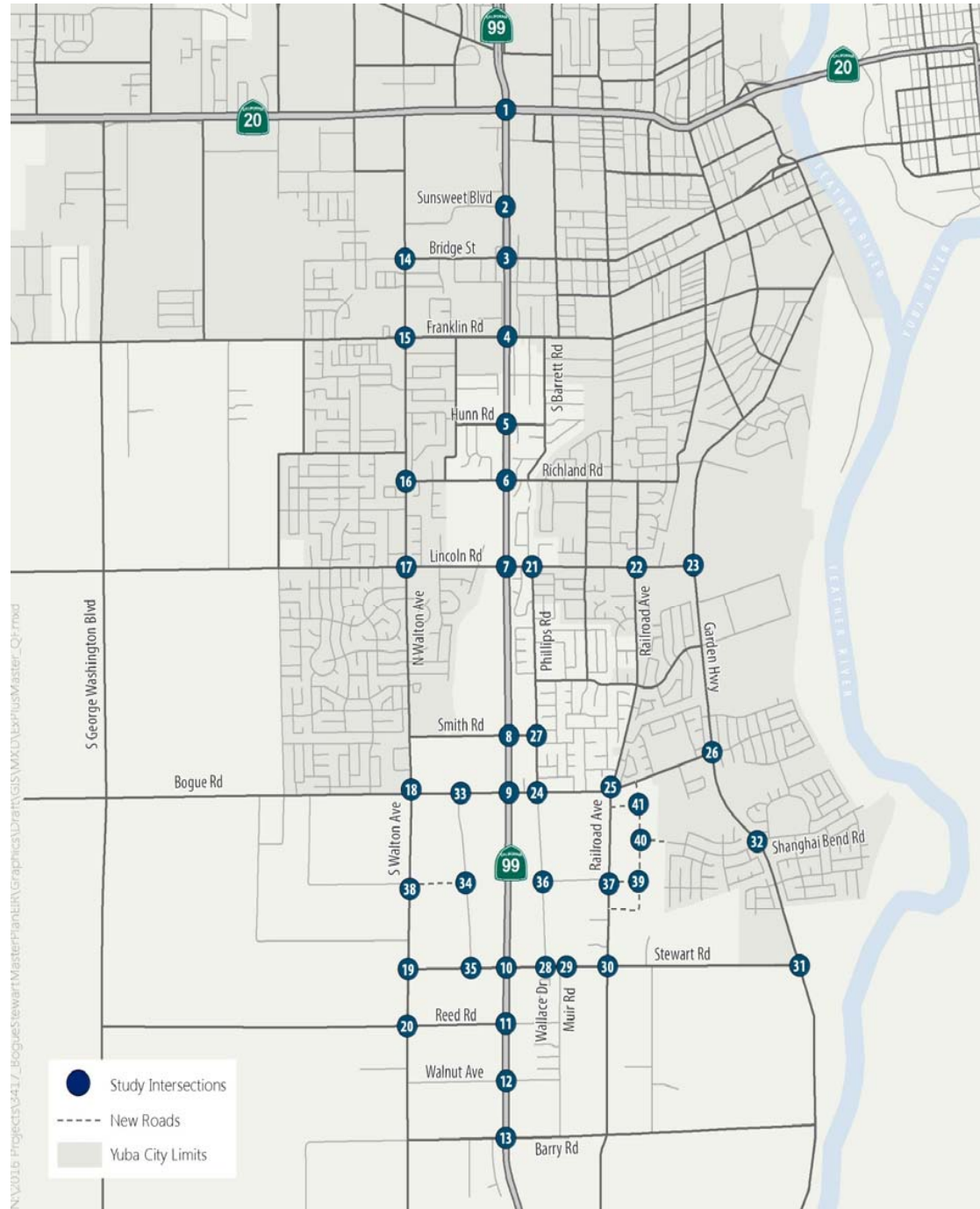
N:\2016 Projects\3417_BogueStewartMasterPlan\EIR\Graphics\Draft\A13.14-10_MasterPlan_TripDist.ai

↑
Not to Scale



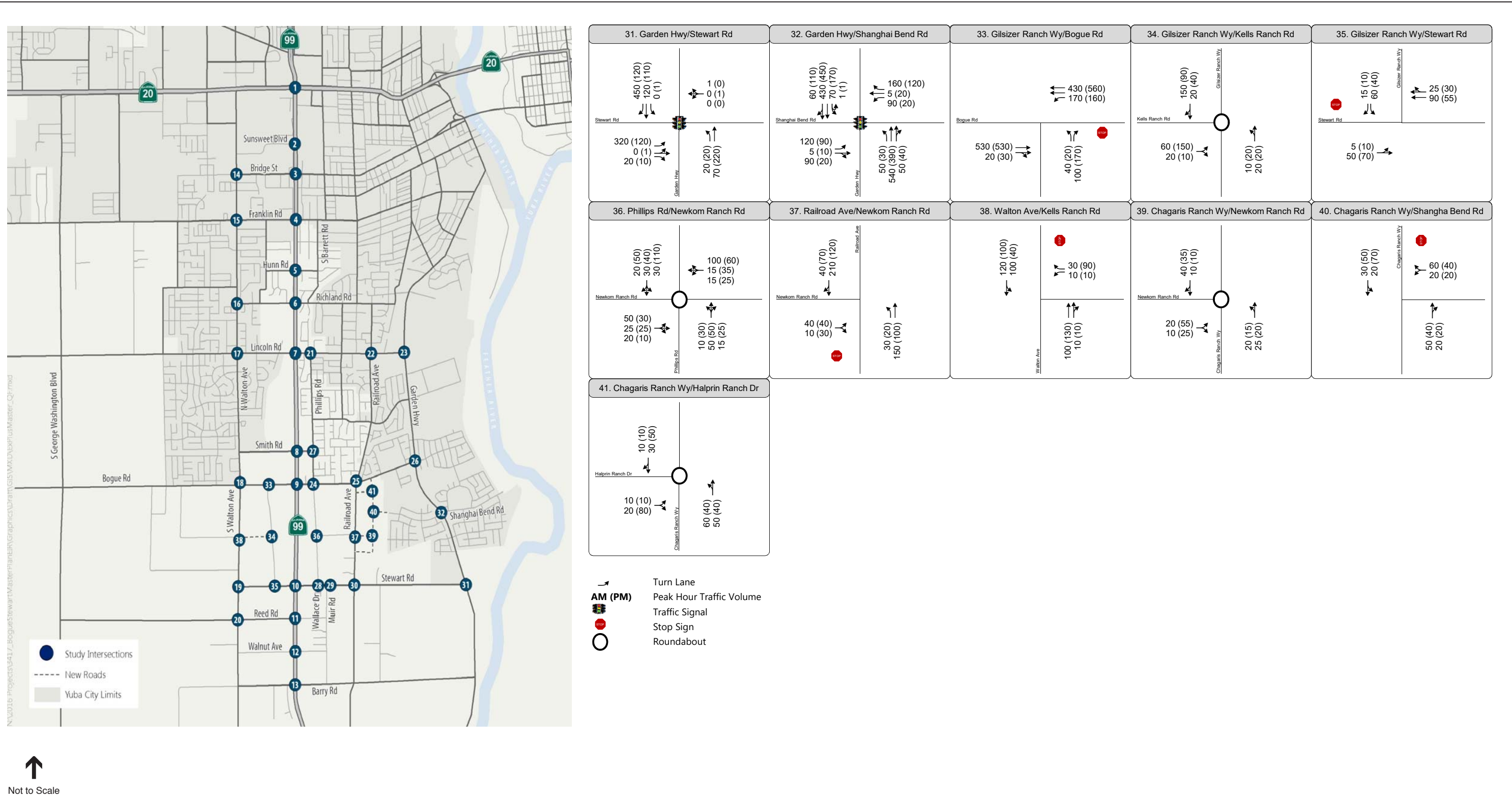
- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- Roundabout

↑
Not to Scale



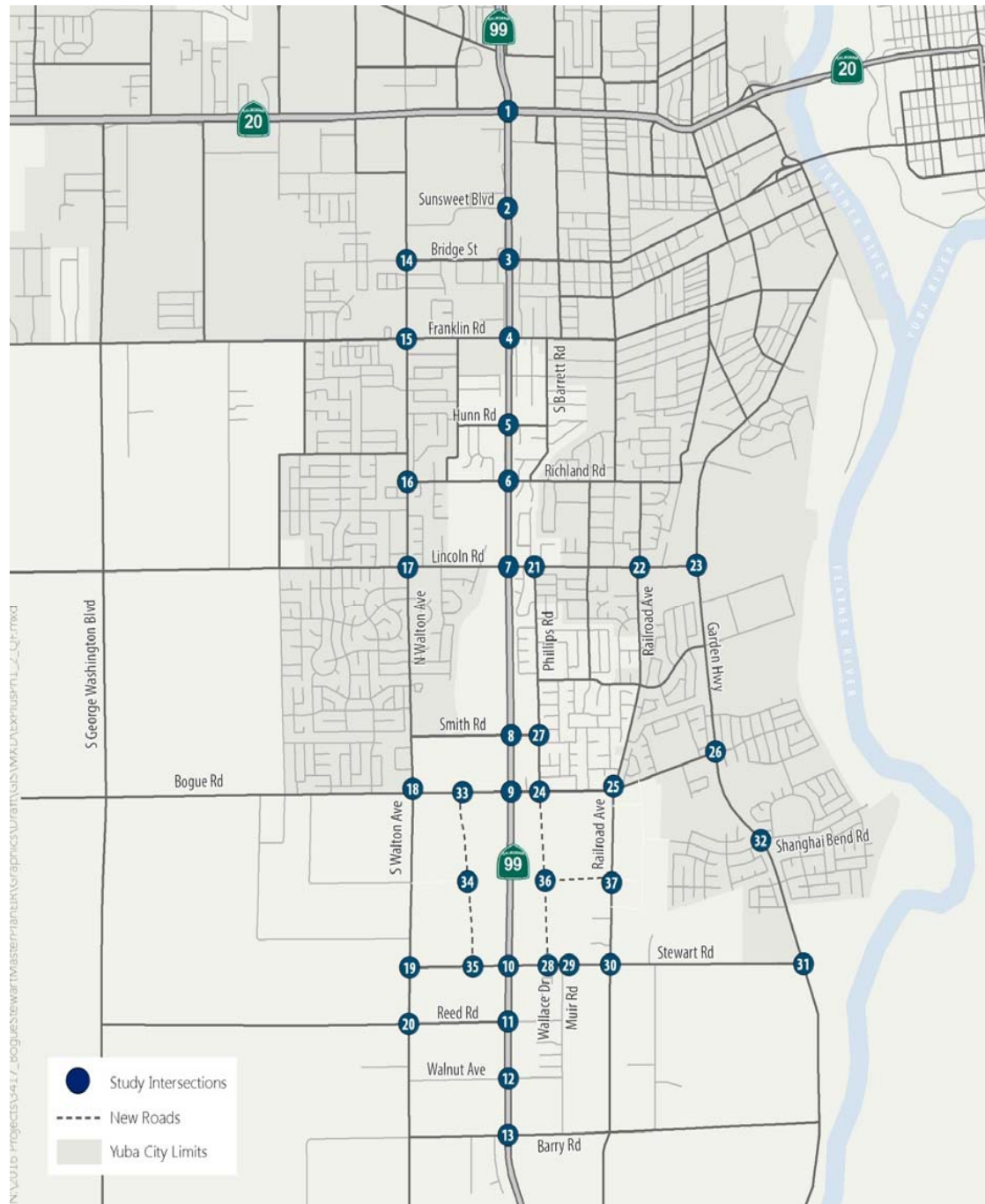
- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- Roundabout

↑
Not to Scale



SOURCE: Fehr & Peers, 2017

Figure 3.14-11c
Peak Hour Intersection Traffic Controls, Lane Configurations, and Traffic Controls - Existing Plus Master Plan Buildout



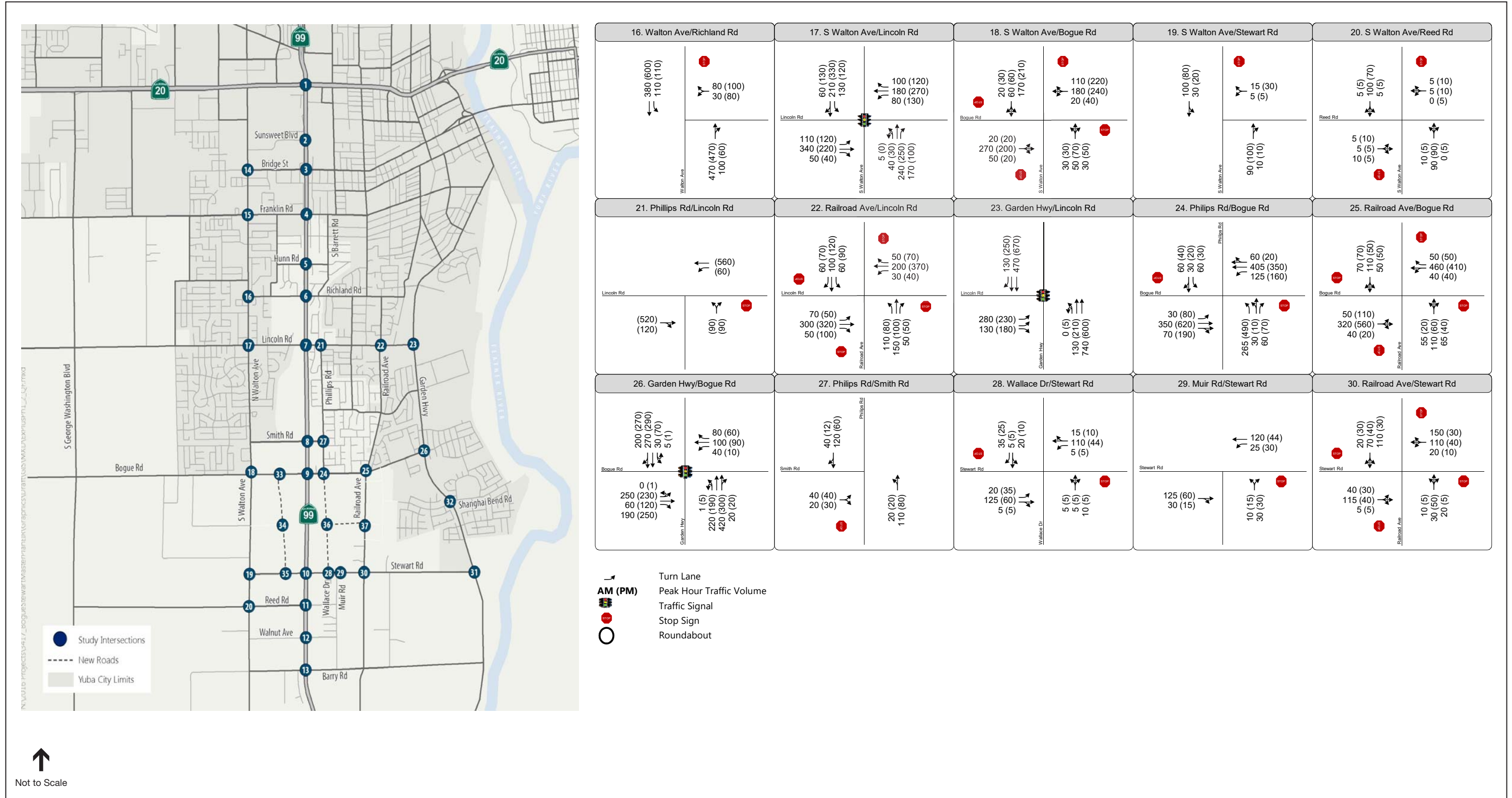
<p>1. SR 99/SR 20</p>	<p>2. SR 99/Sunsweet Blvd</p>	<p>3. SR 99/Bridge St</p>	<p>4. SR 99/Franklin Ave</p>	<p>5. SR 99/Hunn Rd</p>
<p>6. SR 99/Richland Rd</p>	<p>7. SR 99/Lincoln Rd</p>	<p>8. SR 99/Smith Rd</p>	<p>9. SR 99/Bogue Rd</p>	<p>10. SR 99/Stewart Rd</p>
<p>11. SR 99/Reed Rd</p>	<p>12. SR 99/Walnut Ave</p>	<p>13. SR 99/Barry Rd</p>	<p>14. Walton Ave/Bridge St</p>	<p>15. Walton Ave/Franklin Rd</p>

- Turn Lane
 - Traffic Signal
 - Stop Sign
 - Roundabout
- AM (PM)** Peak Hour Traffic Volume

↑
Not to Scale

SOURCE: Fehr & Peers, 2017

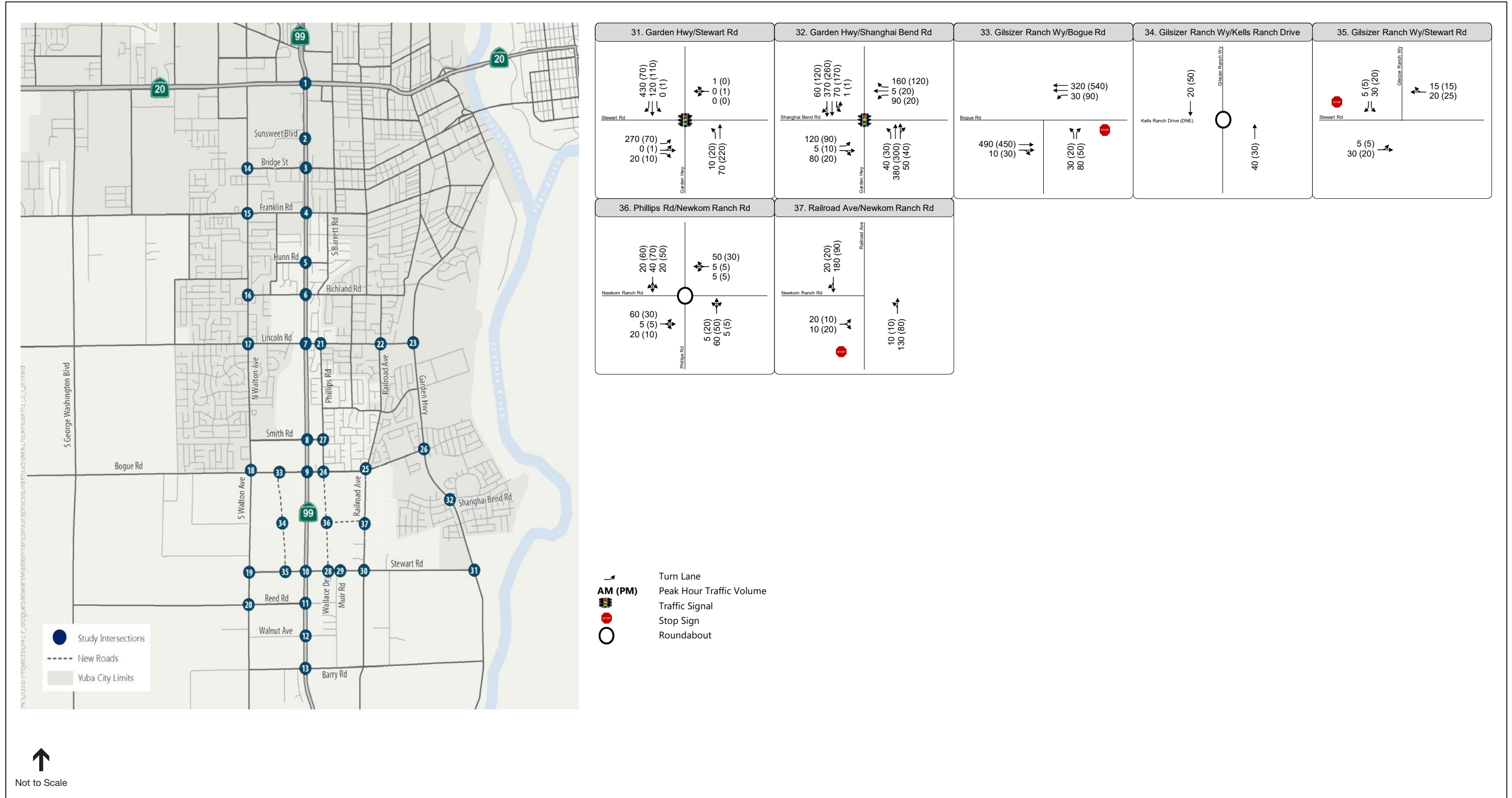
Figure 3.14-12a
Peak Hour Intersection Traffic Controls, Lane Configurations, and Traffic Controls - Existing Plus Phase I and II



SOURCE: Fehr & Peers, 2017

Bogue-Stewart Master Plan and EIR . 140720

Figure 3.14-12b
Peak Hour Intersection Traffic Controls, Lane Configurations, and Traffic Controls - Existing Plus Phase I and II



SOURCE: Fehr & Peers, 2017

Figure 3.14-12c
Peak Hour Intersection Traffic Controls, Lane Configurations, and Traffic Controls - Existing Plus Phase I and II

**TABLE 3.14-12
PEAK HOUR INTERSECTION LEVEL OF SERVICE – EXISTING PLUS BSMP CONDITION**

Intersection	LOS Standard	Traffic Control	Existing Conditions				Existing Plus BSMP			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
1. SR 99/SR 20	E	Signal	25	C	38	D	28	C	41	D
2. SR 99/Sunsweet Blvd	E	Signal	11	B	17	B	13	C	18	B
3. SR 99/Bridge Street	E	Signal	30	C	45	D	35	D	59	E
4. SR 99/Franklin Road	E	Signal	32	C	37	D	42	D	54	D
5. SR 99/Hunn Road	E	SSSC	7 (29)	A (D)	8 (92)	A (F)	9 (35)	A (D)	9 (78)	A (F)
6. SR 99/Richland Road	E	Signal	23	C	24	C	38	D	45	D
7. SR 99/Lincoln Road	E	Signal	29	C	32	C	49	D	43	D
8. SR 99/Smith Road	D	SSSC	8 (18)	A (C)	8 (16)	A (C)	11 (75)	B (F)	10 (72)	A (F)
9. SR 99/Bogue Road	D	Signal	22	C	26	C	45	D	66	E
10. SR 99/Stewart Road	D	SSSC	6 (17)	A (C)	4 (19)	A (C)	21 (120)	C (F)	13 (103)	B (F)
11. SR 99/Reed Road	D	SSSC	4 (14)	A (B)	4 (25)	A (D)	4 (23)	A (C)	5 (35)	A (E)
12. SR 99/Walnut Avenue	D	SSSC	2 (5)	A (A)	4 (14)	A (B)	2 (5)	A (A)	5 (29)	A (D)
13. SR 99/Barry Road	D	Signal	27	C	28	C	28	C	31	C
14. North Walton Avenue/Bridge Street	D	Signal	23	C	27	C	26	C	25	C
15. South Walton Avenue/Franklin Road	D	Signal	37	D	44	D	43	D	53	D
16. South Walton Avenue/Richland Road	D	SSSC	3 (23)	A (C)	3 (19)	A (C)	4 (32)	A (D)	5 (28)	A (D)
17. South Walton Avenue/Lincoln Road	D	Signal	27	C	22	C	29	C	26	C
18. South Walton Avenue/Bogue Road	D	AWSC	11	B	12	B	27	D	38	E
19. South Walton Avenue/Stewart Road	D	SSSC	1 (9)	A (A)	2 (9)	A (A)	2 (10)	A (B)	2 (10)	A (B)
20. South Walton Avenue/Reed Road	D	SSSC	1 (10)	A (A)	1 (10)	A (B)	2 (10)	A (A)	3 (10)	A (B)
21. Phillips Road/Lincoln Road	D	SSSC	5 (20)	A (C)	4 (25)	A (C)	7 (24)	A (C)	6 (32)	A (D)
22. Railroad Avenue/Lincoln Road	D	AWSC	16	C	22	C	19	C	40	E
23. Garden Hwy/Lincoln Road	D	Signal	9	A	12	B	9	A	12	B
24. Phillips Road/Bogue Road	D	SSSC	2 (11)	A (B)	2 (12)	A (B)	25 (156)	D (F)	44 (363)	E (F)

**TABLE 3.14-12
 PEAK HOUR INTERSECTION LEVEL OF SERVICE – EXISTING PLUS BSMP CONDITION**

Intersection	LOS Standard	Traffic Control	Existing Conditions				Existing Plus BSMP			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
25. Railroad Avenue/Bogue Road	D	AWSC	17	C	17	C	72	F	98	F
26. Garden Hwy/Bogue Road	D	Signal	19	B	C	20	27	C	28	C
27. Phillips Road/Smith Road	D	SSSC	1 (5)	A (A)	2 (5)	A (A)	1 (5)	A (A)	2 (5)	A (A)
28. Wallace Drive/Stewart Road	D	SSSC	1 (3)	A (A)	1 (4)	A (A)	1 (7)	A (A)	1 (6)	A (A)
29. Muir Road/Stewart Road	D	SSSC	1 (3)	A (A)	1 (5)	A (A)	1 (7)	A (A)	1 (6)	A (A)
30. Railroad Avenue/Stewart Road	D	AWSC	12	B	A	8	14	B	9	A
31. Garden Hwy/Stewart Road	D	Signal	15	B	B	11	18	B	11	B
32. Garden Hwy/Shanghai Bend Road	D	Signal	18	B	19	B	20	B	17	B
33. Gilsizer Ranch Way/Bogue Road	D	SSSC	Does Not Exist				4 (70)	A (F)	3 (35)	A (E)
34. Gilsizer Ranch Way/Kells East Road	D	Round-about	Does Not Exist				4	A	5	A
35. Stewart Road/Gilsizer Ranch Way	D	SSSC	Does Not Exist				3 (10)	A (B)	3 (10)	A (A)
36. Phillips Road/Newkom Ranch Road	D	Round-about	Does Not Exist				5	A	5	A
37. Railroad Avenue/Newkom Ranch Road	D	SSSC	Does Not Exist				2 (13)	A (B)	2 (10)	A (B)
38. South Walton Avenue/Kells Ranch Drive	D	SSSC	Does Not Exist				3 (12)	A (B)	3 (11)	A (B)
39. Changaris Ranch Way/Newkom Ranch Drive	D	Round-about	Does Not Exist				4	A	4	A
40. Changaris Ranch Way/Shangai Bend Road	D	SSSC	Does Not Exist				4 (9)	A (A)	5 (9)	A (A)
41. Changaris Ranch Way/Halprin Ranch Drive	D	Round-about	Does Not Exist				4	A	4	A

NOTES:

For signalized intersections, roundabouts, and AWSC average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS is reported for the entire intersection LOS and the most-delayed individual movement in parenthesis.

SSSC = Side Street Stop

AWSC = All Way Stop Control

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-13
 PEAK HOUR INTERSECTION SIGNAL WARRANTS – EXISTING PLUS PROJECT CONDITIONS**

Intersection	Traffic Control	Warrant Met					
		Existing Conditions		Existing Plus Phase I and II		Existing Plus BSMP	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
5. SR 99/Hunn Road	SSSC	No	Yes	No	Yes	No	Yes
8. SR 99/Smith Road	SSSC	No	No	No	No	No	No
10. SR 99/Stewart Road	SSSC	Yes	No	Yes	No	Yes	No
11. SR 99/Reed Road	SSSC	No	No	No	No	No	No
12. SR 99/Walnut Avenue	SSSC	No	No	No	No	No	No
16. South Walton Avenue/Richland Road	SSSC	No	No	No	Yes	No	Yes
18. South Walton Avenue/Bogue Road	AWSC	No	No	Yes	Yes	Yes	Yes
19. South Walton Avenue/Stewart Road	SSSC	No	No	No	No	No	No
20. South Walton Avenue/Reed Road	SSSC	No	No	No	No	No	No
21. Phillips Road/Lincoln Road	SSSC	No	No	Yes	Yes	Yes	Yes
22. Railroad Avenue/Lincoln Road	AWSC	No	Yes	No	Yes	Yes	Yes
24. Phillips Road/Bogue Road	SSSC	No	No	Yes	Yes	Yes	Yes
25. Railroad Avenue/Bogue Road	AWSC	No	No	Yes	Yes	Yes	Yes
27. Phillips Road/Smith Road	SSSC	No	No	No	No	No	No
28. Wallace Drive/Stewart Road	SSSC	No	No	No	No	No	No
29. Muir Road/Stewart Road	SSSC	No	No	No	No	No	No
30. Railroad Avenue/Stewart Road	AWSC	No	No	No	No	No	No
33. Gilsizer Ranch Way/Bogue Rd	SSSC	Does Not Exist		No	No	Yes	Yes
34. Gilsizer Ranch Way/Kells Ranch Dr	Roundabout	Does Not Exist		No	No	No	No
35. Gilsizer Ranch Way/Stewart Rd	SSSC	Does Not Exist		No	No	No	No
36. Phillips Road/Newkom Ranch Rd	Roundabout	Does Not Exist		No	No	No	No
37. Railroad Ave/Newkom Ranch Rd	SSSC	Does Not Exist		No	No	No	No
38. South Walton Avenue/Kells Ranch Drive	SSSC	Does Not Exist		Does Not Exist		No	No
39. Changaris Ranch Way/Newkom Ranch Drive	Roundabout	Does Not Exist		Does Not Exist		No	No
40. Changaris Ranch Way & Shangai Bend Road	SSSC	Does Not Exist		Does Not Exist		No	No
41. Changaris Ranch Way/Halprin Ranch Drive	Roundabout	Does Not Exist		Does Not Exist		No	No

NOTES:

- 1 Warrant 3B, Peak Hour signal warrant. *California Manual on Uniform Traffic Control Devices*, Caltrans, 2016. Refer to previous page for definition of urban versus rural criteria.
- 2 SSSC = Side Street Stop
- 3 AWSC = All Way Stop Control

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-14
 MAXIMUM QUEUE LENGTH ESTIMATES ON SR 99 – EXISTING PLUS BSMP CONDITIONS**

Intersection ¹	Traffic Control	Turn Lane	Storage ²	Maximum Queue Length ³			
				Existing Conditions		Existing Plus BSMP	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SR 99/Bogue Road	Traffic Signal	NB Left	450 ft.	100	150	175	250
		NB Through	N/A	225	275	325	325
		NB Right	300 ft.	50	150	125	250
		SB Left	450 ft.	75	200	325	1,250
		SB Through	N/A	200	150	275	1,250
		SB Right	250 ft.	50	75	150	125
SR 99/Stewart Road	Side-Street Stop	NB Left	450 ft.	50	25	125	100
		SB Left	450 ft.	50	50	100	100

NOTES:

1. The project would increase left and right-turning movements at the SR 99/Bogue Road and SR 99/Stewart Road intersections.
2. Estimated based on aerial imagery. N/A = Not applicable for through lanes.
3. Based on output from SimTraffic model. Values rounded up to the nearest 25 feet.

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-15
PEAK HOUR INTERSECTION LEVEL OF SERVICE – EXISTING PLUS PHASE I AND II CONDITIONS**

Intersection	LOS Standard	Traffic Control	Existing Conditions				Existing Plus Phase I & II			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
1. SR 99/SR 20	E	Signal	25	C	38	D	27	C	43	D
2. SR 99/Sunsweet Blvd	E	Signal	11	B	17	B	13	B	19	B
3. SR 99/Bridge Street	E	Signal	30	C	45	D	32	C	53	D
4. SR 99/Franklin Road	E	Signal	32	C	37	D	38	D	41	D
5. SR 99/Hunn Road	E	SSSC	7 (29)	A (D)	8 (92)	A (F)	8 (36)	A (E)	9 (75)	A (F)
6. SR 99/Richland Road	E	Signal	23	C	24	C	32	C	34	C
7. SR 99/Lincoln Road	E	Signal	29	C	32	C	39	D	43	D
8. SR 99/Smith Road	D	SSSC	8 (18)	A (C)	8 (16)	A (C)	10 (38)	A (E)	10 (97)	B (F)
9. SR 99/Bogue Road	D	Signal	22	C	26	C	36	D	51	D
10. SR 99/Stewart Road	D	SSSC	6 (17)	A (C)	4 (19)	A (C)	7 (26)	A (D)	6 (32)	A (D)
11. SR 99/Reed Road	D	SSSC	4 (14)	A (B)	4 (25)	A (D)	4 (26)	A (D)	5 (21)	A (C)
12. SR 99/Walnut Avenue	D	SSSC	2 (5)	A (A)	4 (14)	A (B)	2 (9)	A (A)	4 (26)	A (D)
13. SR 99/Barry Road	D	Signal	27	C	28	C	27	C	30	C
14. North Walton Avenue/Bridge St	D	Signal	23	C	27	C	24	C	26	C
15. South Walton Avenue/Franklin Rd	D	Signal	37	D	44	D	39	D	47	D
16. South Walton Avenue/Richland Rd	D	SSSC	3 (23)	A (C)	3 (19)	A (C)	3 (25)	A (D)	4 (24)	A (C)
17. South Walton Avenue/Lincoln Rd	D	Signal	27	C	22	C	28	C	24	C
18. South Walton Avenue/Bogue Road	D	AWSC	11	B	12	B	15	B	28	D
19. South Walton Avenue/Stewart Rd	D	SSSC	1 (9)	A (A)	2 (9)	A (A)	2 (9)	A (A)	2 (9)	A (A)
20. South Walton Avenue/Reed Road	D	SSSC	1 (10)	A (A)	1 (10)	A (B)	2 (10)	A (A)	2 (10)	A (B)
21. Phillips Road/Lincoln Road	D	SSSC	5 (20)	A (C)	4 (25)	A (C)	6 (21)	A (C)	6 (32)	A (D)

**TABLE 3.14-15
PEAK HOUR INTERSECTION LEVEL OF SERVICE – EXISTING PLUS PHASE I AND II CONDITIONS**

Intersection	LOS Standard	Traffic Control	Existing Conditions				Existing Plus Phase I & II			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
22. Railroad Avenue/Lincoln Rd	D	AWSC	16	C	22	C	17	C	27	D
23. Garden Hwy/Lincoln Road	D	Signal	9	A	12	B	9	A	12	B
24. Phillips Road/Bogue Road	D	SSSC	2 (11)	A (B)	2 (12)	A (B)	17 (103)	C (F)	44 (266)	E (F)
25. Railroad Avenue/Bogue Rd	D	AWSC	17	C	17	C	58	F	76	F
26. Garden Hwy/Bogue Road	D	Signal	19	B	C	20	23	C	23	C
27. Phillips Road/Smith Road	D	SSSC	1 (5)	A (A)	2 (5)	A (A)	1 (5)	A (A)	1 (5)	A (A)
28. Wallace Drive/Stewart Road	D	SSSC	1 (3)	A (A)	1 (4)	A (A)	1 (6)	A (A)	1 (4)	A (A)
29. Muir Road/Stewart Road	D	SSSC	1 (3)	A (A)	1 (5)	A (A)	1 (6)	A (A)	1 (4)	A (A)
30. Railroad Avenue/Stewart Rd	D	AWSC	12	B	A	8	12	B	8	A
31. Garden Hwy/Stewart Road	D	Signal	15	B	B	11	15	B	11	B
32. Garden Hwy/Shanghai Bend Rd	D	Signal	18	B	19	B	19	B	17	B
33. Gilsizer Ranch Way/Bogue Rd	D	SSSC	Does Not Exist				2 (15)	A (C)	2 (22)	A (C)
34. Gilsizer Ranch Way/Kells East Rd	D	Round-about	Does Not Exist				4	A	4	A
35. Stewart Road/Gilsizer Ranch Way	D	SSSC	Does Not Exist				3 (9)	A (A)	3 (9)	A (A)
36. Phillips Road/Newkom Ranch Rd	D	Round-about	Does Not Exist				4	A	5	A
37. Railroad Avenue/Newkom Ranch Rd	D	SSSC	Does Not Exist				A (11)	A (B)	2 (9)	A (A)

NOTES:

1 For signalized intersections, roundabouts, and AWSC average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS is reported for the entire intersection LOS and the most-delayed individual movement in parenthesis.

2 SSSC = Side Street Stop

3 AWSC = All Way Stop Control

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-16
MAXIMUM QUEUE LENGTH ESTIMATES ON SR 99 – EXISTING PLUS PHASE I AND II CONDITIONS**

Intersection ¹	Traffic Control	Turn Lane	Storage ²	Maximum Queue Length ³			
				Existing Conditions		Existing Plus Phase I and II Conditions	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SR 99/Bogue Road	Traffic Signal	NB Left	450 ft.	100	150	175	225
		NB Through	N/A	225	275	325	350
		NB Right	300 ft.	50	150	150	275
		SB Left	450 ft.	75	200	275	775
		SB Through	N/A	200	150	225	775
		SB Right	250 ft.	50	75	100	125
SR 99/Stewart Road	Side-Street Stop	NB Left	450 ft.	50	25	75	50
		SB Left	450 ft.	50	50	75	50

NOTES:

1. The project would increase left and right-turning movements at the SR 99/Bogue Road and SR 99/Stewart Road intersections.
2. Estimated based on aerial imagery. N/A = Not applicable for through lanes.
3. Based on output from SimTraffic model. Values rounded up to the nearest 25 feet.

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-17
SUTTER COUNTY ROADWAY SEGMENT OPERATIONS – EXISTING PLUS PROJECT CONDITIONS**

Segment ¹	Functional Class ²	Operations					
		Existing		Existing Plus Phase I and II		Existing Plus BSMP	
		ADT ³	LOS ⁴	ADT ³	LOS ⁴	ADT ³	LOS ⁴
South Walton Avenue south of Stewart Road	Two-Lane Major Rural Collector	2,200	A	2,400	A	2,500	A
Railroad Avenue south of Stewart Road	Two-Lane Minor Rural Collector	1,300	A	1,600	A	1,700	A
Garden Highway south of Stewart Road	Urban Minor Arterial	5,200	A	5,500	A	5,600	A
Bogue Road from George Washington Boulevard to Sanborn Road	Two-Lane Rural Major Collector	2,400	A	2,800	A	3,200	A

NOTES:

1. Only segments currently in Sutter County that would be used to a considerable degree by project trips and remain as a County roadway were studied.
2. Based on Table 6.14-1 of the Sutter County General Plan Draft EIR.
3. Based on Table 6.14-7 of the Sutter County General Plan Draft EIR. For study segment of South Walton Avenue, ADT is estimated by applying a 9 percent k-factor to PM peak hour volume.
4. Per Table 6.14-7 of the Sutter County General Plan Draft EIR, the following ADT/LOS ranges are provided:
Rural Two-Lane: LOS C = 10,600 ADT or less, LOS D = 10,600- 16,400, and LOS E = 16,400 – 25,200.
Urban Arterial: LOS C = 17,500 ADT or less, LOS D = 17,500- 19,700, and LOS E = 19,700 – 21,900.

SOURCE: Fehr & Peers, 2017

Cumulative Conditions

This section describes anticipated travel conditions under cumulative conditions, without and with the proposed project. As with the existing plus project analysis, the Yuba City travel demand model was used to forecast cumulative traffic volumes within the study area.

To identify the proposed project's cumulatively considerable effect, the cumulative conditions analysis includes the following three scenarios:

- Cumulative No Project Conditions;
- Cumulative Plus Phase I and II Conditions; and
- Cumulative Plus BSMP Conditions.

The Cumulative No Project scenario does not include any new development within the BSMP site. Each "plus project" scenario includes the land use and roadway network inputs associated with that scenario. The difference in traffic conditions between Cumulative No Project Conditions, and each "Plus Project" scenario represents the incremental effect of the proposed BSMP when viewed in the context of other current and probable future development and transportation projects.

Land Use and Transportation System Inputs

The cumulative version of the 2030 Yuba City travel demand model includes land development and transportation infrastructure projects that are anticipated to be constructed by 2030. Although it is noted that the model represents a Year 2030 condition, the amount of land use growth assumed in Yuba City by 2030 far exceeds various regional projections, as described below:

- According to SACOG's 2036 MTP/SCS,²¹ 6,409 new dwelling units are expected to be developed within the Yuba City limits or its Sphere of Influence by 2036;
- The California Department of Finance²² indicates that Sutter County is expected to add 18,700 new persons between 2015 and 2035. With about two-thirds of persons in Sutter County currently residing in Yuba City, this would suggest that an additional 12,570 Yuba City residents over the next twenty years. And at the current size of 2.99 persons per household, this would equate to about 4,200 new dwelling units; and
- The City of Yuba City reports that their peak residential unit building permit issuance occurred between 2001 and 2006 with an average of 660 permits issued per year.

The City's future year travel demand model had originally assumed growth of 26,352 dwelling units. In 2015,²³ Yuba City directed Fehr & Peers to modify the future year version of its travel demand model to represent a more reasonable level of land development. It was decided to reduce

²¹ Sacramento Area Council of Governments, 2012. Appendix E-3: Land Use Forecast Background Documentation. https://www.sacog.org/sites/main/files/file-attachments/appendix_e-3_land_use_forecast_background_documentation.pdf.

²² California Department of Finance, 2017. Total Estimated and Projected Population for California and Counties: July 1, 2010 to July 1, 2060 in 5-year Increments. Available: www.dof.ca.gov/Forecasting/Demographics/Projections/.

²³ Langley, Diana, Director, City of Yuba City Public Works, personal communication, March 25, 2015.

this growth by 50 percent so that the resulting absorption totals would be more reasonable, but still conservative. Given the decrease in residential units, a commensurate decrease in non-residential was also made.

The assumed growth of 13,176 new dwelling units in the 2030 model still far exceeds the absorption projected by SACOG and Department of Finance projections. In fact, it would take 20 years to absorb this number of new dwelling units at peak (2001-2006) absorption levels realized in the City in 2001-2006. Thus, although the model has a stated 2030 horizon year, the level of land use growth is more realistically 2035 to 2040.

The cumulative model includes the following transportation improvements in the study area:

- Widen Bridge Street to a continuous four-lane arterial from Walton Avenue to SR 99, as well as portions east of SR 99 to create a continuous four-lane arterial;
- Widen Franklin Road to a four-lane arterial from Township Road to Plumas Boulevard (currently four lanes from South Walton Avenue to SR 99);
- Widen Lincoln Road to a four-lane arterial from Township Road to Garden Highway;
- Widen Bogue Road to a four-lane arterial from George Washington Boulevard to Garden Highway; and
- Widen South Walton Avenue to be a continuous four-lane arterial from SR 20 to Bogue Road (portion north of Franklin Road is already four lanes).

The Sutter County General Plan does not identify any planned County roadway widenings within the study area.

Both the Yuba City General Plan and the Sutter County General Plan identify the widening of SR 99 from four to six lanes between SR 20 and Bogue Road. However, the SACOG MTP/SCS lists this as a planned (unfunded) project. The Yuba City General Plan also identifies a future interchange at the SR 20/99 intersection. However, this improvement was also not identified in the SACOG MTP/SCS project list. Accordingly, the cumulative year travel demand model (and associated cumulative traffic operations analysis) does not assume any widening of SR 99 in the study area. However, spot widenings (e.g., SR 99/Lincoln Road) are assumed on planned east-west arterials. Additionally, the cumulative year travel demand model excludes the Bogue Road widening from South Walton Avenue to Garden Highway under 'no project' conditions because there would not be land use growth to warrant this widening (or new development along its frontage to accommodate the widening).

The cumulative year model assumes the widening of the Twin Cities Memorial (aka 5th Street) Bridge over the Feather River from two to four lanes. However, it does not assume a third bridge over the Feather River since such a facility is not included in the SACOG MTP/SCS.

Cumulative Traffic Forecasts

Similar to the existing plus project forecasting procedure, this study forecasts the cumulative conditions traffic forecasts using the “difference method” calculation. This approach applies the following formula:

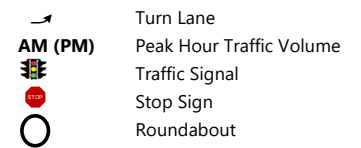
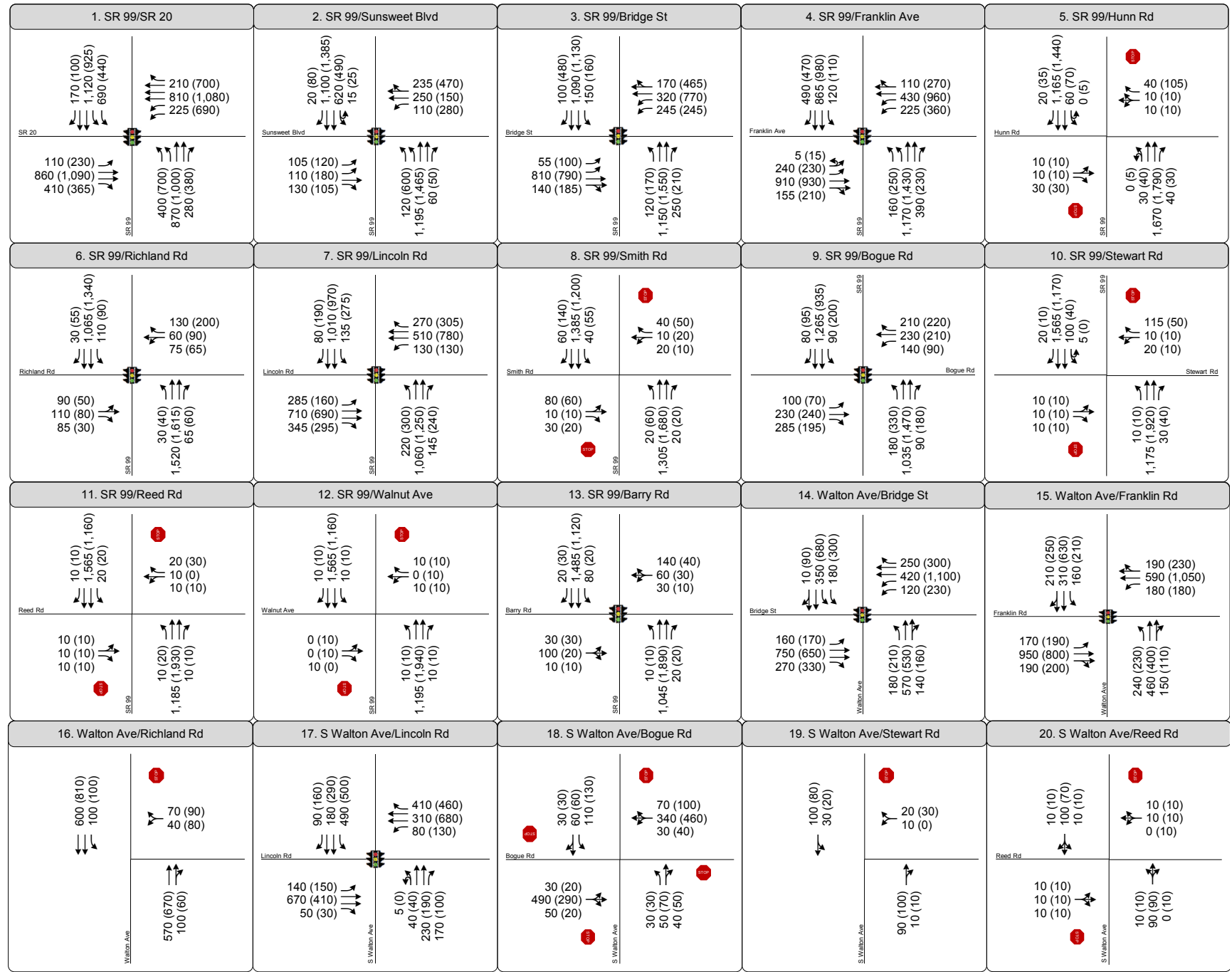
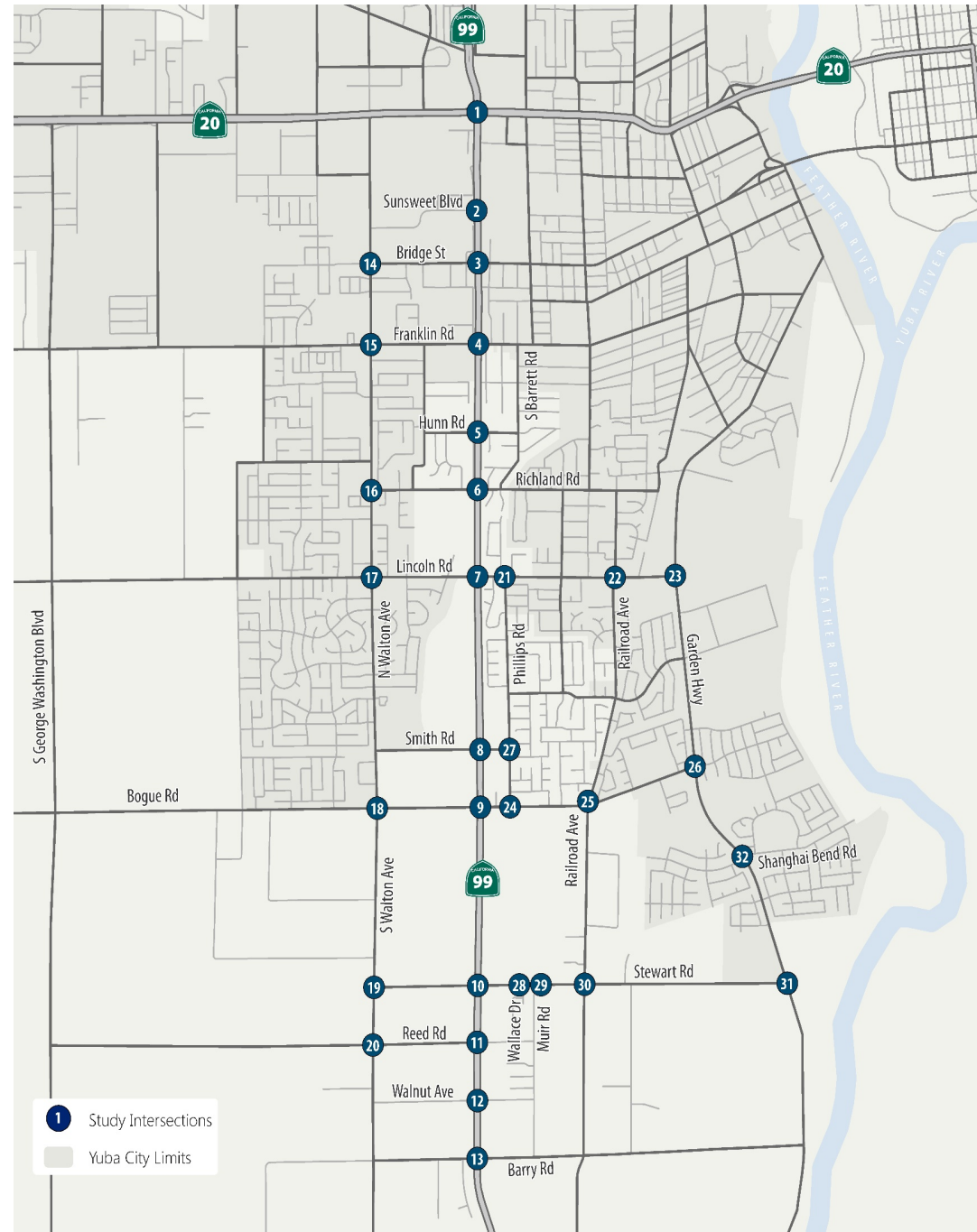
$$\text{Cumulative Forecasts} = \text{Existing Traffic Count} + (\text{Cumulative Model Volume} - \text{Base Year Model Volume})$$

Figure 3.14-13a and 13b display the traffic forecasts, lane configurations and traffic control devices at the study intersections under cumulative no project conditions. **Figure 3.14-14a, 14b and 14c** present the traffic forecasts, lane configurations and traffic control devices at the study intersections under cumulative plus Phase I and II conditions. **Figure 3.14-15a, 15b and 15c** present the traffic forecasts, lane configurations and traffic control devices at the study intersections under cumulative plus BSMP conditions.

The cumulative traffic volume on SR 99 south of SR 20 is projected to increase by 56 percent over the existing volume of 32,800 AADT based on the growth in AM and PM peak hour traffic between existing and cumulative no project conditions. The resulting volume of 51,000 vehicles per day is considerable for a four-lane expressway.

Closer to the BSMP site, the cumulative no project traffic volume on SR 99 north of Bogue Road is projected to increase by 69 and 61 percent during the AM and PM peak hours, respectively, over existing conditions. South of Stewart Road, traffic volumes on SR 99 are projected to increase by 91 and 89 percent during the AM and PM peak hours, respectively, over existing conditions. The greater growth in the southerly portion of the corridor is due to new residential development (and employment opportunities in Sacramento County), combined with lower existing volumes (when compared to northerly sections) from which to measure that traffic growth.

Table 3.14-18 presents the AM and PM peak hour LOS at each study intersection under cumulative no project conditions. This table also displays the results under cumulative plus BSMP conditions. **Table 3.14-19** presents the AM and PM peak hour maximum queue length estimates at selected study intersections on SR 99 under cumulative no project conditions, and with the addition of the proposed BSMP.

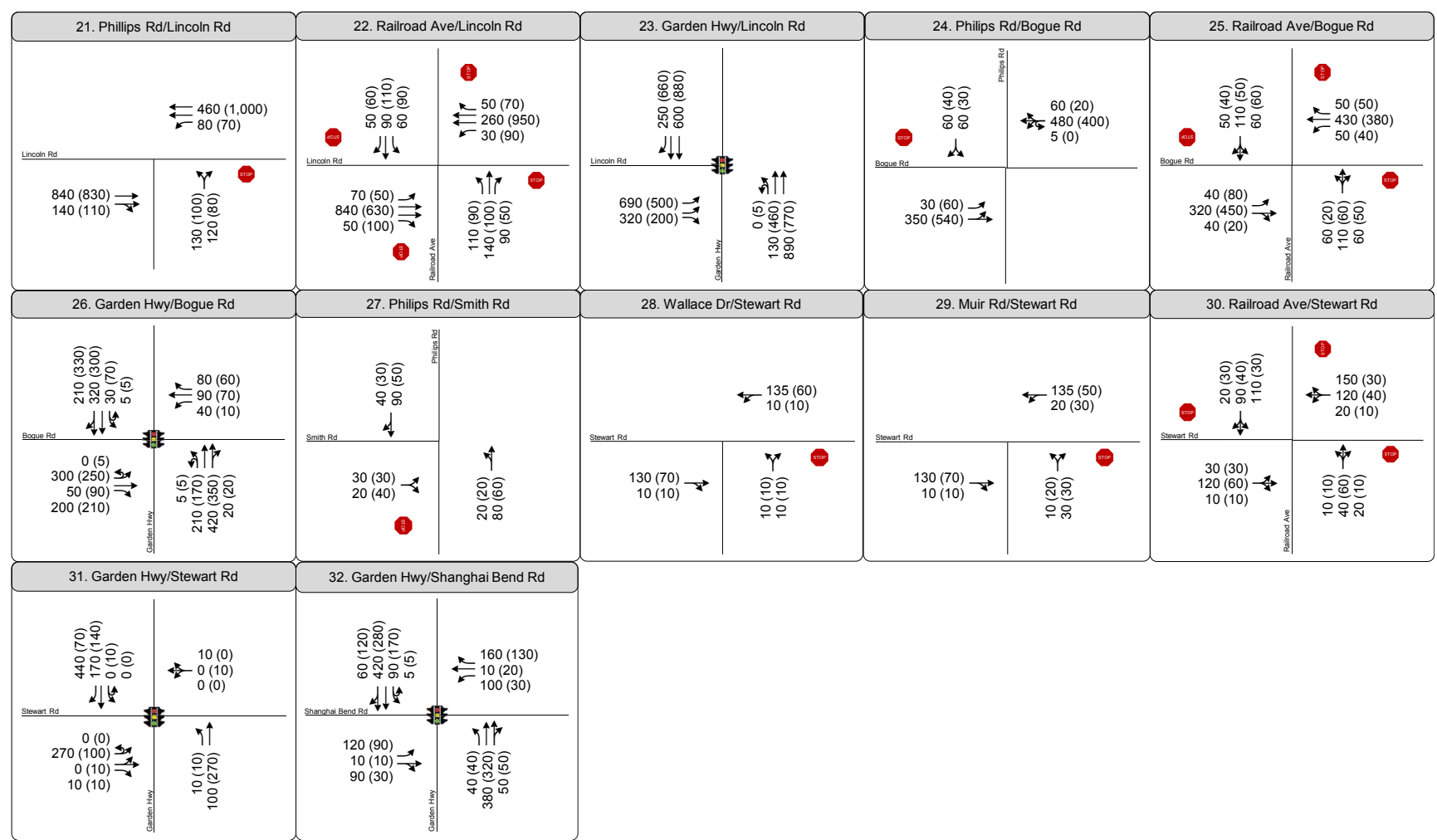
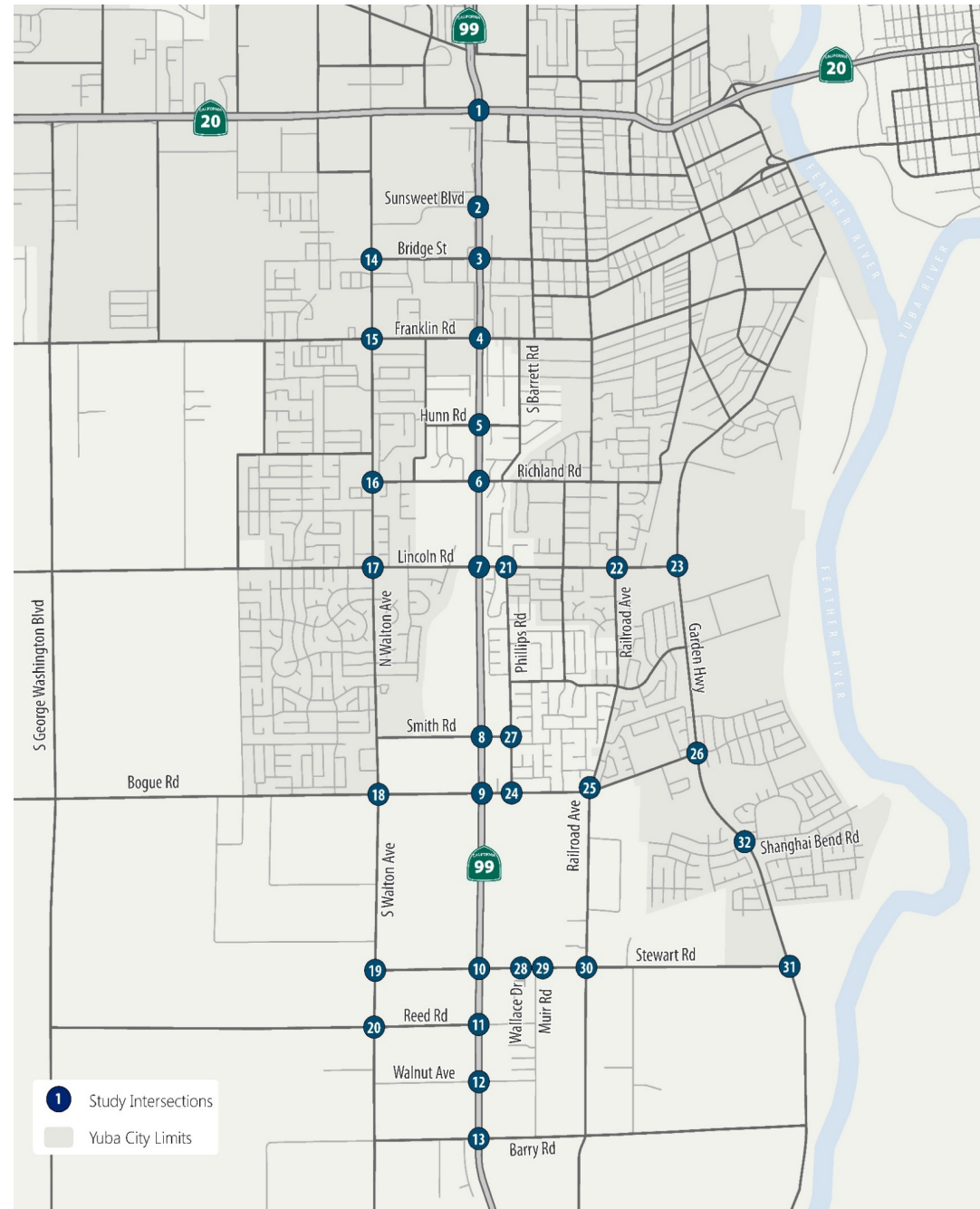


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Not to Scale

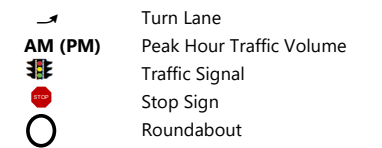
SOURCE: Fehr & Peers, 2017

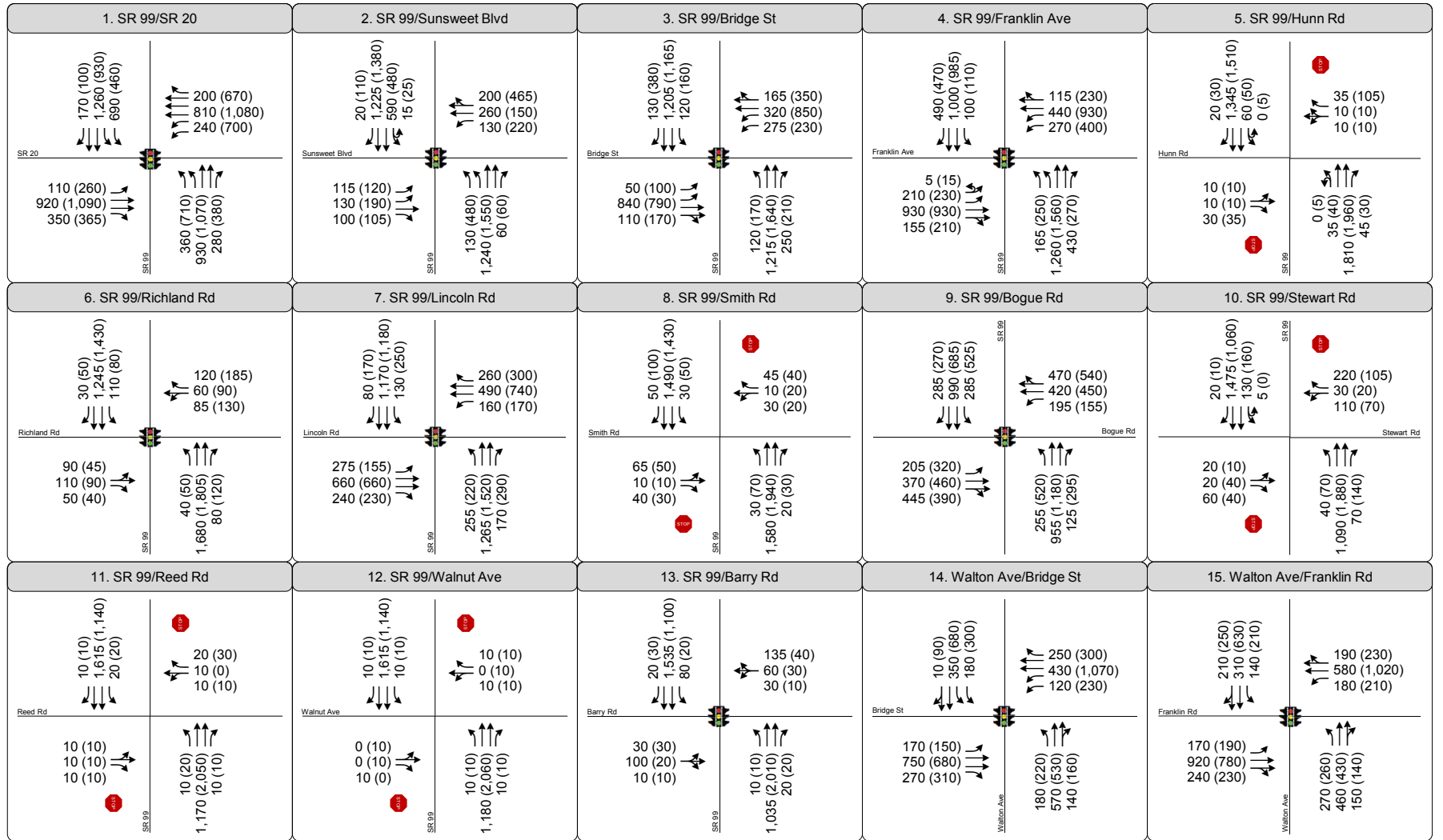
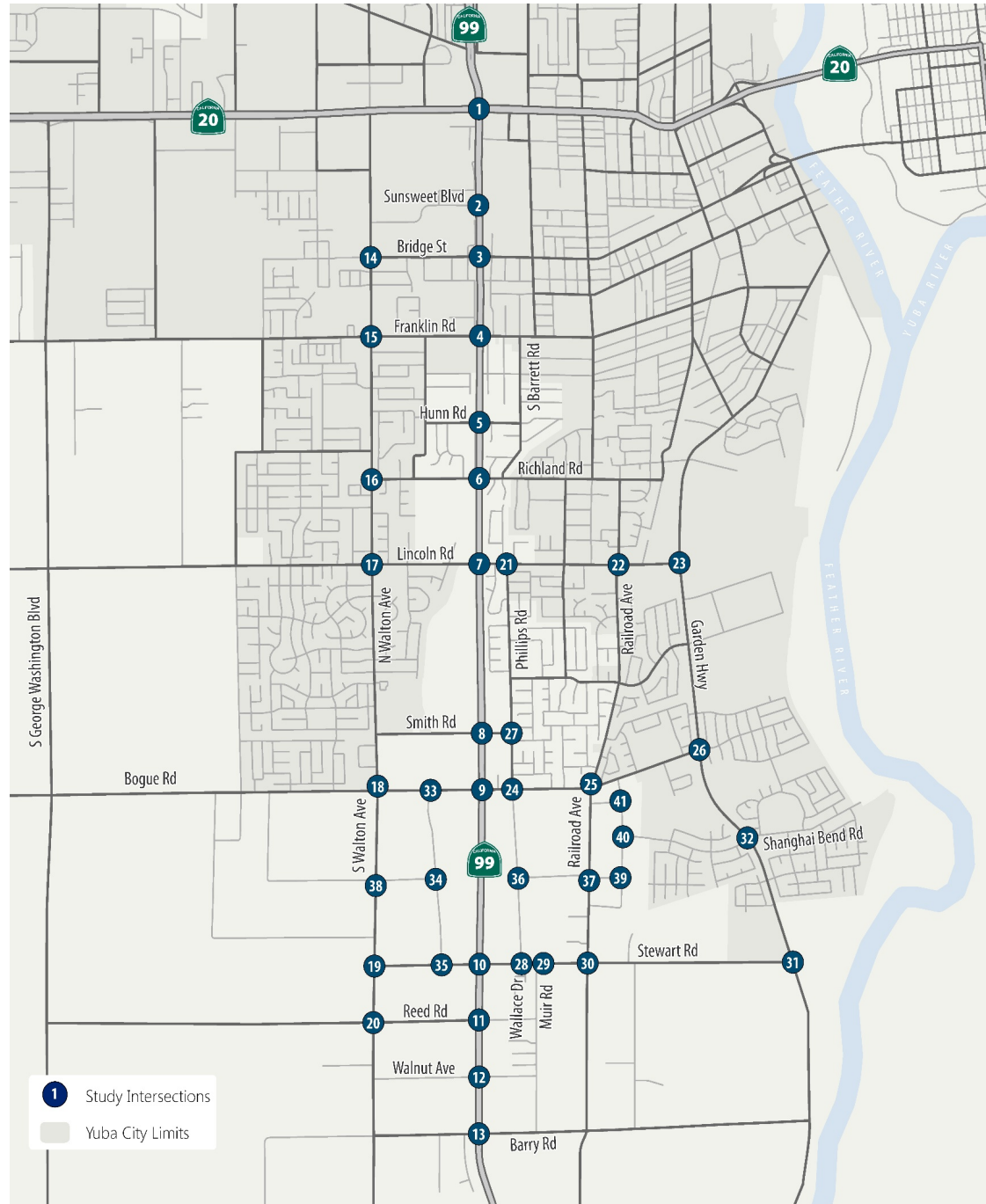
Figure 3.14-13a

Peak Hour Intersection Traffic Controls, Lane Configurations, and Traffic Controls - Cumulative No Project Conditions



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Not to Scale



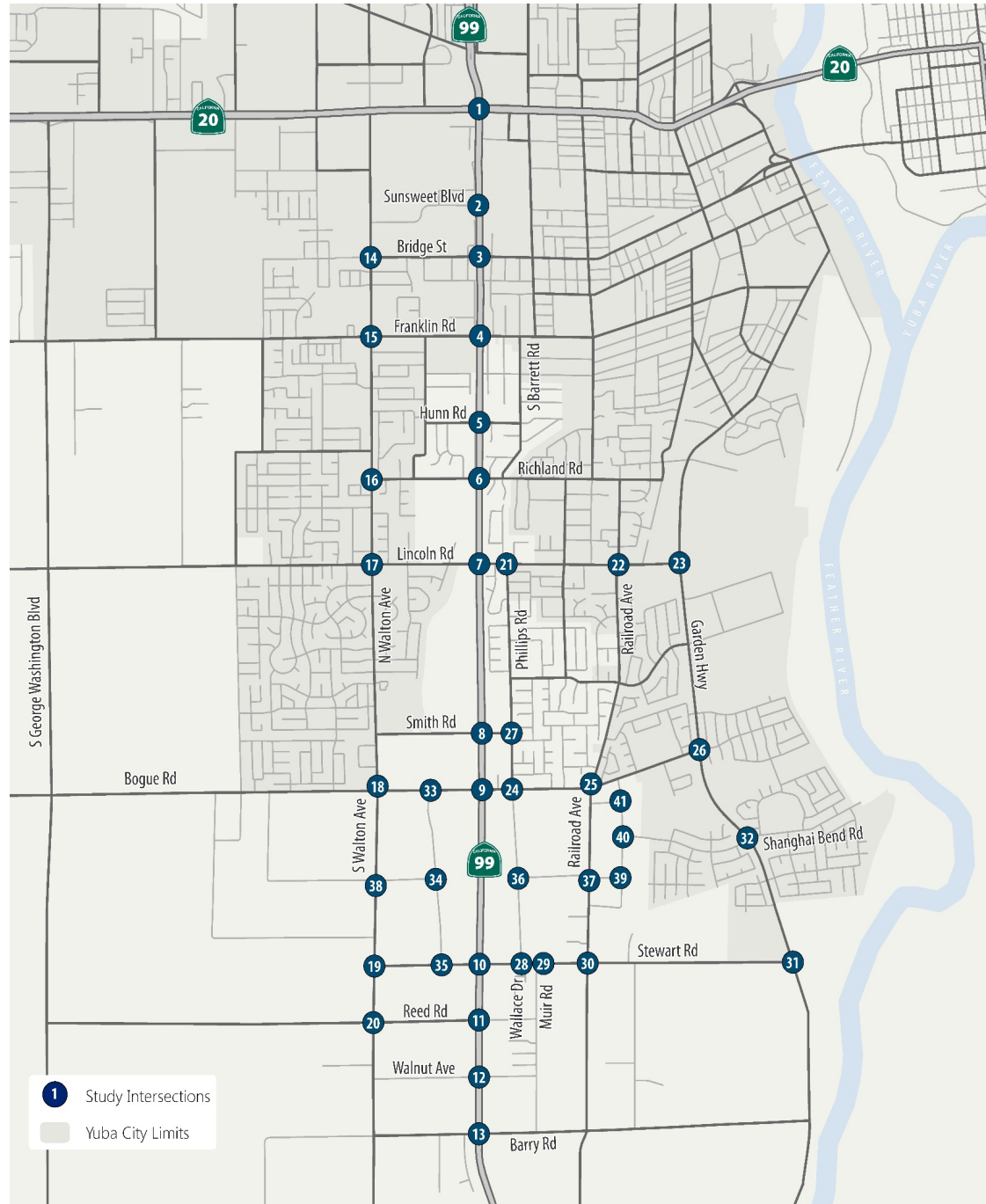


- Turn Lane
- AM (PM)
- Traffic Signal
- Stop Sign
- Roundabout

SOURCE: Fehr & Peers, 2017

Bogue-Stewart Master Plan and EIR . 140720

Figure 3.14-14a
Peak Hour Intersection Traffic Controls, Lane Configurations, and Traffic Controls - Cumulative Plus Master Plan Buildout



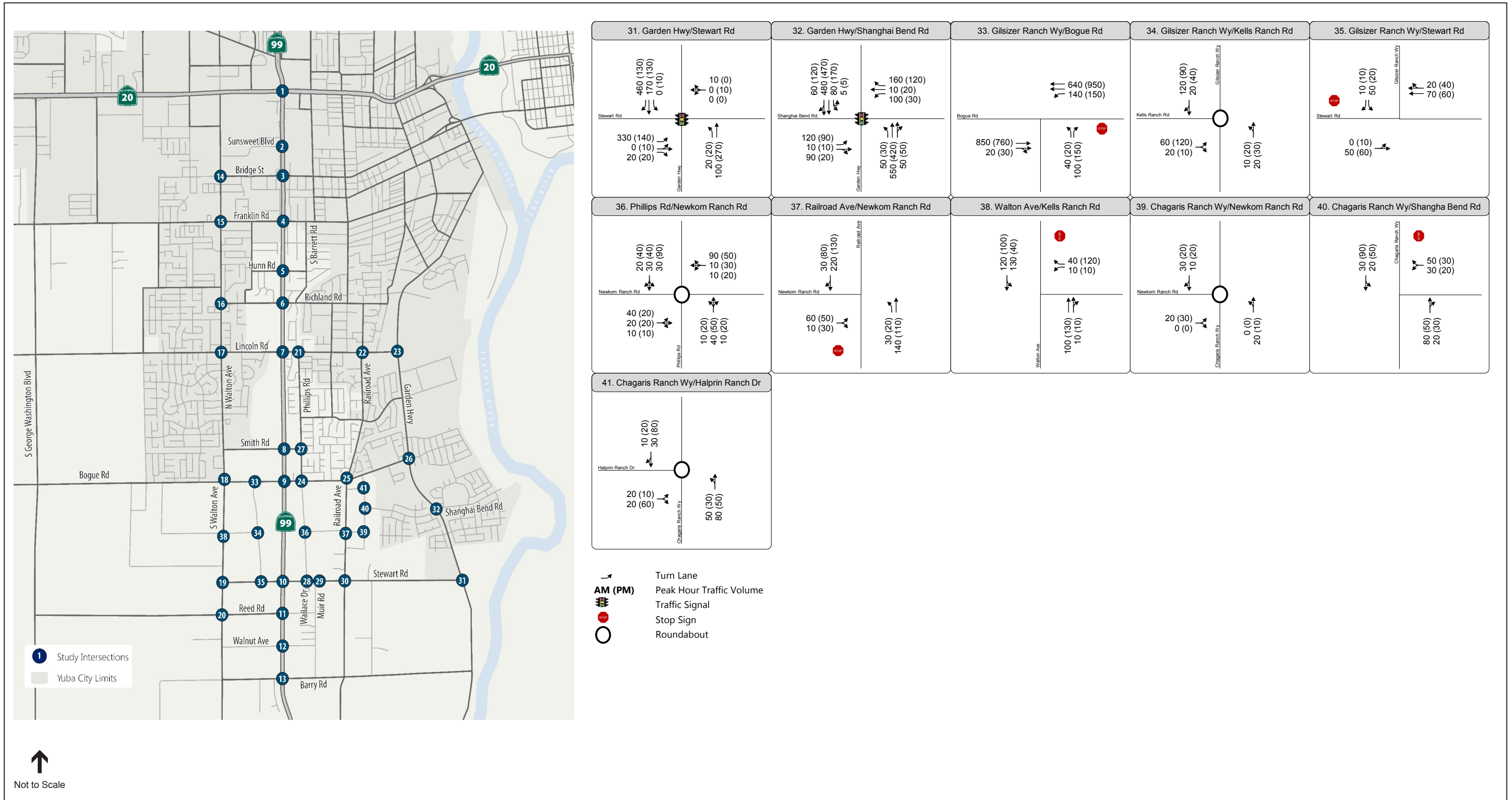
<p>16. Walton Ave/Richland Rd</p> <p>Walton Ave</p> <p>Richland Rd</p> <p>710 (960) 100 (100)</p> <p>70 (90) 40 (80)</p> <p>660 (820) 100 (60)</p>	<p>17. S Walton Ave/Lincoln Rd</p> <p>Lincoln Rd</p> <p>S Walton Ave</p> <p>90 (170) 270 (330) 380 (440)</p> <p>430 (340) 310 (630) 80 (130)</p> <p>140 (150) 610 (400) 80 (50)</p> <p>5 (0) 40 (120) 230 (340) 170 (100)</p>	<p>18. S Walton Ave/Bogue Rd</p> <p>Bogue Rd</p> <p>S Walton Ave</p> <p>20 (30) 130 (110) 180 (280)</p> <p>120 (320) 450 (530) 40 (50)</p> <p>30 (20) 580 (420) 110 (50)</p> <p>50 (80) 80 (160) 60 (60)</p>	<p>19. S Walton Ave/Stewart Rd</p> <p>S Walton Ave</p> <p>110 (80) 30 (20)</p> <p>20 (30) 10 (0)</p> <p>90 (100) 10 (10)</p>	<p>20. S Walton Ave/Reed Rd</p> <p>Reed Rd</p> <p>S Walton Ave</p> <p>10 (10) 100 (70) 10 (10)</p> <p>10 (10) 10 (10) 10 (10)</p> <p>10 (10) 90 (90) 0 (10)</p>
<p>21. Phillips Rd/Lincoln Rd</p> <p>Lincoln Rd</p> <p>Phillips Rd</p> <p>470 (1,000) 80 (70)</p> <p>810 (830) 130 (110)</p> <p>130 (100) 120 (90)</p>	<p>22. Railroad Ave/Lincoln Rd</p> <p>Lincoln Rd</p> <p>Railroad Ave</p> <p>50 (60) 90 (150) 60 (90)</p> <p>50 (70) 280 (880) 40 (120)</p> <p>70 (50) 790 (590) 60 (150)</p> <p>130 (110) 140 (100) 90 (50)</p>	<p>23. Garden Hwy/Lincoln Rd</p> <p>Lincoln Rd</p> <p>Garden Hwy</p> <p>260 (640) 760 (1,030)</p> <p>650 (490) 310 (180)</p> <p>0 (5) 130 (430) 1,130 (980)</p>	<p>24. Phillips Rd/Bogue Rd</p> <p>Phillips Rd</p> <p>Bogue Rd</p> <p>60 (40) 20 (30) 60 (30)</p> <p>60 (20) 635 (480) 105 (110)</p> <p>30 (80) 450 (840) 120 (180)</p> <p>335 (640) 10 (10) 10 (10)</p>	<p>25. Railroad Ave/Bogue Rd</p> <p>Bogue Rd</p> <p>Railroad Ave</p> <p>70 (90) 120 (170) 60 (70)</p> <p>50 (110) 400 (640) 80 (130)</p> <p>50 (60) 570 (470) 90 (90)</p> <p>160 (70) 140 (80) 140 (100)</p>
<p>26. Garden Hwy/Bogue Rd</p> <p>Bogue Rd</p> <p>Garden Hwy</p> <p>370 (510) 350 (400) 30 (70) 5 (5)</p> <p>80 (60) 90 (70) 40 (10)</p> <p>0 (5) 530 (490) 50 (90) 200 (210)</p> <p>5 (5) 240 (190) 480 (400) 20 (20)</p>	<p>27. Phillips Rd/Smith Rd</p> <p>Phillips Rd</p> <p>Smith Rd</p> <p>50 (50) 110 (70)</p> <p>30 (30) 20 (40)</p>	<p>28. Wallace Dr/Stewart Rd</p> <p>Wallace Dr</p> <p>Stewart Rd</p> <p>40 (30) 0 (0) 10 (20)</p> <p>20 (60) 170 (180) 10 (10)</p> <p>10 (10) 0 (0) 10 (10)</p>	<p>29. Muir Rd/Stewart Rd</p> <p>Muir Rd</p> <p>Stewart Rd</p> <p>230 (100) 20 (30)</p> <p>180 (190) 10 (20)</p> <p>10 (20) 30 (30)</p>	<p>30. Railroad Ave/Stewart Rd</p> <p>Stewart Rd</p> <p>Railroad Ave</p> <p>60 (70) 90 (50) 120 (30)</p> <p>60 (80) 150 (130) 10 (10)</p> <p>150 (30) 170 (80) 20 (10)</p> <p>10 (10) 40 (60) 20 (10)</p>

- Turn Lane
- AM (PM)** Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- Roundabout

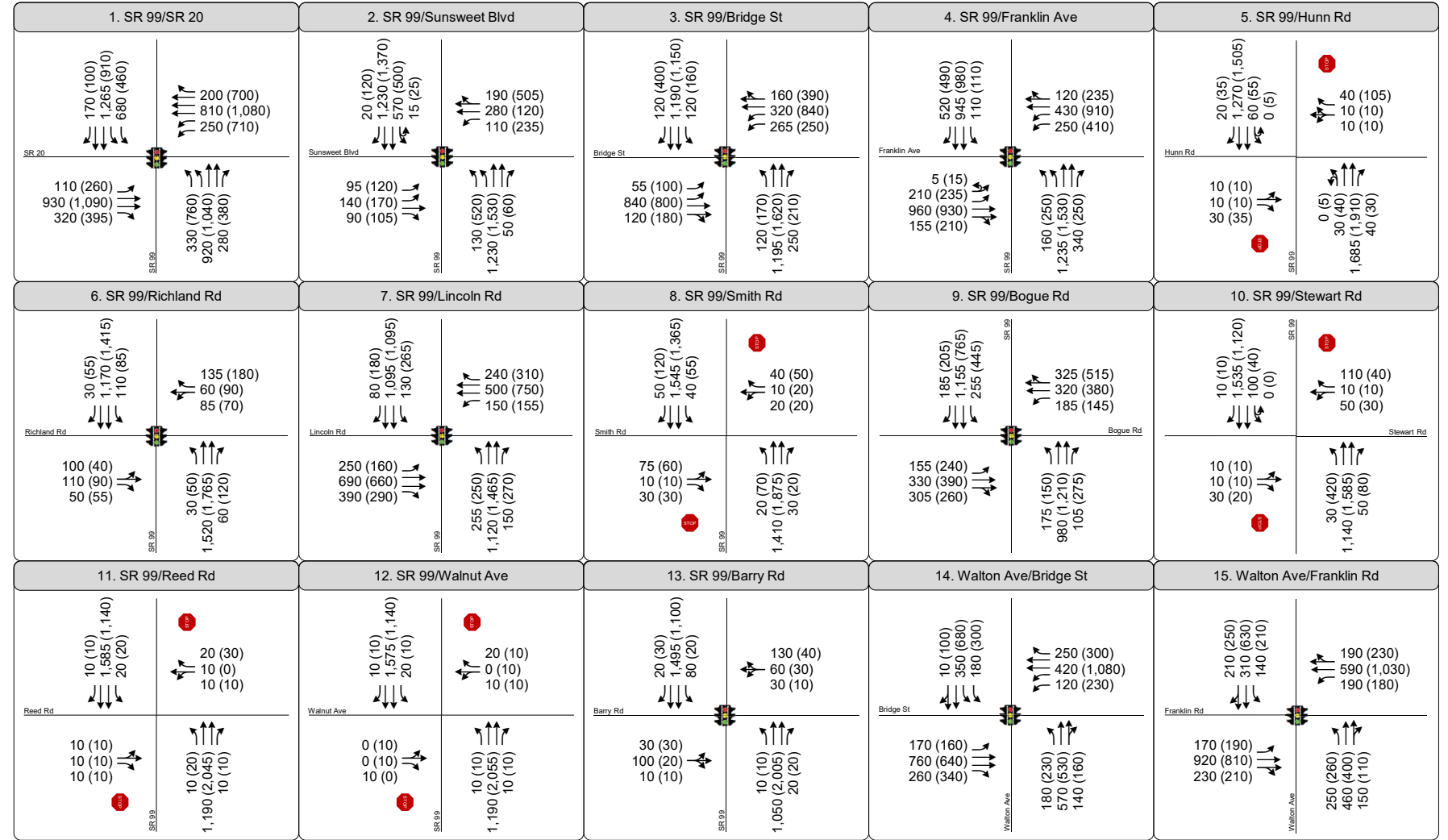
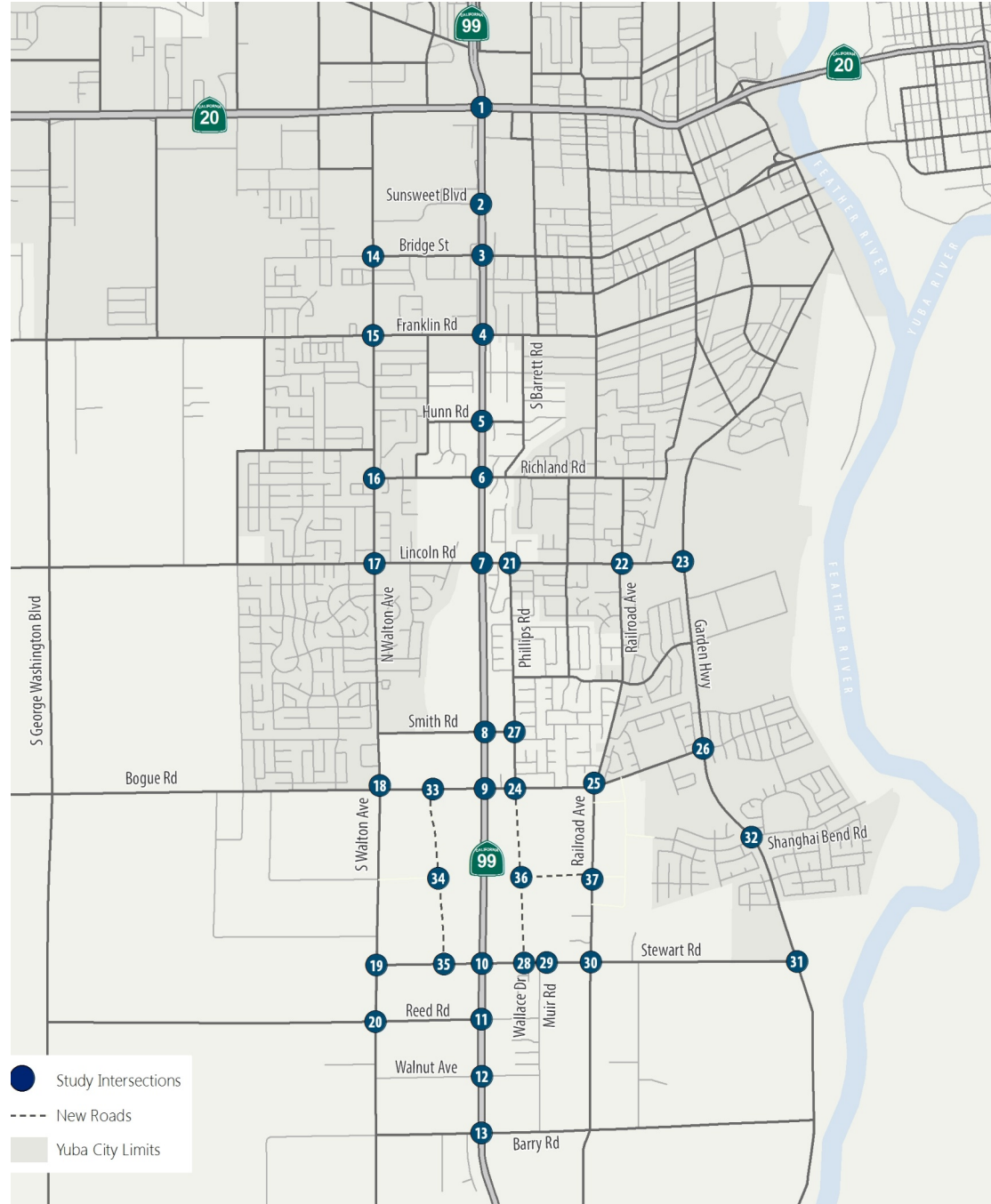
SOURCE: Fehr & Peers, 2017

Bogue-Stewart Master Plan and EIR . 140720

Figure 3.14-14b
Peak Hour Intersection Traffic Controls, Lane Configurations, and Traffic Controls - Cumulative Plus Master Plan Buildout

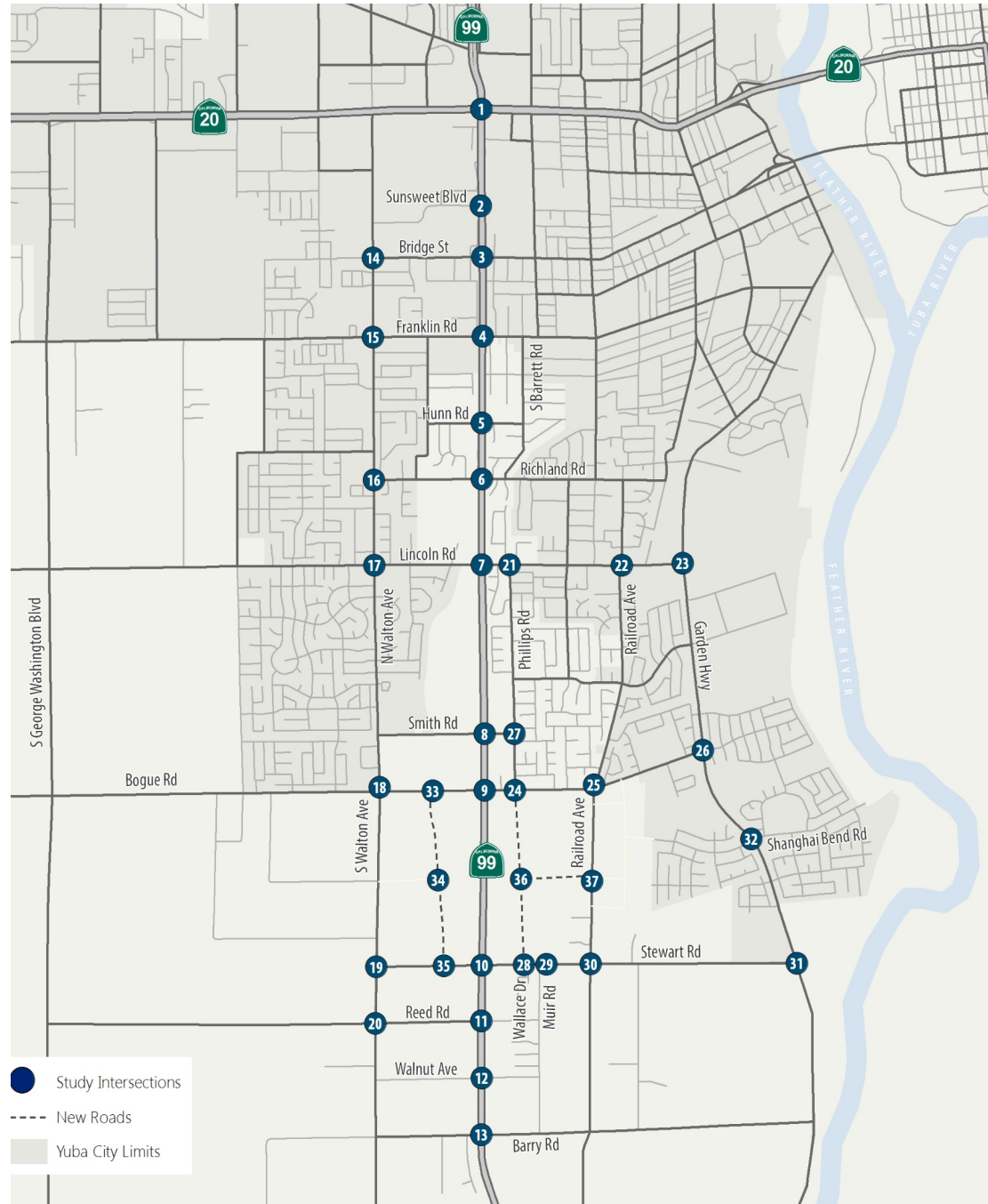


SOURCE: Fehr & Peers, 2017



- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- Roundabout

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Not to Scale



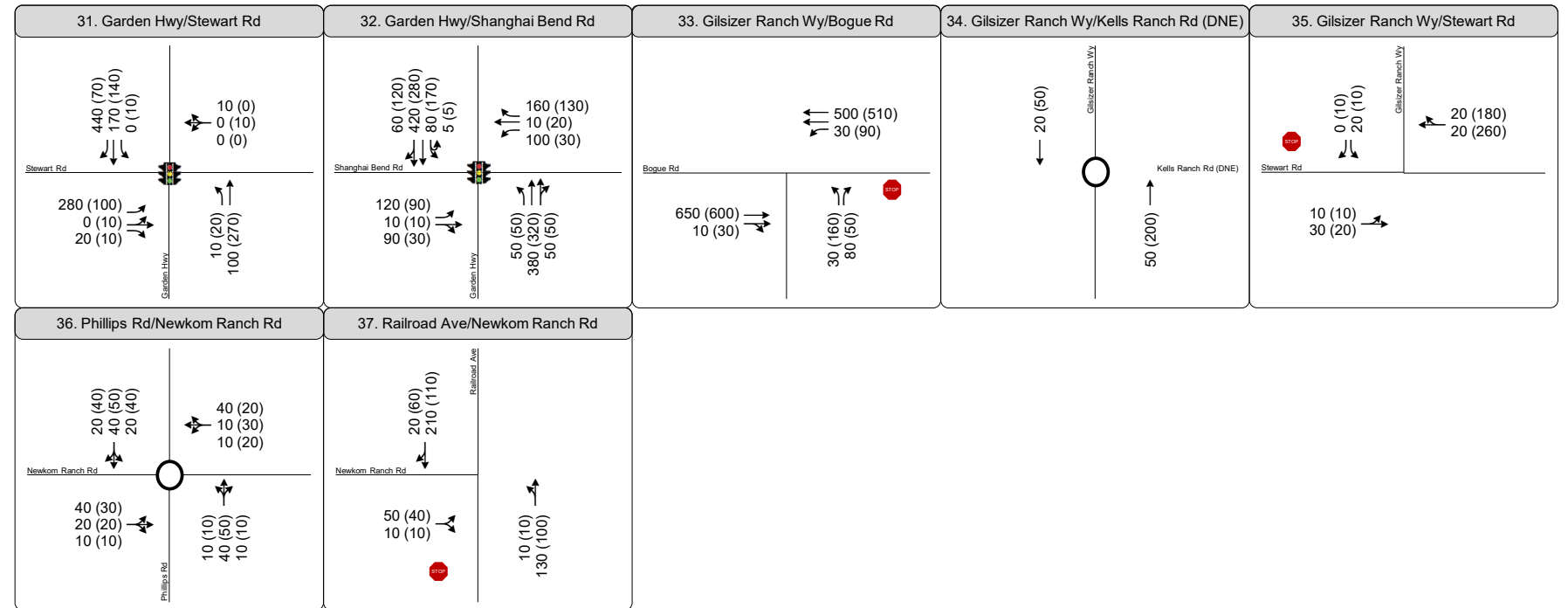
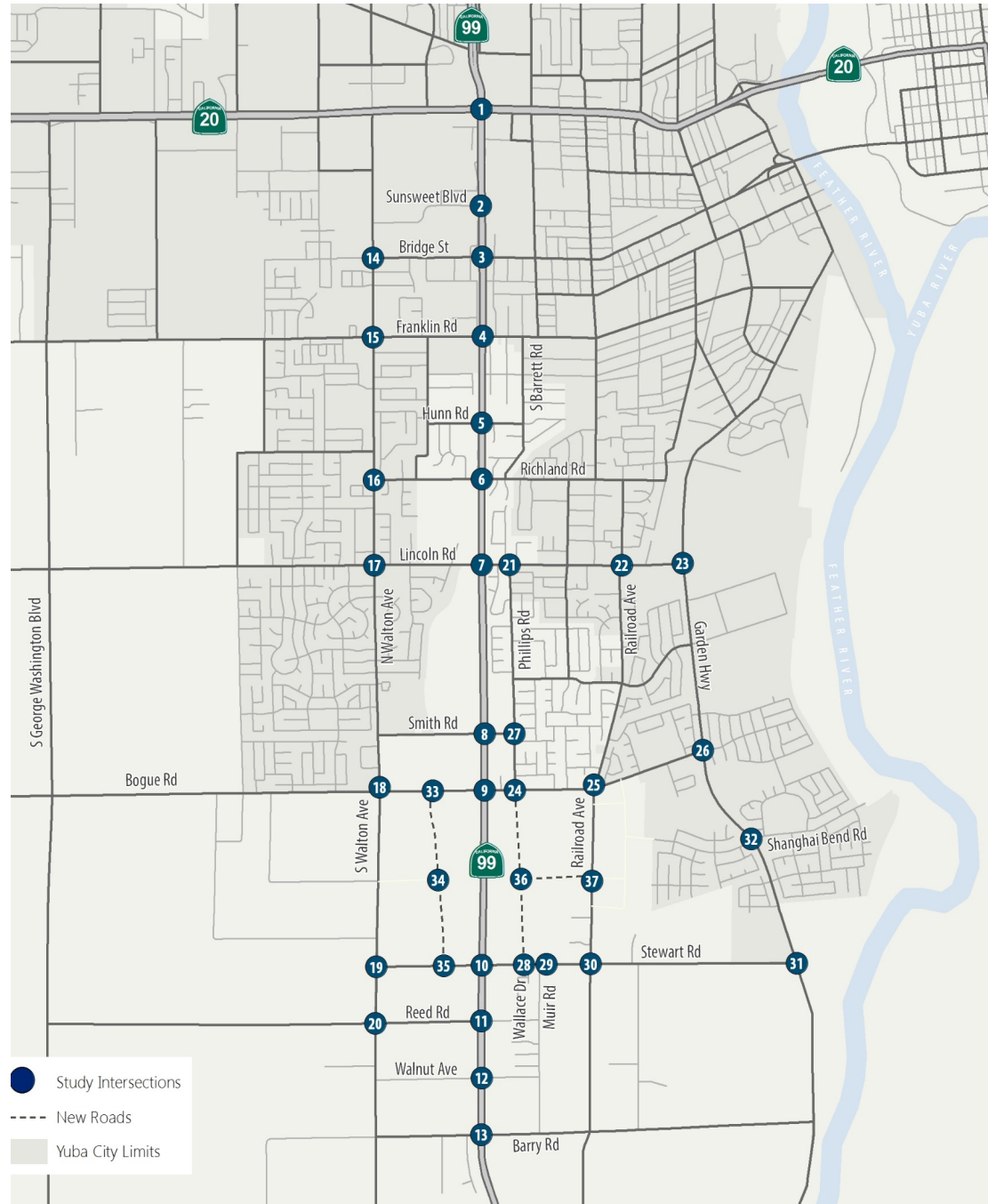
<p>16. Walton Ave/Richland Rd</p> <p>Walton Ave</p> <p>Richland Rd</p> <p>660 (870) 100 (100)</p> <p>70 (90) 40 (80)</p> <p>620 (760) 100 (60)</p>	<p>17. S Walton Ave/Lincoln Rd</p> <p>S Walton Ave</p> <p>Lincoln Rd</p> <p>90 (170) 180 (290) 520 (500)</p> <p>430 (380) 310 (650) 80 (130)</p> <p>150 (150) 650 (400) 60 (40)</p> <p>5 (0) 40 (60) 230 (240) 170 (100)</p>	<p>18. S Walton Ave/Bogue Rd</p> <p>S Walton Ave</p> <p>Bogue Rd</p> <p>30 (30) 70 (60) 110 (180)</p> <p>70 (120) 410 (440) 30 (40)</p> <p>30 (20) 580 (380) 50 (20)</p> <p>30 (150) 50 (180) 40 (50)</p>	<p>19. S Walton Ave/Stewart Rd</p> <p>S Walton Ave</p> <p>Stewart Rd</p> <p>110 (80) 30 (20)</p> <p>20 (260) 10 (10)</p> <p>90 (100) 10 (10)</p>	<p>20. S Walton Ave/Reed Rd</p> <p>S Walton Ave</p> <p>Reed Rd</p> <p>10 (10) 100 (70) 10 (10)</p> <p>10 (10) 10 (10) 10 (10)</p> <p>10 (10) 90 (90) 0 (10)</p>
<p>21. Phillips Rd/Lincoln Rd</p> <p>Lincoln Rd</p> <p>Phillips Rd</p> <p>460 (1,000) 80 (70)</p> <p>820 (820) 130 (110)</p> <p>130 (100) 120 (90)</p>	<p>22. Railroad Ave/Lincoln Rd</p> <p>Lincoln Rd</p> <p>Railroad Ave</p> <p>50 (60) 90 (110) 60 (90)</p> <p>50 (70) 250 (910) 40 (90)</p> <p>70 (50) 800 (590) 50 (100)</p> <p>110 (90) 140 (100) 90 (50)</p>	<p>23. Garden Hwy/Lincoln Rd</p> <p>Lincoln Rd</p> <p>Garden Hwy</p> <p>250 (630) 690 (970)</p> <p>650 (480) 320 (180)</p> <p>0 (5) 130 (440) 970 (870)</p>	<p>24. Phillips Rd/Bogue Rd</p> <p>Phillips Rd</p> <p>Bogue Rd</p> <p>60 (40) 30 (30) 60 (30)</p> <p>60 (20) 495 (380) 105 (150)</p> <p>30 (80) 390 (690) 100 (160)</p> <p>245 (530) 30 (10) 30 (20)</p>	<p>25. Railroad Ave/Bogue Rd</p> <p>Railroad Ave</p> <p>Bogue Rd</p> <p>70 (60) 110 (60) 60 (60)</p> <p>50 (110) 400 (600) 40 (20)</p> <p>60 (20) 110 (70) 110 (90)</p>
<p>26. Garden Hwy/Bogue Rd</p> <p>Garden Hwy</p> <p>Bogue Rd</p> <p>320 (500) 320 (290) 30 (70) 5 (5)</p> <p>80 (60) 90 (70) 40 (10)</p> <p>0 (5) 430 (400) 50 (90) 190 (210)</p> <p>5 (5) 240 (190) 420 (330) 20 (20)</p>	<p>27. Phillips Rd/Smith Rd</p> <p>Phillips Rd</p> <p>Smith Rd</p> <p>50 (40) 120 (70)</p> <p>40 (30) 20 (40)</p> <p>20 (20) 110 (90)</p>	<p>28. Wallace Dr/Stewart Rd</p> <p>Wallace Dr</p> <p>Stewart Rd</p> <p>0 (0) 0 (0) 0 (0)</p> <p>0 (0) 130 (60) 10 (10)</p> <p>0 (0) 150 (80) 10 (10)</p> <p>10 (10) 0 (0) 10 (10)</p>	<p>29. Muir Rd/Stewart Rd</p> <p>Muir Rd</p> <p>Stewart Rd</p> <p>130 (50) 20 (30)</p> <p>140 (70) 20 (20)</p> <p>10 (20) 30 (30)</p>	<p>30. Railroad Ave/Stewart Rd</p> <p>Railroad Ave</p> <p>Stewart Rd</p> <p>20 (40) 100 (50) 110 (30)</p> <p>150 (30) 120 (50) 20 (10)</p> <p>40 (30) 130 (70) 10 (10)</p> <p>10 (10) 40 (60) 20 (10)</p>

- Turn Lane
- AM (PM)** Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- Roundabout

↑
Not to Scale

SOURCE: Fehr & Peers, 2017

Figure 3.14-15b
Peak Hour Intersection Traffic Controls, Lane Configurations, and Traffic Controls - Cumulative Plus Phase I and II



- Turn Lane
- AM (PM)** Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- Roundabout

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Not to Scale

**TABLE 3.14-18
PEAK HOUR INTERSECTION LEVEL OF SERVICE – CUMULATIVE PLUS BSMP CONDITIONS**

Intersection	LOS Standard	Traffic Control	Cumulative No Project Conditions				Cumulative Plus BSMP Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
1. SR 99/SR 20	E	Signal	57	E	91	F	75	E	92	F
2. SR 99/Sunsweet Blvd	E	Signal	54	D	68	E	49	D	67	E
3. SR 99/Bridge Street	E	Signal	57	E	68	E	54	D	77	E
4. SR 99/Franklin Road	E	Signal	89	F	73	E	90	F	60	E
5. SR 99/Hunn Road	E	SSSC	10 (95)	A (F)	10 (118)	B (F)	10 (106)	A (F)	11 (112)	B (F)
6. SR 99/Richland Road	E	Signal	38	D	33	C	40	D	38	D
7. SR 99/Lincoln Road	E	Signal	47	D	51	D	54	D	62	E
8. SR 99/Smith Road	D	SSSC	16 (138)	C (F)	16 (148)	C (F)	16 (170)	C (F)	15 (108)	B (F)
9. SR 99/Bogue Road	D	Signal	41	D	50	D	67	E	89	F
10. SR 99/Stewart Road	D	SSSC	11 (86)	B (F)	9 (229)	A (F)	36 (472)	E (F)	27 (879)	D (F)
11. SR 99/Reed Road	D	SSSC	7 (111)	A (F)	6 (134)	A (F)	13 (67)	B (F)	14 (222)	B (F)
12. SR 99/Walnut Avenue	D	SSSC	3 (16)	A (C)	5 (108)	A (F)	11 (27)	B (D)	10 (135)	A (F)
13. SR 99/Barry Road	D	Signal	27	C	16	B	31	C	24	C
14. North Walton Avenue/ Bridge St	D	Signal	28	C	55	D	24	C	51	D
15. South Walton Avenue/ Franklin Rd	D	Signal	61	E	92	F	61	E	95	F
16. South Walton Avenue/ Richland Rd	D	SSSC	2 (16)	A (C)	3 (23)	A (C)	2 (18)	A (C)	3 (31)	A (D)
17. South Walton Avenue/ Lincoln Rd	D	Signal	53	D	53	D	37	D	36	D
18. South Walton Avenue/ Bogue Road	D	AWSC	51	F	54	F	190	F	150	F
19. South Walton Avenue/ Stewart Rd	D	SSSC	2 (10)	A (A)	2 (9)	A (A)	2 (10)	A (B)	2 (9)	A (A)
20. South Walton Avenue/ Reed Road	D	SSSC	2 (10)	A (B)	3 (10)	A (B)	3 (10)	A (B)	3 (10)	A (B)
21. Phillips Road/Lincoln Road	D	SSSC	9 (62)	A (F)	8 (72)	A (F)	9 (38)	A (E)	7 (31)	A (D)
22. Railroad Avenue/ Lincoln Rd	D	AWSC	78	F	158	F	70	F	144	F
23. Garden Hwy/Lincoln Road	D	Signal	14	B	53	D	15	B	38	D
24. Phillips Road/Bogue Road	D	SSSC	3 (17)	A (C)	3 (14)	A (B)	24 (124)	C (F)	45 (278)	E (F)
25. Railroad Avenue/Bogue Rd	D	AWSC	49	E	35	D	117	F	218	F
26. Garden Hwy/Bogue Road	D	Signal	28	C	28	C	55	E	56	E
27. Phillips Road/Smith Road	D	SSSC	1 (6)	A (A)	2 (6)	A (A)	1 (6)	A (A)	1 (5)	A (A)

**TABLE 3.14-18
 PEAK HOUR INTERSECTION LEVEL OF SERVICE – CUMULATIVE PLUS BSMP CONDITIONS**

Intersection	LOS Standard	Traffic Control	Cumulative No Project Conditions				Cumulative Plus BSMP Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
28. Wallace Drive/Stewart Road	D	SSSC	1 (5)	A (A)	1 (5)	A (A)	16 (33)	B (D)	4 (18)	A (C)
29. Muir Road/Stewart Road	D	SSSC	1 (6)	A (A)	1 (5)	A (A)	5 (14)	A (B)	1 (5)	A (A)
30. Railroad Avenue/Stewart Rd	D	AWSC	11	B	8	A	12	B	9	A
31. Garden Hwy/Stewart Road	D	Signal	13	B	13	B	14	B	13	B
32. Garden Hwy/Shanghai Bend Rd	D	Signal	18	B	22	C	19	B	18	B
33. Gilsizer Ranch Way/Bogue Rd	D	SSSC	Does Not Exist				4 (100)	A (F)	3 (76)	A (F)
34. Gilsizer Ranch Way/Kells East Rd	D	Roundabout	Does Not Exist				4	A	5	A
35. Stewart Road/Gilsizer Ranch Way	D	SSSC	Does Not Exist				3 (10)	A (A)	2 (10)	A (A)
36. Phillips Road/Newkom Ranch Rd	D	Roundabout	Does Not Exist				4	A	5	A
37. Railroad Avenue/Newkom Ranch Rd	D	SSSC	Does Not Exist				2 (13)	A (B)	2 (11)	A (B)
38. South Walton Avenue/Kells Ranch Drive	D	SSSC	Does Not Exist				4 (13)	A (B)	4 (11)	A (B)
39. Changaris Ranch Way/Newkom Ranch Drive	D	Roundabout	Does Not Exist				4	A	4	A
40. Changaris Ranch Way & Shanghai Bend Road	D	SSSC	Does Not Exist				4	A	3	A
41. Changaris Ranch Way/Halprin Ranch Dr	D	Roundabout	Does Not Exist				4	A	4	A

NOTES:

- 1 For signalized intersections, roundabouts, and AWSC average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS is reported for the entire intersection LOS and the most-delayed individual movement in parenthesis.
- 2 SSSC = Side Street Stop
- 3 AWSC = All Way Stop Control

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-19
 MAXIMUM QUEUE LENGTH ESTIMATES ON SR 99 – CUMULATIVE PLUS BSMP CONDITIONS**

Intersection ¹	Traffic Control	Turn Lane	Storage ²	Maximum Queue Length ³			
				Cumulative No Project Conditions		Cumulative Plus BSMP	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SR 99/Bogue Road	Traffic Signal	NB Left	450 ft.	275	400	375	475
		NB Through	N/A	375	550	550	800
		NB Right	300 ft.	225	325	325	350
		SB Left	450 ft.	125	225	300	475
		SB Through	N/A	400	300	400	475
		SB Right	250 ft.	225	100	325	175
SR 99/Stewart Road	Side-Street Stop	NB Left	450 ft.	50	50	100	75
		SB Left	450 ft.	75	50	125	125

NOTES:

1. The project would increase left and right-turning movements at the SR 99/Bogue Road and SR 99/Stewart Road intersections.
2. Estimated based on aerial imagery. N/A = Not applicable for through lanes.
3. Based on output from SimTraffic model. Values rounded up to the nearest 25 feet. Results consider the effects of upstream bottlenecks that limit the flow of traffic through the mid-point of the corridor.

SOURCE: Fehr & Peers, 2017

Table 3.14-20 presents the AM and PM peak hour LOS at each study intersection under cumulative plus Phase I and II conditions. **Table 3.14-21** presents the AM and PM peak hour maximum queue length estimates at selected study intersections on SR 99 under cumulative plus Phase I and II conditions.

Table 3.14-22 displays the signal warrant analysis results during the AM and PM peak hours at unsignalized study intersections under each cumulative scenario. **Table 3.14-23** displays the volume of daily traffic on Sutter County roadways under all three scenarios.

Capacity constraints in the northerly section of the SR 99 study corridor limit the amount of traffic able to pass through the central part of the corridor. Specifically, LOS F conditions at the SR 99/SR 20 intersection limits the flow of southbound through traffic during the PM peak hour. As a result, only 65 percent of the southbound travel demand approaching SR 99/Sunsweet Boulevard (next intersection to the south) is able to arrive within the PM peak hour (see Appendix G).

Under cumulative plus BSMP conditions, the lack of traffic signals on Bogue Road at Phillips Road and Railroad Avenue cause LOS F conditions at those locations and also limit the amount of westbound traffic able to arrive at the SR 99/Bogue Road during the PM peak hour. Although the SR 99/Bogue Road intersection operates at LOS F with 89 seconds of delay under this scenario, it is only serving 72 percent of its projected demand due to capacity constraints to the east on Bogue Road, to the north along Bogue Road, and at the intersection itself.

**TABLE 3.14-20
 PEAK HOUR INTERSECTION LEVEL OF SERVICE – CUMULATIVE PLUS PHASE I AND II CONDITIONS**

Intersection	LOS Standard	Traffic Control	Cumulative No Project Conditions				Cumulative Plus Phase I and II Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
1. SR 99/SR 20	E	Signal	57	E	91	F	69	E	94	F
2. SR 99/Sunsweet Blvd	E	Signal	54	D	68	E	50	D	65	E
3. SR 99/Bridge Street	E	Signal	57	E	68	E	55	E	79	E
4. SR 99/Franklin Road	E	Signal	89	F	73	E	85	F	78	E
5. SR 99/Hunn Road	E	SSSC	10 (95)	A (F)	10 (118)	B (F)	10 (109)	B (F)	11 (139)	B (F)
6. SR 99/Richland Road	E	Signal	38	D	33	C	40	D	36	D
7. SR 99/Lincoln Road	E	Signal	47	D	51	D	47	D	52	D
8. SR 99/Smith Road	D	SSSC	16 (138)	C (F)	16 (148)	C (F)	15 (153)	C (F)	17 (234)	C (F)
9. SR 99/Bogue Road	D	Signal	41	D	50	D	61	E	64	E
10. SR 99/Stewart Road	D	SSSC	11 (86)	B (F)	9 (229)	A (F)	19 (143)	C (F)	19 (411)	C (F)
11. SR 99/Reed Road	D	SSSC	7 (111)	A (F)	6 (134)	A (F)	15 (110)	A (F)	7 (166)	B (F)
12. SR 99/Walnut Avenue	D	SSSC	3 (16)	A (C)	5 (108)	A (F)	12 (36)	B (E)	6 (84)	A (F)
13. SR 99/Barry Road	D	Signal	27	C	16	B	28	C	22	C
14. North Walton Avenue/ Bridge St	D	Signal	28	C	55	D	25	C	51	D
15. South Walton Avenue/ Franklin Rd	D	Signal	61	E	92	F	61	E	89	F
16. South Walton Avenue/ Richland Rd	D	SSSC	2 (16)	A (C)	3 (23)	A (C)	2 (17)	A (C)	3 (27)	A (D)
17. South Walton Avenue/ Lincoln Rd	D	Signal	53	D	53	D	52	D	40	D
18. South Walton Avenue/ Bogue Road	D	AWSC	51	F	54	F	85	F	115	F
19. South Walton Avenue/ Stewart Rd	D	SSSC	2 (10)	A (A)	2 (9)	A (A)	2 (10)	A (A)	6 (11)	A (B)
20. South Walton Avenue/ Reed Road	D	SSSC	2 (10)	A (B)	3 (10)	A (B)	2 (10)	A (B)	3 (10)	A (B)
21. Phillips Road/Lincoln Road	D	SSSC	9 (62)	A (F)	8 (72)	A (F)	9 (44)	A (E)	10 (89)	A (F)
22. Railroad Avenue/Lincoln Rd	D	AWSC	78	F	158	F	67	F	137	F
23. Garden Hwy/Lincoln Road	D	Signal	14	B	53	D	14	B	36	D
24. Phillips Road/Bogue Road	D	SSSC	3 (17)	A (C)	3 (14)	A (B)	14 (80)	A (F)	46 (225)	E (F)
25. Railroad Avenue/ Bogue Rd	D	AWSC	49	E	35	D	105	F	111	F
26. Garden Hwy/Bogue Road	D	Signal	28	C	28	C	40	D	44	D

**TABLE 3.14-20
PEAK HOUR INTERSECTION LEVEL OF SERVICE – CUMULATIVE PLUS PHASE I AND II CONDITIONS**

Intersection	LOS Standard	Traffic Control	Cumulative No Project Conditions				Cumulative Plus Phase I and II Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
27. Phillips Road/Smith Road	D	SSSC	1 (6)	A (A)	2 (6)	A (A)	2 (4)	A (A)	1 (5)	A (A)
28. Wallace Drive/Stewart Road	D	SSSC	1 (5)	A (A)	1 (5)	A (A)	1 (5)	A (A)	1 (5)	A (A)
29. Muir Road/Stewart Road	D	SSSC	1 (6)	A (A)	1 (5)	A (A)	1 (5)	A (A)	1 (5)	A (A)
30. Railroad Avenue/Stewart Rd	D	AWSC	11	B	8	A	12	B	8	A
31. Garden Hwy/Stewart Road	D	Signal	13	B	13	B	13	B	12	B
32. Garden Hwy/Shanghai Bend Rd	D	Signal	18	B	22	C	18	B	18	B
33. Gilsizer Ranch Way/Bogue Rd	D	SSSC	Does Not Exist				2 (25)	A (C)	13 (110)	B (F)
34. Gilsizer Ranch Way/Kells East Rd	D	Roundabout	Does Not Exist				4	A	5	A
35. Stewart Road/Gilsizer Ranch Way	D	SSSC	Does Not Exist				3 (9)	A (A)	1 (11)	A (B)
36. Phillips Road/Newkom Ranch Rd	D	Roundabout	Does Not Exist				4	A	4	A
37. Railroad Avenue/Newkom Ranch Rd	D	SSSC	Does Not Exist				2 (12)	A (B)	2 (10)	A (B)

NOTES:

1. For signalized intersections, roundabouts, and AWSC average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS is reported for the entire intersection LOS and the most-delayed individual movement in parenthesis.
2. SSSC = Side Street Stop
3. AWSC = All Way Stop Control

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-21
 MAXIMUM QUEUE LENGTH ESTIMATES ON SR 99 – CUMULATIVE PLUS PHASE I AND II CONDITIONS**

Intersection ¹	Traffic Control	Turn Lane	Storage ²	Maximum Queue Length ³			
				Cumulative No Project Conditions		Cumulative Plus Phase I and II	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SR 99/Bogue Road	Traffic Signal	NB Left	450 ft.	275	400	475	475
		NB Through	N/A	375	550	800	1,100
		NB Right	300 ft.	225	325	325	325
		SB Left	450 ft.	125	225	300	425
		SB Through	N/A	400	300	475	325
		SB Right	250 ft.	225	100	300	100
SR 99/Stewart Road	Side-Street Stop	NB Left	450 ft.	50	50	125	475
		SB Left	450 ft.	75	50	75	50

NOTES:

1. The project would increase left and right-turning movements at the SR 99/Bogue Road and SR 99/Stewart Road intersections.
2. Estimated based on aerial imagery. N/A = Not applicable for through lanes.
3. Based on output from SimTraffic model. Values rounded up to the nearest 25 feet. Results consider the effects of upstream bottlenecks that limit the flow of traffic through the mid-point of the corridor.

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-22
 PEAK HOUR INTERSECTION SIGNAL WARRANTS – CUMULATIVE CONDITIONS**

Intersection	Traffic Control	Warrant Met					
		Cumulative No Project Conditions		Cumulative Plus Phase I and II		Cumulative Plus BSMP	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
5. SR 99/Hunn Road	SSSC	No	Yes	No	Yes	Yes	Yes
8. SR 99/Smith Road	SSSC	Yes	Yes	Yes	Yes	Yes	Yes
10. SR 99/Stewart Road	SSSC	Yes	No	Yes	Yes	Yes	Yes
11. SR 99/Reed Road	SSSC	No	No	No	No	No	No
12. SR 99/Walnut Avenue	SSSC	No	No	No	No	No	No
16. South Walton Avenue/Richland Road	SSSC	No	Yes	No	Yes	No	Yes
18. South Walton Avenue/Bogue Road	AWSC	Yes	Yes	Yes	Yes	Yes	Yes
19. South Walton Avenue/Stewart Road	SSSC	No	No	No	No	No	No
20. South Walton Avenue/Reed Road	SSSC	No	No	No	No	No	No
21. Phillips Road/Lincoln Road	SSSC	Yes	Yes	Yes	Yes	Yes	Yes
22. Railroad Avenue/Lincoln Road	AWSC	Yes	Yes	Yes	Yes	Yes	Yes
24. Phillips Road/Bogue Road	SSSC	No	No	Yes	Yes	Yes	Yes
25. Railroad Avenue/Bogue Road	AWSC	Yes	Yes	Yes	Yes	Yes	Yes
27. Phillips Road/Smith Road	SSSC	No	No	No	No	No	No

**TABLE 3.14-22
PEAK HOUR INTERSECTION SIGNAL WARRANTS – CUMULATIVE CONDITIONS**

Intersection	Traffic Control	Warrant Met					
		Cumulative No Project Conditions		Cumulative Plus Phase I and II		Cumulative Plus BSMP	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
28. Wallace Drive/Stewart Road	SSSC	No	No	No	No	No	No
29. Muir Road/Stewart Road	SSSC	No	No	No	No	No	No
30. Railroad Avenue/Stewart Road	AWSC	No	No	No	No	No	No
33. Gilsizer Ranch Way/Bogue Rd	SSSC	Does Not Exist		Yes	Yes	Yes	No
34. Gilsizer Ranch Way/Kells Ranch Dr	Roundabout	Does Not Exist		No	No	No	No
35. Gilsizer Ranch Way/Stewart Rd	SSSC	Does Not Exist		No	No	No	No
36. Phillips Road/Newkom Ranch Rd	Roundabout	Does Not Exist		No	No	No	No
37. Railroad Ave/Newkom Ranch Rd	SSSC	Does Not Exist		No	No	No	No
38. South Walton Avenue/Kells Ranch Dr	SSSC	Does Not Exist		Does Not Exist		No	No
39. Changaris Ranch Way/Newkom Ranch Dr	Roundabout	Does Not Exist		Does Not Exist		No	No
40. Changaris Ranch Way & Shangai Bend Rd	SSSC	Does Not Exist		Does Not Exist		No	No
41. Changaris Ranch Way/Halprin Ranch Dr	Roundabout	Does Not Exist		Does Not Exist		No	No

NOTES:

1 Warrant 3B, Peak Hour signal warrant. *California Manual on Uniform Traffic Control Devices*, Caltrans, 2016. Refer to previous page for definition of urban versus rural criteria.

2 SSSC = Side Street Stop

3 AWSC = All Way Stop Control

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-23
SUTTER COUNTY ROADWAY SEGMENT OPERATIONS – CUMULATIVE CONDITIONS**

Segment ¹	Functional Class ²	Operations					
		Cumulative No Project Conditions		Cumulative Plus Phase I and II		Cumulative Plus BSMP	
		ADT ³	LOS ⁴	ADT ³	LOS ⁴	ADT ³	LOS ⁴
South Walton Avenue south of Stewart Road	Two-Lane Major Rural Collector	2,350	A	2,400	A	2,450	A
Railroad Avenue south of Stewart Road	Two-Lane Minor Rural Collector	1,600	A	1,700	A	1,750	A
Garden Highway south of Stewart Road	Urban Minor Arterial	6,250	A	6,300	A	6,350	A
Bogue Road west of George Washington Boulevard	Two-Lane Rural Major Collector	7,450	A	8,500	A	9,350	A

NOTES:

1 Only segments currently in Sutter County that would be used to a considerable degree by project trips and remain as a County roadway were studied.

2 Based on Table 6.14-1 of the Sutter County General Plan Draft EIR.

3 Estimated using City of Yuba City travel demand model.

4 Per Table 6.14-7 of the Sutter County General Plan Draft EIR, the following ADT/LOS ranges are provided:

5 Rural Two-Lane: LOS C = 10,600 ADT or less, LOS D = 10,600- 16,400, and LOS E = 16,400 – 25,200.

6 Urban Arterial: LOS C = 17,500 ADT or less, LOS D = 17,500- 19,700, and LOS E = 19,700 – 21,900.

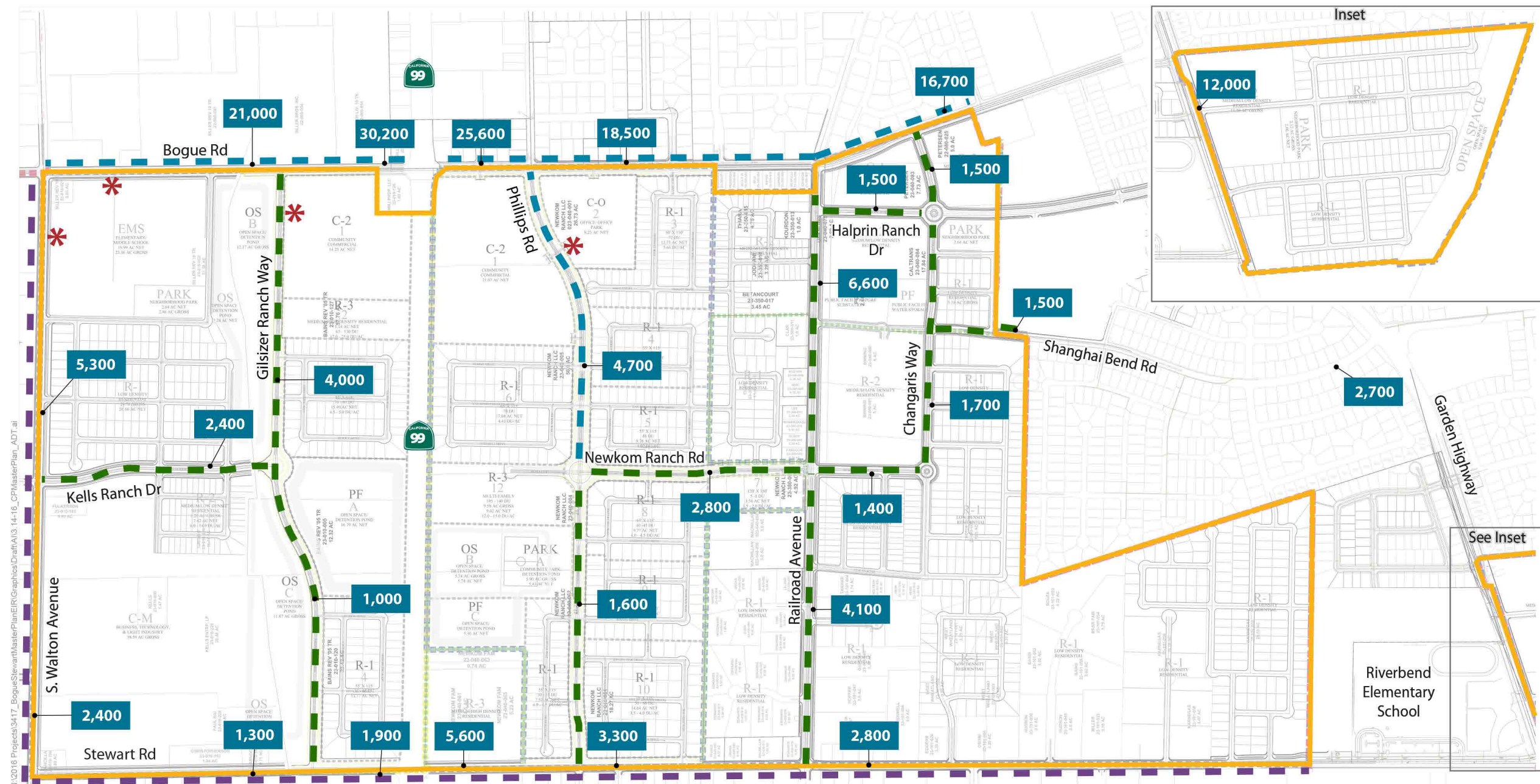
SOURCE: Fehr & Peers, 2017

Figure 3.14-16 displays the ADT on arterial and collector roadways abutting and within the BSMP site under Cumulative Plus BSMP conditions. It is noted that ADT estimates are not shown for certain roadway segments because currently unknown location of driveways serving retail, office, and school parcels would heavily influence the level of traffic on these sections. Traffic volumes are not estimated for residential streets because tentative and final maps have not yet been submitted for City review.

The proposed BSMP would extend Shanghai Bend Road westerly from its current terminus to Changaris Way, thereby providing an alternative route to using Garden Highway for this residential community. As shown on Figure 3.14-16, traffic volumes on Shanghai Bend Road are anticipated to be 1,400 ADT at its westerly terminus and 2,400 ADT at its easterly terminus. The roadway currently carries approximately 3,000 ADT west of Garden Highway (based on observed peak hour traffic and ITE's ratio of AM and PM peak hour to daily traffic for single-family residential). By providing a second point of access, the volume west of Garden Highway would be reduced, though residents on the westerly portion of the street would experience substantial traffic growth relative to existing conditions. Further, since the combined volume at each termini would be 3,800 ADT, this suggests that approximately 400 vehicles per day would use this street to travel between Garden Highway and Changaris Way.

Shanghai Bend Road would be approximately 0.6 miles, with a cross-section consisting of one travel lane, bike lane, and parking lane in each direction. Further, the roadway currently consists of no traffic calming or other impedances to slow traffic. If the roadway extension occurs as planned and the proposed BSMP fully develops, there is a strong possibility that the 85th percentile speed on this residential street could exceed 25 mph, which would be inconsistent with developing/managing residential streets to have such speeds be 25 mph or less (i.e., Implementing Policy 5.2-I-13). To address this potential, the BSMP Mobility Chapter identifies the need to implement various traffic calming techniques to slow down traffic movement and promote cognitive awareness among various street users. Potential traffic calming measures listed in the Mobility chapter include: narrowed street widths, bulb-outs, special pavement markings, chokers, on-street parking, and diagonal closures. Implementation of such measures are recommended to extend beyond the BSMP roadway network to include potentially affected segments of Shanghai Bend Road.

Figure 3.14-16 shows that the volume of traffic on Railroad Avenue between Bogue Road and Stewart Road would range from 4,100 to 6,600 ADT under cumulative plus BSMP conditions. These volumes would remain within the capacity of the proposed upgraded three-lane collector street (one lane in each direction separated by a two-way left-turn lane). However, the resulting volume represents a sizeable increase over the existing volume of 2,250 ADT.



N:\2016 Projects\3417_BogueStewartMasterPlan\EIR\Graphics\Draft\A10.14-16_CPMasterPlan_ADT.txd

X,XXX Average Daily Traffic (Rounded to Nearest Hundred)

Master Plan Boundary

New/Widened Two-Lane Street

Widened Three-Lane Street

New/Widened Four-Lane Street

Estimate not provided because unknown placement of retail/office/school driveways will affect volumes.

Notes:

1. Number of travel lanes represents through lanes only, and does not include any median or turn lanes.
2. Residential lotting plans are conceptual, and subject to additional review/modification.

↑
Not to Scale

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The proposed project would add additional trips along Stewart Road in the vicinity of Riverbend Elementary School. Some of these trips would be associated with project residents picking up or dropping off students at the school, while other trips would use Stewart Road to access SR 99. The project could contribute to worsened congestion near the school during peak times. However, this is more related to the design/operations of the school access than the level of traffic added by the project. The project would add 100 vehicles during the AM peak hour to the segment of Stewart Road west of Garden Highway.

Vehicle Miles of Travel

Table 3.14-24 displays the VMT of Phases I and II, and the BSMP as a whole under cumulative conditions. These values represent the project’s effect on VMT, and are calculated in the same manner as under existing conditions. This table shows that Phase I and II would generate approximately 96,900 VMT, while the proposed BSMP would generate 220,000 VMT. When compared to the existing VMT, the VMT of the cumulative plus BSMP decreases by 1.5 percent. However, the VMT of Phase I and II increases by 22 percent. In reviewing the model output, this increase is most likely being caused by generally worse traffic conditions (under cumulative versus existing) and the implementation of new project-related street connections/widenings (most notably Bogue Road), which enable trips to travel longer distances in the same time at higher speeds.

**TABLE 3.14-24
 VMT ESTIMATION – CUMULATIVE PLUS PROJECT CONDITIONS**

Scenario	Gross Daily Trips	VMT
Phase I and II	30,178	96,877
BSMP	52,615	219,875

NOTES:
 1 Calculated using City of Yuba City travel demand model.
 SOURCE: Fehr & Peers, 2017

Under cumulative no project conditions, the Yuba City travel demand model generates an estimated 4,552,912 VMT. The model is estimated to have a service population (i.e., residents and employees) of 202,437. This is based on an average of three persons per single-family unit, two persons per multi-family units, two employees per thousand square feet of retail, three employees per thousand square feet of office/public-quasi public, and one employee per thousand square feet of light industrial and manufacturing. Employment related to schools, agriculture, and construction were excluded due to difficulties in developing reasonable estimates. Under cumulative no project conditions, the model reflects a ratio of 22.49 VMT per service population.

This calculation was also performed under cumulative plus BSMP conditions. For this scenario, the Yuba City travel demand model generates an estimated 4,772,787 VMT. The model is estimated to have a service population (i.e., residents and employees) of 211,321. Under cumulative plus BSMP conditions, the model has a ratio of 22.59 VMT per service population.

This corresponds to a 0.4 percent increase in VMT per service population. This increase would not be considered substantial, as the proposed BSMP contains a mix of land uses and would include a variety of elements that would encourage walking, biking, and shorter/less frequent vehicle trips. Furthermore, the City anticipates that a 0.4 percent increase in VMT would be minimized if not surpassed over the buildout lifetime of the BSMP, due to lifestyle change such as decreased travel miles for jobs, due to increased internet-based employment and online shopping.

Impacts and Mitigation Measures

This section presents the impacts and mitigation measures for the proposed BSMP, and separately for the combined Phases I and II. Following each impact statement, mitigation measures are recommended if required. The discussion of mitigation measures first identifies all measures recommended for the BSMP as a whole, and then presents those mitigations required for Phase I and II only.

Impact 3.14-1: Implementation of the proposed BSMP would cause significant impacts at intersections in the City of Yuba City.

BSMP

The proposed BSMP would cause significant impacts at the following intersections in the City of Yuba City:

- South Walton Avenue/Bogue Road (LOS B to E during the PM peak hour)
- Railroad Avenue/Lincoln Road (LOS C to E during the PM peak hour)
- Phillips Road/Bogue Road (LOS B to F during the AM and PM peak hours)
- Railroad Avenue/Bogue Road (LOS C to F during the AM and PM peak hours)
- Gilsizer Ranch Way/Bogue Road (LOS E or F during the AM and PM peak hours)

Each of these intersections would consist of stop control under existing plus BSMP conditions. In addition to operating at an unacceptable LOS E or F, each intersection would satisfy the peak hour warrant for consideration of a traffic signal. Therefore, this impact is considered **significant**. Mitigation measures for these impacts are recommended below.

Newkom Ranch/Kells East Ranch

Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would cause significant impacts at the following intersections in the City of Yuba City:

- Phillips Road/Bogue Road (LOS B to F during the AM and PM peak hours); and
- Railroad Avenue/Bogue Road (LOS C to F during the AM and PM peak hours).

Each of these intersections would consist of stop control under existing Plus Phase I and II conditions. In addition to operating at an unacceptable LOS F, each intersection would satisfy the

peak hour warrant for consideration of a traffic signal. Therefore, this impact is considered **significant**. Mitigation measures for these impacts are recommended below.

Summary

The proposed BSMP would cause significant impacts at five intersections within and maintained by the City of Yuba City. Newkom Ranch and Kells East Ranch (i.e., Phase I and II), alone, would cause **significant** impacts at two of those intersections. Mitigation measures are available to improve operations to acceptable levels at all intersections with significant impacts. It should be noted that several other unsignalized study intersections are shown in Table 3.14-12 to operate at LOS F with the BSMP. However, because these would not satisfy the peak hour warrant for a traffic signal, impacts at them are not considered significant.

Mitigation Measure

Mitigation measures identified below (for BSMP as a whole and Phases I and II only) are recommended for significant impacts (refer to **Figure 3.14-17** for illustration of mitigation measures):

Mitigation Measure 3.14-1(a): Yuba City Intersections (BSMP)

The project applicant(s) shall construct the following improvements. The timing of the need for these improvements will depend on the amount of development on the west versus east side of SR 99, mix of land uses, and level of background traffic growth. The applicant shall coordinate with City staff regarding construction of these improvements as individual projects within the BSMP are proposed. The financial responsibility for each project applicant shall be determined by the City and shall be included in each applicant's project approval documentation.

- i. Install a traffic signal and widen the eastbound and southbound approaches to provide dedicated left-turn pockets at the Bogue Road/South Walton Avenue intersection (in conjunction with lane configurations planned under existing plus BSMP conditions).
- ii. Install a traffic signal at the Railroad Avenue/Lincoln Road intersection (in conjunction with existing lane configurations).
- iii. Install a traffic signal at the Bogue Road/Phillips Road intersection (in conjunction with lane configurations planned under existing plus BSMP conditions).
- iv. Install a traffic signal at the Bogue Road/Railroad Avenue intersection and widen/restripe the northbound and southbound approaches to provide dedicated left-turn pockets (in conjunction with lane configurations planned under existing plus BSMP conditions).
- v. Install a traffic signal at the Gilsizer Ranch Way/Bogue Road intersection (in conjunction with lane configurations planned under existing plus BSMP conditions).

Significance After Mitigation: Table 3.14-25 displays the effectiveness of each mitigation measure under existing plus BSMP buildout conditions. As shown, these mitigation measures would restore operations at each intersection to an acceptable LOS D or better. The Bogue Road/Phillips Road intersection is recommended to operate with split-phasing on the northbound and southbound approaches and protected left-turn phasing on the eastbound and westbound approaches. The Bogue Road/South Walton Avenue and Bogue Road/Railroad Avenue intersections are recommended to operate with protected left-turn phasing on all approaches. With the implementation of Mitigation Measure 3.14-1(a) listed above, this impact would be reduced to a **less-than-significant** level for the BSMP.

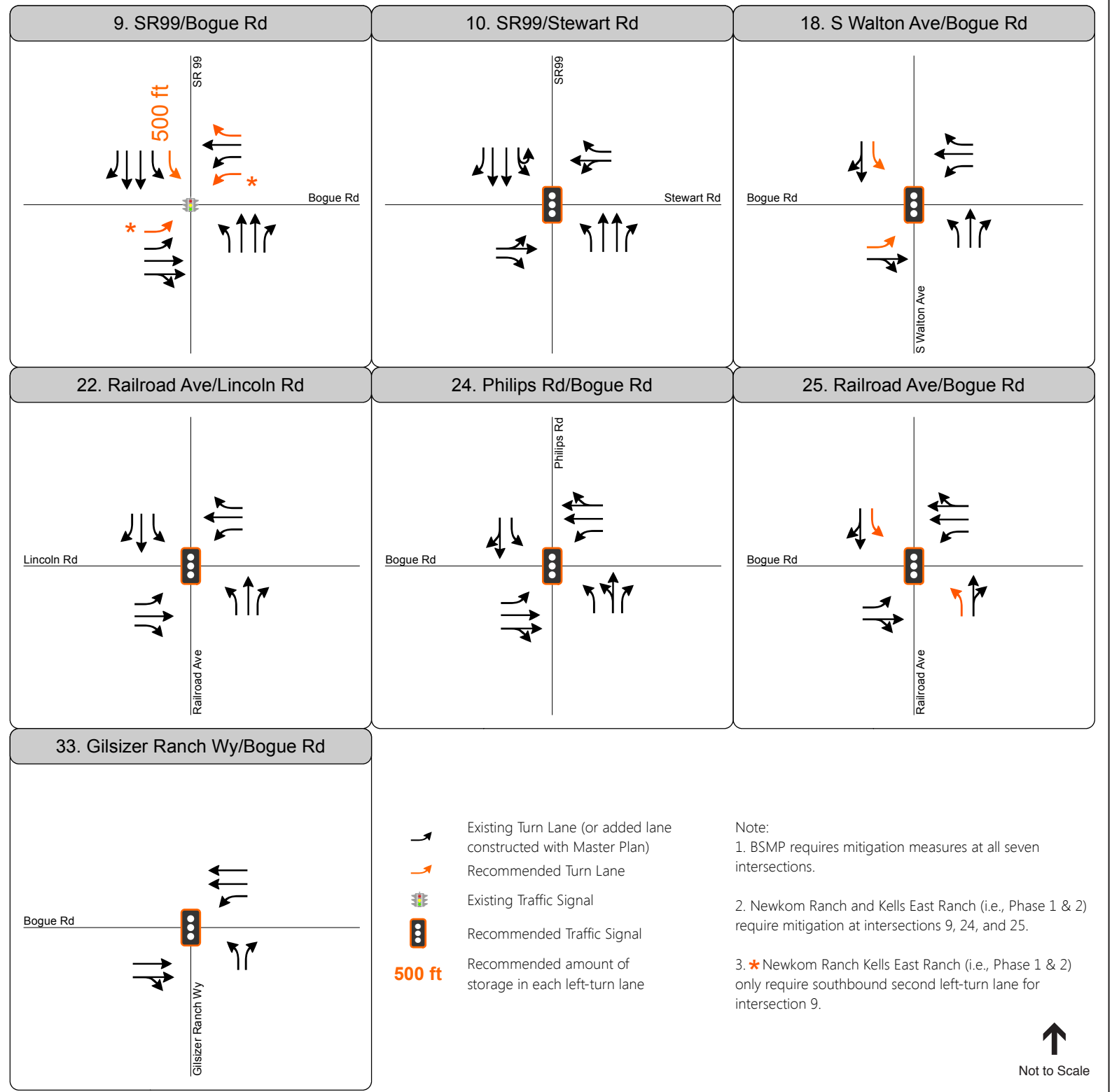
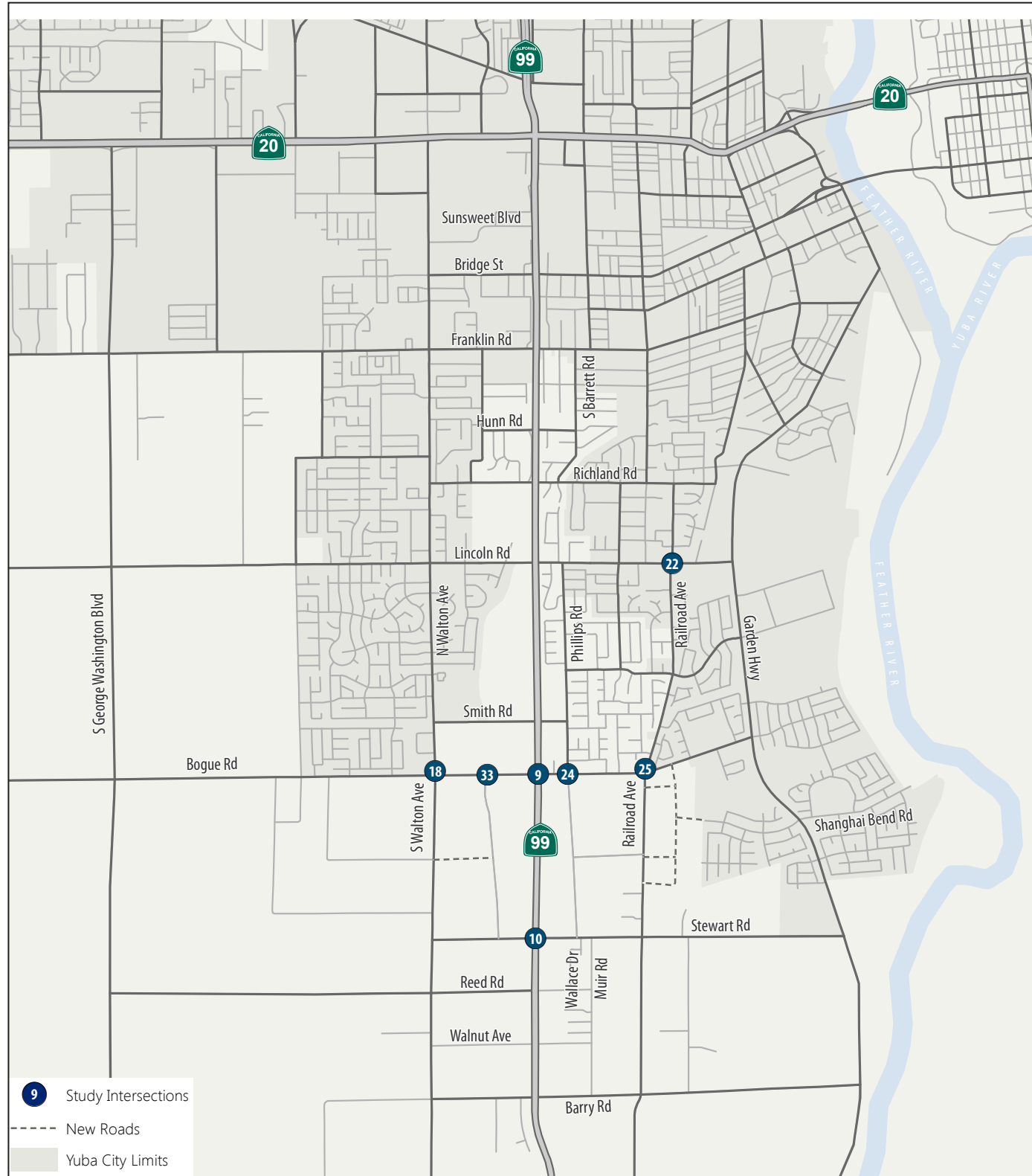
**TABLE 3.14-25
 PEAK HOUR INTERSECTION LEVEL OF SERVICE –
 EXISTING PLUS BSMP CONDITIONS WITH MITIGATION MEASURES**

Intersection	Traffic Control	Existing Conditions				Existing Plus BSMP				Existing Plus BSMP and Mitigation Measures			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 99/Bogue Road	Signal	22	C	26	C	45	D	66	E	46	D	55	D
SR 99/Stewart Road	SSSC/Signal	6 (17)	A (C)	4 (19)	A (C)	21 (120)	C (F)	13 (103)	B (F)	24	C	24	C
South Walton Avenue/Bogue Road	AWSC/Signal	11	B	12	B	27	D	38	E	19	B	21	C
Railroad Avenue/ Lincoln Rd	AWSC/Signal	16	C	22	C	19	C	40	E	19	B	21	C
Phillips Road/Bogue Road	SSSC/Signal	2 (11)	A (B)	2 (12)	A (B)	25 (156)	D (F)	44 (363)	E (F)	29	C	36	D
Railroad Avenue/Bogue Rd	AWSC/Signal	17	C	17	C	72	F	98	F	22	B	32	C
Gilsizer Ranch Way/Bogue Road	SSSC/Signal	Does Not Exist				4 (70)	A (F)	3 (35)	A (E)	14	B	6	A

NOTES:

1. For signalized intersections, roundabouts, and AWSC average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS is reported for the entire intersection LOS and the most-delayed individual movement in parenthesis.
2. SSSC = Side Street Stop
3. AWSC = All Way Stop Control
4. See prior pages for discussion of mitigation measures.
5. X/Y = Traffic control under Existing Plus BSMP/Existing Plus BSMP with Mitigation conditions.

SOURCE: Fehr & Peers, 2017



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Mitigation Measure 3.14-1(b): Yuba City Intersections (NR/KER)

The project applicant(s) shall construct the following improvements. Improvement shall be required at such time that the retail center in the southwest quadrant of the Bogue Road/Phillips Road intersection is constructed. It shall also be required at such time that two-thirds of the total dwelling units within Newkom Ranch and Kells East Ranch are developed. Improvement ii shall be required at such time that two-thirds of the total dwelling units within Newkom Ranch and Kells East Ranch are developed. The financial responsibility for each project applicant shall be determined by the City and shall be included in each applicant’s project approval documentation.

- i. Install a traffic signal at the Bogue Road/Phillips Road intersection (in conjunction with lane configurations planned under existing plus BSMP conditions); and
- ii. Install a traffic signal at the Bogue Road/Railroad Avenue intersection and widen/restripe the northbound and southbound approaches to provide dedicated left-turn pockets (in conjunction with lane configurations planned under existing plus BSMP conditions).

Significance After Mitigation: Table 3.14-26 displays the effectiveness of each mitigation measure under existing plus Phase I and II conditions. As shown, each intersection would operate at an acceptable LOS D or better under existing plus Phase I and II conditions. With the implementation of Mitigation Measure 3.14-1(b) listed above, this impact would be reduced to a **less-than-significant** level for Phase I and II.

**TABLE 3.14-26
 PEAK HOUR INTERSECTION LEVEL OF SERVICE – EXISTING PLUS PHASE I AND II CONDITIONS
 WITH MITIGATION MEASURES**

Intersection	Traffic Control	Existing Conditions				Existing Plus Phase I and II				Existing Plus Phase I and II and Mitigation Measures			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 99/Bogue Road	Signal	22	C	26	C	36	D	51	D	39	D	50	D
Phillips Road/Bogue Road	SSSC/Signal	2 (11)	A (B)	2 (12)	A (B)	17 (103)	C (F)	44 (266)	E (F)	26	C	29	C
Railroad Avenue/Bogue Rd	AWSC/Signal	17	C	17	C	58	F	76	F	20	C	20	B

NOTES:

- 1 For signalized intersections, roundabouts, and AWSC average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS is reported for the entire intersection LOS and the most-delayed individual movement in parenthesis.
- 2 SSSC = Side Street Stop
- 3 AWSC = All Way Stop Control
- 4 See prior pages for discussion of mitigation measures.
- 5 X/Y = Traffic control under Existing Plus Phase I and II/Existing Plus Phase I and II with Mitigation conditions.

SOURCE: Fehr & Peers, 2017

Impact 3.14-2: Implementation of the proposed BSMP would not cause significant impacts at intersections or roadways in Sutter County.

BSMP

The BSMP would not cause any Sutter County intersections or roadways to worsen from acceptable to unacceptable, or exacerbate to a significant degree currently unacceptable operations. Therefore, this impact is considered **less than significant**.

Newkom Ranch/Kells East Ranch

Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would not cause any Sutter County intersections or roadways to worsen from acceptable to unacceptable, or exacerbate to a significant degree currently unacceptable operations. Therefore, this impact is considered **less than significant**.

Summary

The BSMP would not cause significant impacts at Sutter County intersections or roadways maintained by Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would also not cause significant impacts at Sutter County intersections or roadways. Therefore, this impact is considered **less than significant**.

Mitigation Measure

None required.

Impact 3.14-3: Implementation of the proposed BSMP would cause significant LOS-related impacts at intersections maintained by Caltrans.

BSMP

The BSMP would cause significant impacts at the following intersections maintained by Caltrans:

- SR 99/Bogue Road (LOS C to E during the PM peak hour)
- SR 99/Stewart Road (LOS F during the AM and PM peak hours and peak hour signal warrant met)

Table 3.14-12 indicates that the proposed BSMP would worsen delays at other intersections (besides the two listed above) along SR 99. However, impacts would be less than significant at those locations because either the resulting LOS remain acceptable, operations would be unacceptable but the peak hour signal warrant would not be met, or the increase the delay would be less than five seconds (for already unacceptable operations). Impacts of the proposed BSMP at these two intersections is considered **significant**.

Newkom Ranch/Kells East Ranch

Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would not cause any Caltrans intersections to worsen from acceptable to unacceptable, or exacerbate to a significant degree currently unacceptable operations. Therefore, this impact is considered **less than significant**.

Summary

The proposed BSMP would cause significant LOS-related impacts at two intersections maintained by Caltrans. Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would not cause any significant LOS-related impacts to Caltrans intersections. Therefore, this impact is considered **significant** for the proposed BSMP, but **less than significant** for Newkom Ranch and Kells East Ranch (i.e., Phase I and II). Mitigation measures are required for the significant impact, and are available to improve operations to acceptable levels.

Mitigation Measure

Mitigation measures identified below are recommended for significant intersection impacts (refer to Figure 3.14-17 for illustration of improvements):

Mitigation Measure 3.14-3: Caltrans Intersections LOS (BSMP)

The project applicant(s) shall construct the improvements described below. The timing of the need for these improvements will depend on the amount of development on the west versus east side of SR 99, mix of land uses, and level of background traffic growth. The applicant shall coordinate with City staff and Caltrans regarding construction of these improvements as individual projects within the BSMP are proposed. The financial responsibility for each project applicant shall be determined by the City and shall be included in each applicant's project approval documentation.

- i. Widen the SR 99/Bogue Road intersection to provide a second southbound left-turn lane that provides 500 feet of storage in each lane. Widen Bogue Road to construct a second eastbound and westbound left-turn lane. Restripe westbound Bogue Road approaching SR 99 to consist of two left-turn lanes, one through lane, and one right-turn lane (with the right-turn consisting of an overlap arrow); and
- ii. Install a traffic signal at the SR 99/Stewart Road intersection.

Significance After Mitigation: Table 3.14-25 displays the predicted effectiveness of each mitigation measure. As shown, operations would be restored to LOS D at the SR 99/Bogue Road intersection, and LOS C at the SR 99/Stewart Road intersection during each peak hour. Since the project applicant controls properties on both sides of SR 99 south of Bogue Road, widening of Bogue Road to accommodate the additional lanes is considered feasible. Additionally, the *State Route 99 Transportation Corridor Concept Report*²⁴ indicates that this segment of SR 99 is planned to ultimately be a six-lane expressway, which implies (and also based on review of aerial imagery) that right-of-way is available to widen SR 99 to accommodate a second southbound left-turn lane. Additionally, it is noted that the City, Caltrans, applicant representatives, and EIR

²⁴ California Department of Transportation, 2010. *State Route 99 Transportation Corridor Concept Report*.

consultants met on May 7, 2015 to discuss improvements along SR 99 to accommodate the project. Although that meeting did not result in any formal agreements, there was consensus around the need to provide additional capacity to accommodate the project. With the implementation of Mitigation Measure 3.14-3(i) and (ii) listed above, this impact would be reduced to a **less-than-significant** level for the proposed BSMP.

Impact 3.14-4: Implementation of the proposed BSMP would cause significant queuing-related impacts at intersections maintained by Caltrans.

BSMP

The proposed BSMP would cause significant queuing-related impacts at the following intersection maintained by Caltrans:

- SR 99/Bogue Road – The southbound left-turn lane would have a maximum vehicle queue of 1,250 feet during the PM peak hour, which would exceed the 450 feet of available storage. This would cause traffic to queue into the adjacent through lane.

The impact of the proposed BSMP at this intersection is considered **significant**.

Newkom Ranch/Kells East Ranch

Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would cause significant queuing-related impacts at the following intersection maintained by Caltrans:

- SR 99/Bogue Road – The southbound left-turn lane would have a maximum vehicle queue of 775 feet during the PM peak hour, which would exceed the 450 feet of available storage. This would cause traffic to queue into the adjacent through lane.

The impact of Newkom Ranch and Kells East Ranch (i.e., Phase I and II) at this intersection is considered **significant**.

Summary

The proposed BSMP would cause significant queuing-related impacts at one intersection (SR 99/Bogue Road) maintained by Caltrans. Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would also cause this same impact, though to a lesser degree of severity. This impact is considered **significant** for both the BSMP, and for Newkom Ranch and Kells East Ranch (i.e., Phase I and II).

Mitigation Measure

The mitigation measure identified below are recommended for significant queuing impacts:

Mitigation Measure 3.14-4(a): Caltrans Intersections Queuing (BSMP)

Implement Mitigation Measure 3.14-3(i), which consists of adding a second southbound left-turn lane at the SR 99/Bogue Road intersection and providing 500 feet of storage in each turn lane. To address queuing impacts in the southbound left-turn lane prior to the

overall intersection LOS reaching an unacceptable level, the second left-turn lane is necessary. The timing of the need for these improvements will depend on the amount of development on the west versus east side of SR 99, mix of land uses, and level of background traffic growth. The applicant shall coordinate with City staff and Caltrans regarding construction of these improvements as individual projects within the BSMP are proposed. The financial responsibility for each project applicant shall be determined by the City and shall be included in each applicant’s project approval documentation.

Significance After Mitigation: Table 3.14-27 displays the predicted effectiveness of this mitigation measure under existing plus BSMP conditions. As shown, the maximum queue in the southbound left-turn lane would be 300 feet, which is less than the 500 feet per lane that would be provided with this mitigation. This table also demonstrates that vehicular queuing at the SR 99/Stewart Road intersection would also be acceptable with installation of a traffic signal (i.e., implementation of Mitigation Measure 3.14-3(ii)). With the implementation of Mitigation Measure 3.14-3(i), this impact would be reduced to a **less-than-significant** level.

**TABLE 3.14-27
 MAXIMUM QUEUE LENGTH ESTIMATES ON SR 99 – EXISTING PLUS BSMP CONDITIONS
 WITH MITIGATION MEASURES**

Intersection ¹	Traffic Control	Turn Lane	Storage ²	Maximum Queue Length ³					
				Existing Conditions		Existing Plus BSMP		Existing Plus BSMP Plus Mitigations	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SR 99/Bogue Rd	Traffic Signal	SB Left	450 ft.	75	200	325	1,250	175	300
		SB Through	N/A	200	150	275	1,250	225	200
SR 99/Stewart Rd	Traffic Signal	NB Left	450 ft.	50	25	125	100	175	200
		SB Left	450 ft.	50	50	100	100	125	175

NOTES:

1. The project would increase left and right-turning movements at the SR 99/Bogue Road and SR 99/Stewart Road intersections.
2. Estimated based on aerial imagery. N/A = Not applicable for through lanes.
3. Based on output from SimTraffic model. Values rounded up to the nearest 25 feet.
4. See prior pages for discussion of mitigation measures.

SOURCE: Fehr & Peers, 2017

Mitigation Measure 3.14-4(b): Caltrans Intersections Queuing (NR/KER)

The project applicant(s) shall construct the following improvements at the SR 99/Bogue Road intersection. These improvements shall be in place at such time that the 21-acre retail center located in the southwest quadrant of the Bogue Road/Phillips Road intersection and 20 additional acres of residential in Newkom Ranch or Kells East Ranch are constructed. The financial responsibility for each project applicant shall be determined by the City and shall be included in each applicant’s project approval documentation.

- i. Widen the SR 99/Bogue Road intersection to provide a second southbound left-turn lane that provides 500 feet of storage in each lane.

Significance After Mitigation: Table 3.14-28 displays the predicted effectiveness of this mitigation measure under existing plus Phase I and II conditions. As shown, the maximum queue in the southbound left-turn lane would be 275 feet, which is less than the 500 feet per lane that would be provided with this mitigation. With the implementation of Mitigation Measures 3.14-4(a) and (b), this impact would be reduced to a **less-than-significant** level.

**TABLE 3.14-28
 MAXIMUM QUEUE LENGTH ESTIMATES ON SR 99 – EXISTING PLUS PHASE I AND II CONDITIONS WITH
 MITIGATION MEASURES**

Intersection ¹	Traffic Control	Turn Lane	Storage ²	Maximum Queue Length ³					
				Existing Conditions		Existing Plus Phase I and II		Existing Plus Phase I and II Plus Mitigations	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SR 99/Bogue Road	Traffic Signal	SB Left	450 ft.	75	200	275	475	175	275
		SB Through	N/A	200	150	225	775	250	225

NOTES:

1. The project would increase left and right-turning movements at the SR 99/Bogue Road and SR 99/Stewart Road intersections.
2. Estimated based on aerial imagery. N/A = Not applicable for through lanes.
3. Based on output from SimTraffic model. Values rounded up to the nearest 25 feet.
4. See prior pages for discussion of mitigation measures.

SOURCE: Fehr & Peers, 2017

Impact 3.14-5: Implementation of the proposed BSMP would include the provision of new bicycle and pedestrian facilities to support bicycle and pedestrian travel within the project, and connect the project with adjacent areas in the City of Yuba City.

BSMP/Newkom Ranch/Kells East Ranch

The proposed BSMP contains a comprehensive mobility network, including designated facilities for bicyclists and pedestrians. All collector and arterial streets would include six-foot Class II bike lanes in each direction. All new streets would include a minimum of five-foot sidewalks on both sides of the street. Some streets would have ten-foot multi-use paths such as Gilsizer Ranch Way. Existing streets along the edge of the BSMP site (e.g., Bogue Road, Stewart Road, South South Walton Avenue) would include sidewalks on both sides of the street if right-of-way is available, or may include a sidewalk or multi-use path on the project side of the street only. The proposed BSMP would not adversely affect an existing bicycle or pedestrian facility or fail to adequately provide for access by these modes. Therefore, this impact is considered **less than significant**.

Mitigation Measure

None required.

Impact 3.14-6: Implementation of the proposed BSMP would include designated bus stops and transit shelters to support transit use as a means of travel within the project and between the project and the surrounding area.

BSMP/Newkom Ranch/Kells East Ranch

Figure 3.14-6 shows conceptual bus stop locations within and abutting the BSMP. These locations have been identified based on coordination with the Yuba-Sutter Transit Director. As shown, bus stops would be provided on key roadways throughout the BSMP (i.e., Bogue Road, Stewart Road, South Walton Avenue, Gilsizer Way, and Railroad Avenue). Since the project would provide access to the transit for its residents and businesses, this impact is considered **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

This section presents the cumulatively considerable significant impacts of Phase I and II, and the BSMP as a whole. The impact analysis first determines if the cumulative impact is significant, inclusive of the proposed project. For those cumulative impacts deemed to be significant, a subsequent evaluation is conducted to determine whether the project's contribution to that impact is considerable (using the significance criteria as the basis for this determination). If the proposed project's contribution is less than considerable, then the cumulative impact is less than significant. If the proposed project's contribution is considerable, then the cumulative impact is significant, and mitigation is required.

Similar to the organization of project-specific mitigations, the formatting of mitigation measures for cumulatively considerable impacts first identifies all mitigations recommended for the proposed BSMP as a whole, and then presents those mitigations recommended for Phase I and II only.

For project-specific impacts, the recommended mitigation requires the applicant to construct physical improvements. For cumulatively considerable impacts, the recommended mitigation takes two potential forms. If the cumulative impact at a given facility is also a project-specific impact, then applicant construction is recommended. If the cumulative impact at a given facility does not occur under existing plus project conditions, then the mitigation measure consists of a

fair share contribution (because the project contributes to the cumulative need for the improvement, but does not trigger it upon its own development).

Mitigation consisting of fair share contributions for cumulative improvements on facilities owned and operated by the City of Yuba City is deemed to reduce cumulatively considerable impacts to less than significant provided that the identified improvement is feasible. This conclusion recognizes that the City is able to add new improvements to its Capital Improvement Program (CIP) based on fees that can be collected from all new development in the City to pay its fair share toward these cumulatively necessary improvements. Conversely, mitigation consisting of fair share contributions for cumulative improvements on Caltrans facilities is deemed to not reduce the impact to less than significant because the City's CIP does not currently cover the cost of improvements on the State highway system, and Caltrans does not have an established fee program for corridor improvements. Caltrans does have processes in place whereby they may accept direct payments from applicants as fair share mitigation for impacts to the state highway system. However, negotiations between the applicant, City, and Caltrans regarding such a payment have not been initiated at this time.

Impact 3.14-7: Implementation of the proposed BSMP, in combination with other cumulative development, would cause cumulatively considerable significant impacts at intersections in the City of Yuba City.

BSMP

The proposed BSMP would contribute to cumulatively considerable significant impacts at the following intersections in the City of Yuba City:

- South Walton Avenue/Bogue Road (LOS F operations exacerbated during the AM and PM peak hours);
- Phillips Road/Bogue Road (LOS C to F during the AM peak hour and LOS B to F during the PM peak hour);
- Railroad Avenue/Bogue Road (LOS E to F during the AM peak hour and LOS D to F during the PM peak hour);
- Garden Highway/Bogue Road (LOS C to E during the AM and PM peak hours); and
- Gilsizer Ranch Way/Bogue Road (LOS F during the AM and PM peak hours).

Four of the five intersections would consist of stop control under cumulative Plus BSMP conditions. In addition to operating at an unacceptable LOS F, each unsignalized intersection would satisfy the peak hour warrant for consideration of a traffic signal. Therefore, this impact is considered cumulatively **significant**.

Newkom Ranch/Kells East Ranch

Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would contribute to cumulatively considerable significant impacts at the following intersections in the City of Yuba City:

- South Walton Avenue/Bogue Road (LOS F operations exacerbated during the AM and PM peak hours)
- Phillips Road/Lincoln Road (LOS F operations exacerbated during the PM peak hour)
- Phillips Road/Bogue Road (LOS C to F during the AM peak hour and LOS B to F during the PM peak hour)
- Railroad Avenue/Bogue Road (LOS E to F during the AM peak hour and LOS D to F during the PM peak hour)
- Gilsizer Ranch Way/Bogue Road (LOS F during the PM peak hour)

Each of these intersections would consist of stop control under cumulative plus Phase I and II conditions. In addition to operating at an unacceptable LOS F, each intersection would satisfy the peak hour warrant for consideration of a traffic signal for the specified above list above. Therefore, this impact is considered cumulatively **significant**.

Summary

The BSMP would cause significant impacts at five intersections within and maintained by the City of Yuba City. Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would also cause significant impacts at four of those intersections as well as one other intersection that is not impacted under cumulative plus BSMP conditions.

Mitigation Measure

Mitigation measures identified below are recommended for significant impacts:

Mitigation Measure 3.14-7(a): Cumulative Yuba City Intersections (BSMP)

- i. Implement Mitigation Measure 3.14-1(a)(i): Install traffic signal and add turn lanes at the Bogue Road/South Walton Avenue intersection.
- ii. Implement Mitigation Measure 3.14-1(a)(iii): Install traffic signal at the Bogue Road/Phillips Road intersection.
- iii. Implement Mitigation Measure 3.14-1(a)(iv): Install a traffic signal and add turn lanes at the Bogue Road/Railroad Avenue intersection.
- iv. Implement Mitigation Measure 3.14-1(a)(v): Install traffic signal at the Gilsizer Ranch Way/Bogue Road intersection.
- v. Contribute fair share cost for restriping the eastbound approach at the Garden Highway/Bogue Road intersection from a through lane to a shared through/right lane, and modifying the signal phasing to east-west split-phase.

Significance After Mitigation: Table 3.14-29 displays the effectiveness of each mitigation measure under cumulative plus BSMP conditions. As shown, these mitigation measures would restore operations at each intersection to an acceptable LOS D or better. The Bogue Road/Phillips Road intersection is recommended to operate with split-phasing on the northbound and southbound approaches and protected left-turn phasing on the eastbound and westbound approaches. The Bogue Road/Railroad Avenue intersection is

recommended to operate with protected left-turn phasing on all approaches. With the implementation of the above mitigation measures, this impact would be reduced to a **less-than-significant** level with the proposed BSMP.

**TABLE 3.14-29
 PEAK HOUR INTERSECTION LEVEL OF SERVICE – CUMULATIVE PLUS BSMP CONDITIONS
 WITH MITIGATION MEASURES**

Intersection	Traffic Control	Cumulative No Project Conditions				Cumulative Plus BSMP				Cumulative Plus BSMP and Mitigation Measures			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 99/Hunn Rd	SSSC/Signal	10 (95)	A (F)	10 (118)	B (F)	10 (106)	A (F)	11 (112)	B (F)	15	B	17	B
SR 99/Smith Rd	SSSC/Signal	16 (138)	C (F)	16 (148)	C (F)	16 (170)	C (F)	15 (108)	B (F)	22	C	19	B
SR 99/Bogue Rd	Signal	41	D	50	D	67	E	89	F	43	D	51	D
SR 99/Stewart Rd	SSSC/Signal	11 (86)	B (F)	9 (229)	A (F)	36 (472)	E (F)	27 (879)	D (F)	27	C	40	D
South Walton Ave/ Bogue Rd	AWSC/ Signal	51	F	54	F	190	F	150	F	27	C	33	C
Phillips Rd/Bogue Rd	SSSC/ Signal	3 (17)	A (C)	3 (14)	A (B)	24 (124)	C (F)	45 (278)	E (F)	33	D	30	C
Railroad Ave/Bogue Rd	AWSC/ Signal	49	E	35	D	117	F	218	F	26	C	35	D
Garden Hwy/Bogue Rd	Signal	28	C	28	C	55	E	56	E	39	D	51	D
Gilsizer Ranch Way/ Bogue Rd	SSSC/ Signal	Does Not Exist				4 (100)	A (F)	3 (76)	A (F)	5	A	6	A

NOTES:

- For signalized intersections, roundabouts, and AWSC average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS is reported for the entire intersection LOS and the most-delayed individual movement in parenthesis.
- SSSC = Side Street Stop
- AWSC = All Way Stop Control
- See prior pages for discussion of mitigation measures. In some instances, mitigation consists of applicant constructing improvements. In other instances, mitigation consists of applicant fair share contribution toward an improvement.
- X/Y = Traffic control under Cumulative Plus BSMP/Cumulative Plus BSMP with Mitigation conditions.

SOURCE: Fehr & Peers, 2017

Mitigation Measure 3.14-7(b): Cumulative Yuba City Intersections (NR/KER)

- Implement Mitigation Measure 3.14-1(b)(i): Install traffic signal at the Bogue Road/Phillips Road intersection.
- Implement Mitigation Measure 3.14-1(b)(ii): Install a traffic signal and add turn lanes at the Bogue Road/Railroad Avenue intersection.
- Contribute fair share cost for installing a traffic signal at the South Walton Avenue/Bogue Road intersection.
- Contribute fair share cost for installing a traffic signal at the Phillips Road/Lincoln Road intersection.
- Contribute fair share cost for installing a traffic signal at the Gilsizer Ranch Way/Bogue Road intersection.

Significance After Mitigation: Table 3.14-displays the effectiveness of each mitigation measure under cumulative plus Phase I and II conditions. As shown, these mitigation measures would restore operations at each intersection to an acceptable LOS D or better. With the implementation of the above mitigation measures, this impact would be reduced to a **less-than-significant** level with Phases I and II.

**TABLE 3.14-30
 PEAK HOUR INTERSECTION LEVEL OF SERVICE – CUMULATIVE PLUS PHASE I AND II CONDITIONS WITH
 MITIGATION MEASURES**

Intersection	Traffic Control	Cumulative No Project Conditions				Cumulative Plus Phase I and II				Cumulative Plus Phase I and II and Mitigation Measures			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 99/Hunn Road	SSSC/ Signal	10 (95)	A (F)	10 (118)	B (F)	10 (109)	B (F)	11 (139)	B (F)	14	B	16	B
SR 99/Smith Road	SSSC/ Signal	16 (138)	C (F)	16 (148)	C (F)	15 (153)	C (F)	17 (234)	C (F)	20	B	21	C
SR 99/Bogue Road	Signal	41	D	50	D	61	E	64	E	40	D	40	D
SR 99/Stewart Rd	SSSC/ Signal	11 (86)	B (F)	9 (229)	A (F)	19 (143)	C (F)	19 (411)	C (F)	22	C	46	D
South Walton Avenue/Bogue Rd	AWSC/ Signal	51	F	54	F	85	F	115	F	21	C	26	C
Phillips Road/ Lincoln Road	SSSC/ Signal	9 (62)	A (F)	8 (72)	A (F)	9 (44)	A (E)	10 (89)	A (F)	9	A	9	A
Phillips Road/Bogue Road	SSSC/ Signal	3 (17)	A (C)	3 (14)	A (B)	14 (80)	A (F)	46 (225)	E (F)	22	C	30	C
Railroad Avenue/ Bogue Rd	AWSC/ Signal	49	E	35	D	105	F	111	F	22	C	24	C
Gilsizer Ranch Way/ Bogue Road	SSSC/ Signal	Does Not Exist				2 (25)	A (C)	13 (110)	B (F)	5	A	6	A

NOTES:

1. For signalized intersections, roundabouts, and AWSC average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS is reported for the entire intersection LOS and the most-delayed individual movement in parenthesis.
2. SSSC = Side Street Stop
3. AWSC = All Way Stop Control
4. See prior pages for discussion of mitigation measures. In some instances, mitigation consists of applicant constructing improvements. In other instances, mitigation consists of applicant fair share contribution toward an improvement.
5. X/Y = Traffic control under Cumulative Plus Phase I and II/Cumulative Plus Phase I and II with Mitigation conditions.

SOURCE: Fehr & Peers, 2017

Impact 3.14-8: Implementation of the proposed BSMP, in combination with other cumulative development, would not cause significant impacts at intersections or roadways in Sutter County.

BSMP

The proposed BSMP would not cause any Sutter County intersections or roadways to worsen from acceptable to unacceptable, or exacerbate to a significant degree currently unacceptable operations. Therefore, this impact is considered **less than significant**.

Newkom Ranch/Kells East Ranch

Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would not cause any Sutter County intersections or roadways to worsen from acceptable to unacceptable, or exacerbate to a significant degree currently unacceptable operations. Therefore, this impact is considered **less than significant**.

Summary

The BSMP would not cause significant impacts at Sutter County intersections or roadways maintained by. Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would also not cause significant impacts at Sutter County intersections or roadways. Therefore, this impact is considered **less than significant**.

Mitigation Measure

None required.

Impact 3.14-9: Implementation of the proposed BSMP, in combination with other cumulative development, would cause cumulatively significant LOS-related impacts at intersections maintained by Caltrans.

BSMP

The proposed BSMP would cause cumulatively significant impacts at the following intersections maintained by Caltrans:

- SR 99/Hunn Road (LOS F operations exacerbated during the AM peak hour and peak hour signal warrant met);
- SR 99/Smith Road (LOS F operations exacerbated during the AM peak hour and peak hour signal warrant met);
- SR 99/Bogue Road (LOS D to E during the AM peak hour and LOS D to F during the PM peak hour); and
- SR 99/Stewart Road (LOS F operations exacerbated during the AM and PM peak hours and peak hour signal warrant met).

Table 3.14-18 indicates that the project would worsen delays at other intersections (besides those listed above) along SR 99. However, impacts are less than significant at those locations because either the resulting LOS remained acceptable, operations were unacceptable but the peak hour signal warrant was not met, or the increase in delay was less than five seconds (for already unacceptable operations). The impacts of the proposed BSMP at these intersections are considered cumulatively **significant**.

Newkom Ranch/Kells East Ranch

Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would contribute to cumulatively considerable significant impacts at the following intersections maintained by Caltrans:

- SR 99/Hunn Road (LOS F operations exacerbated during PM peak hour and peak hour signal warrant met);
- SR 99/Smith Road (LOS F operations exacerbated during the AM and PM peak hours and peak hour signal warrant met);
- SR 99/Bogue Road (LOS D to E during the AM peak hour and LOS D to E during the PM peak hour); and
- SR 99/Stewart Road (LOS F operations exacerbated during the AM and PM peak hours and peak hour signal warrant met).

Table 3.14-19 indicates that Phase I and II would worsen delays at other intersections (besides those listed above) along SR 99. However, impacts are less than significant at those locations because either the resulting LOS remained acceptable, operations were unacceptable but the peak hour signal warrant was not met, or the increase in delay was less than five seconds (for already unacceptable operations). Phase I and II impacts at these intersections are considered cumulatively **significant**.

Summary

The proposed BSMP would cause significant LOS-related impacts at five intersections maintained by Caltrans. Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would also cause significant impacts at four of those five intersections. Therefore, this impact is considered **significant** for proposed BSMP, and Phase I and II. Mitigation measures are required for the significant impact, and are available to improve operations to acceptable levels at certain intersections, as described below.

Mitigation Measure

Mitigation measures identified below are recommended for significant intersection impacts:

Mitigation Measure 3.14-9(a): Cumulative Caltrans Intersections LOS (BSMP)

- i. Implement Mitigation Measure 3.14-3(a)(i): Add turn lanes at the SR 99/Bogue Road intersection.
- ii. Implement Mitigation Measure 3.14-3(a)(ii): Install traffic signal at the SR 99/Stewart Road intersection.
- iii. Contribute fair share cost for adding a second northbound left-turn lane and adding dedicated eastbound and westbound right-turn lanes at the SR 99/Bogue Road intersection.
- iv. Contribute fair share cost for installing a traffic signal at the SR 99/Hunn Road intersection.
- v. Contribute fair share cost for installing a traffic signal at the SR 99/Smith Road intersection.

Significance After Mitigation: Table 3.14-29 displays the effectiveness of each mitigation measure. As shown, each intersection would operate at LOS D or better with

recommended mitigation measures in place (and assuming the remaining fair share funding is identified). Since the project applicant controls properties on both sides of SR 99 south of Bogue Road, widening of Bogue Road to accommodate the additional lanes is considered feasible. Additionally, the *State Route 99 Transportation Corridor Concept Report*²⁵ indicates that this segment of SR 99 is planned to ultimately be a six-lane expressway, which implies (and also based on review of aerial imagery) that right-of-way is available to widen SR 99 to add a second southbound left-turn lane. Lastly, it is noted that the City, Caltrans, applicant representatives, and EIR consultants met on May 7, 2015 to discuss improvements along SR 99 to accommodate the project. Although that meeting did not result in any formal agreements, there was consensus around the need to provide additional capacity to accommodate the project.

For impacts to SR 99 intersections that require fair share funding for an identified improvement, those impacts are considered cumulatively significant and unavoidable because there are no known fee programs in place to collect the remaining funds to ensure the identified improvement is made. However, it is noted that Caltrans has processes in place whereby they may accept direct payments from applicants as fair share mitigation for impacts to the state highway system. However, negotiations between the applicant, City, and Caltrans regarding such a payment have not been initiated at this time.

Therefore, cumulative impacts at the SR 99/Hunn Road, SR 99/Smith Road, and SR 99/Bogue Road are considered **significant and unavoidable**, while the impact at the SR 99/Stewart Road intersection is **less than significant** after mitigation.

Mitigation Measure 3.14-9(b): Cumulative Caltrans Intersections LOS (NR/KER)

- i. Implement Mitigation Measure 3.14-4(b)(i): Add second southbound left-turn lane at the SR 99/Bogue Road intersection.
- ii. Contribute fair share cost for adding a second northbound left-turn lane and adding dedicated eastbound and westbound right-turn lanes at the SR 99/Bogue Road intersection.
- iii. Contribute fair share cost for installing a traffic signal at the SR 99/Hunn Road intersection.
- iv. Contribute fair share cost for installing a traffic signal at the SR 99/Smith Road intersection.
- v. Contribute fair share cost for installing a traffic signal at the SR 99/Stewart Road intersection.

Significance After Mitigation: Table 3.14-30 displays the effectiveness of each mitigation measure. As shown, each intersection would operate at LOS D or better with recommended mitigation measures in place. Since the project applicant controls properties on both sides of SR 99 south of Bogue Road, widening of Bogue Road to accommodate the additional lanes is considered feasible. Additionally, the *State Route 99 Transportation Corridor Concept Report*²⁶ indicates that this segment of SR 99 is planned to ultimately be a six-lane expressway, which implies (and also based on review

²⁵ California Department of Transportation, 2010. *State Route 99 Transportation Corridor Concept Report*.

²⁶ California Department of Transportation, 2010. *State Route 99 Transportation Corridor Concept Report*.

of aerial imagery) that right-of-way is available to widen SR 99 to add a second southbound left-turn lane.

For impacts to SR 99 intersections that require fair share funding for an identified improvement, those impacts are considered cumulatively significant and unavoidable because there are no known fee programs in place to collect the remaining funds to ensure the identified improvement is made. However, it is noted that Caltrans has processes in place whereby they may accept direct payments from applicants as fair share mitigation for impacts to the state highway system. However, negotiations between the applicant, City, and Caltrans regarding such a payment have not been initiated at this time.

Therefore, cumulative impacts at the SR 99/Hunn Road, SR 99/Smith Road, SR 99/Bogue Road, and SR 99/Stewart Road are considered **significant and unavoidable**.

Impact 3.14-10: Implementation of the proposed BSMP, in combination with other cumulative development, would cause significant queuing-related impacts at intersections maintained by Caltrans.

BSMP

As shown in Table 3.14-19, the proposed BSMP would cause significant queuing-related impacts at the following intersection maintained by Caltrans:

- SR 99/Bogue Road – The northbound and southbound left and right-turn movements would each have maximum vehicle queues that exceed the available storage during the AM or PM peak hours.

The impact of the proposed BSMP at this intersection is considered **significant**.

Newkom Ranch/Kells East Ranch

As shown in Table 3.14-2121, Newkom Ranch and Kells East Ranch (i.e., Phase I and II) would cause significant queuing-related impacts at the following intersection maintained by Caltrans:

- SR 99/Bogue Road – The southbound left and right-turn and the northbound left-turn movements would each have maximum vehicle queues that exceed the available storage during the AM or PM peak hours; and
- SR 99/Stewart Road – The northbound left-turn movement would have a maximum vehicle queue that exceeds the available storage during the PM peak hour.

Newkom Ranch and Kells East Ranch (i.e., Phase I and II) impacts at these intersections are considered **significant**.

Summary

The proposed BSMP would cause significant queuing-related impacts at one intersection (SR 99/Bogue Road) maintained by Caltrans. Newkom Ranch and Kells East Ranch (i.e., Phase I and II)

would also cause this same impact, and would also cause a queuing impact at SR 99/Stewart Road due the heavy amount of northbound left-turn traffic. These impacts are considered **significant** for both the proposed BSMP, and for Newkom Ranch and Kells East Ranch (i.e., Phase I and II).

The mitigation measures identified below are recommended for significant queuing impacts.

Mitigation Measure

Mitigation Measure 3.14-10(a): Cumulative Caltrans Intersections Queuing (BSMP)

- i. Implement Mitigation Measure 3.14-3(a)(i), which consists of adding a second southbound left-turn lane at the SR 99/Bogue Road intersection and providing 500 feet of storage in each turn lane.
- ii. Implement Mitigation Measure 3.14-9(a)(iii), which consists of paying fair share cost of adding a second northbound left-turn lane and dedicated eastbound and westbound right-turn lanes at the SR 99/Bogue Road intersection.

Significance After Mitigation: Table 3.14-31 displays the effectiveness of this mitigation measure under cumulative plus BSMP conditions. It indicates that the northbound left-turn lane at the SR 99/Bogue Road intersection would have a maximum queue of 475 feet. However, as indicated in the table footnote, this value does not represent a line of vehicles that spills out of the turn pocket, but rather the result of northbound through traffic queuing that causes left-turning traffic to not be able to access the turn pocket. A similar situation occurs in the northbound right-turn lane. The queuing in the southbound left- and right-turn lanes represent vehicular queues that would spill out of the turn pocket and into adjacent through lanes. The mitigation measures would result in reductions in vehicular queues in the southbound left- and right-turn lanes that no longer exceed their available vehicular storage. Northbound left- and right-turn movements would continue to occasionally be blocked by through traffic.

The results in Table 3.14-31 reflect upstream capacity constraints along SR 99 that limit the flow of traffic into the mid-point of the corridor (i.e., through the SR 99/Bogue Road intersection). To understand the actual queuing needs at the intersection under an ‘unconstrained demand’ scenario, supplemental traffic operations analysis was conducted based on the assumptions that 100 percent of the future travel demand arrives at the intersection. This is akin to assuming that additional capacity is provided north and south of the study intersection to enable all travel demand to be served. Table 3.14-32 shows the resulting maximum queue lengths, and indicates that additional turn lane lengthening may be necessary for some movements. This information can be used in support of future studies that will help determine the required geometrics (i.e., amount of storage and deceleration needed in turn lanes) at the SR 99/Bogue Road intersection.

Since the identified mitigation measures for queuing impacts to SR 99 intersections require fair share funding, those impacts are considered **cumulatively significant and unavoidable** because there are no known fee programs in place to collect the remaining funds to ensure the identified improvement is made. Caltrans does have processes in

**TABLE 3.14-31
MAXIMUM QUEUE LENGTH ESTIMATES ON SR 99 – CUMULATIVE PLUS BSMP CONDITIONS WITH MITIGATION MEASURES**

Intersection	Traffic Control	Turn Lane	Storage ¹	Maximum Queue Length ²					
				Cumulative No Project Conditions		Cumulative Plus BSMP		Cumulative Plus BSMP Plus Mitigations ³	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SR 99/Bogue Road	Traffic Signal	NB Left	450 ft.	275	400	375	475	350	475
		NB Through	N/A	375	550	550	800	575	800
		NB Right	300 ft.	225	325	325	350	300	325
		SB Left	450 ft.	125	225	300	475	150	225
		SB Through	N/A	400	300	400	475	325	250
		SB Right	250 ft.	225	100	325	175	200	150

NOTES:

1. Estimated based on aerial imagery. N/A = Not applicable for through lanes.
2. Based on output from SimTraffic model. Values rounded up to the nearest 25 feet. Results consider the effects of upstream bottlenecks that limit the flow of traffic through the mid-point of the corridor. Values shown in bold represent conditions in which through traffic on northbound SR 99 block access to the left- and right-turn lanes (versus those lanes being fully occupied).
3. See prior pages for discussion of mitigation measures.

SOURCE: Fehr & Peers, 2017

**TABLE 3.14-32
MAXIMUM QUEUE LENGTH ESTIMATES ON SR 99 – CUMULATIVE PLUS BSMP CONDITIONS WITH MITIGATION MEASURES AND UNCONSTRAINED VOLUMES**

Intersection	Traffic Control	Turn Lane	Storage ¹	Maximum Queue Length ²					
				Cumulative Plus BSMP		Cumulative Plus BSMP Plus Mitigations ³		Cumulative Plus BSMP Plus Mitigations and Unconstrained Demand ⁴	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SR 99/Bogue Road	Traffic Signal	NB Left	450 ft.	375	475	350	475	425	450
		NB Through	N/A	550	800	575	800	725	825
		NB Right	300 ft.	325	350	300	325	325	325
		SB Left	450 ft.	300	475	150	225	300	400
		SB Through	N/A	400	475	325	250	450	325
		SB Right	250 ft.	325	175	200	150	275	225

NOTES:

1. Estimated based on aerial imagery. N/A = Not applicable for through lanes.
2. Based on output from SimTraffic model. Values rounded up to the nearest 25 feet. Values shown in bold represent conditions in which through traffic on northbound SR 99 block access to the left- and right-turn lanes (versus those lanes being fully occupied).
3. See prior pages for discussion of mitigation measures.
4. For unconstrained conditions, reported queuing results are based on 100 percent of the northbound and southbound travel demand on SR 99 approaching/departing subject intersection (i.e., no upstream capacity constraints).

SOURCE: Fehr & Peers, 2017

place whereby they may accept direct payments from applicants as fair share mitigation for impacts to the state highway system. However, negotiations between the applicant, City, and Caltrans regarding such a payment have not been initiated at this time. Therefore, cumulative impacts related to queuing at the SR 99/Bogue Road intersection are considered **significant and unavoidable**.

Mitigation Measure 3.14-10(b): Cumulative Caltrans Intersections Queuing (NR/KER)

- i. Implement Mitigation Measure 3.14-4(a)(i), which consists of adding a second southbound left-turn lane at the SR 99/Bogue Road intersection and providing 500 feet of storage in each turn lane.
- ii. Implement Mitigation Measure 3.14-9(b)(ii), which consists of paying fair share cost of adding a second northbound left-turn lane and dedicated eastbound and westbound right-turn lanes at the SR 99/Bogue Road intersection.
- iii. Implement Mitigation Measure 3.14-9(b)(v), which consists of paying fair share cost for installing a traffic signal at the SR 99/Stewart Road intersection.
- iv. Contribute fair share cost for adding a second northbound left-turn lane at the SR 99/Stewart Road intersection, or contributing fair share cost for widening Bogue Road to four lanes from Gilsizer Ranch Way to South Walton Avenue.

Significance After Mitigation: Table 3.14-33 displays the effectiveness of this mitigation measure under cumulative plus Phase I and II conditions. Aside from the northbound through traffic queue blocking access to northbound right-turn lane (i.e., maximum queue of 325 feet during PM peak hour versus storage of 300 feet), adequate storage would be provided in all other turn lanes at the SR 99/Bogue Road intersection. At the SR 99/Stewart Road intersection, the heavy northbound left-turn movement (420 vehicles during the PM peak hour) would still exceed the storage if a traffic signal was installed (and even if further lengthening were to occur). To address this impact, Mitigation Measure 3.14-10(b)(iv) is recommended. The addition of a second northbound left-turn lane would enable the maximum queue to be accommodated within the dual turn lanes. Alternatively, widening of Bogue Road to four lanes from Gilsizer Ranch Way to South Walton Avenue would shift some of the northbound left-turn movement (and also explains why a dual left-turn at SR 99/Stewart Road was not needed with full development of the proposed BSMP) as a result of the added capacity, thereby enabling the single left-turn lane at SR 99/Stewart Road to operate acceptably.

Since the identified mitigation measures for these impacts to SR 99 intersections require fair share funding, those impacts are considered **cumulatively significant and unavoidable** because there are no known fee programs in place to collect the remaining funds to ensure the identified improvement is made. However, it is noted that Caltrans has processes in place whereby they may accept direct payments from applicants as fair share mitigation for impacts to the state highway system. However, negotiations between the applicant, City, and Caltrans regarding such a payment have not been initiated at this time. Therefore, cumulative impacts related to queuing at the SR 99/Bogue Road intersection are considered **significant and unavoidable**.

**TABLE 3.14-33
 MAXIMUM QUEUE LENGTH ESTIMATES ON SR 99 – CUMULATIVE PLUS PHASE I AND II CONDITIONS WITH
 MITIGATION MEASURES**

Intersection	Traffic Control	Turn Lane	Storage ¹	Maximum Queue Length ²					
				Cumulative No Project Conditions		Cumulative Plus Phase I and II		Cumulative Plus Phase I and II Plus Mitigations ³	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SR 99/Bogue Road	Traffic Signal	NB Left	450 ft.	275	400	475	475	300	250
		NB Through	N/A	375	550	800	1100	550	600
		NB Right	300 ft.	225	325	325	325	300	325
		SB Left	450 ft.	125	225	300	425	175	200
		SB Through	N/A	400	300	475	325	375	200
		SB Right	250 ft.	225	100	300	100	200	75
SR 99/ Stewart Road	Traffic Signal	NB Left	450 ft.	50	50	125	475	125	475 ⁴
		SB Left	450 ft.	75	50	75	50	100	75

NOTES:

- 1 Estimated based on aerial imagery. N/A = Not applicable for through lanes.
- 2 Based on output from SimTraffic model. Values rounded up to the nearest 25 feet. Results consider the effects of upstream bottlenecks that limit the flow of traffic through the mid-point of the corridor. Values shown in bold represent conditions in which through traffic on northbound SR 99 block access to the left- and right-turn lanes (versus those lanes being fully occupied).
- 3 See prior pages for discussion of mitigation measures.
- 4 Additional mitigation consists of paying fair share toward second northbound left-turn lane or widening of Bogue Road to four lanes from Gilsizer Ranch Way to South Walton Avenue. With additional mitigation in place, turn lane storage would be adequate.

SOURCE: Fehr & Peers, 2017

Impact 3.14-11: Implementation of the proposed BSMP would include the provision of new bicycle and pedestrian facilities to support bicycle and pedestrian travel within the project, and connect the project with adjacent areas in the City of Yuba City.

BSMP/Newkom Ranch/Kells East Ranch

The proposed BSMP contains a comprehensive mobility network, including designated facilities for bicyclists and pedestrians. All collector and arterial streets would include six-foot Class II bike lanes in each direction. All new streets would include a minimum of five-foot sidewalks on both sides of the street. Some streets would have ten-foot multi-use paths such as Gilsizer Ranch Way. Existing streets along the edge of the BSMP site (e.g., Bogue Road, Stewart Road, South Walton Avenue) would include sidewalks on both sides of the street if right-of-way is available, or may include a sidewalk or multi-use path on the project side of the street only. The proposed BSMP would not adversely affect an existing bicycle or pedestrian facility or fail to adequately provide for access by these modes. Therefore, this impact is considered **less than significant**, and no mitigation measures are required.

Mitigation Measure

None required.

Impact 3.14-12: Implementation of the proposed BSMP would include designated bus stops and transit shelters to support transit use as a means of travel within the project and between the project and the surrounding area.

BSMP/Newkom Ranch/Kells East Ranch

Figure 4.4 shows conceptual bus stop locations within and abutting the BSMP. These locations have been identified based on coordination with the Yuba-Sutter Transit Director. As shown, bus stops would be provided on key roadways throughout the BSMP (i.e., Bogue Road, Stewart Road, South Walton Avenue, Gilsizer Way, and Railroad Avenue). Since the project would provide access to the transit for its residents and businesses, this impact is considered **less than significant**.

Mitigation Measure

None required.

Table 3.14-34 provides a summary of project-specific and cumulative mitigation measure responsibility of Phase I and II, and the proposed BSMP at specific intersections.

Evaluation of Proposed Street Cross-Sections

This section evaluates the proposed cross-sections of streets within and abutting the Master Plan area with regard to the amount of traffic they are projected to carry under Cumulative Plus BSMP conditions. This evaluation is intended to confirm that the roadways are properly sized to accommodate anticipated traffic, and are not over- or under-sized.

The following specific roadways were reviewed based on their use and proposed cross-sections:

South Walton Avenue – According to Figure 3.14-16, this roadway along the BSMP frontage is anticipated to carry up to 6,000 vehicles per day. This volume of traffic can be adequately served by a street with a single lane in each direction (the project description identifies two northbound lanes and one southbound lane on this segment). Left-turn pockets are recommended at public street accesses and well-utilized private access driveways along the street. Additionally, the proposed Elementary/Middle School in the southeast quadrant of the South Walton Avenue/Bogue Road intersection may require a special cross-section that considers ingress/egress to parking lots, bus loading/unloading, etc. Coordination with the Yuba City School District would be necessary to evaluate those requirements once a site plan for the proposed school is developed.

**TABLE 3.14-34
 SUMMARY OF ROADWAY SYSTEM MITIGATION MEASURES**

Intersection	Project-Specific Mitigation ¹		Cumulative Mitigation ¹	
	Phase I and II	BSMP ⁵	Phase I and II	BSMP
SR 99/Hunn Road	-	-	Pay fair share toward signal	Pay fair share toward signal
SR 99/Smith Road	-	-	Pay fair share toward signal	Pay fair share toward signal
SR 99/Bogue Road	Add second SB LT Lane ²	Add lanes to EB, WB, and SB approaches	Add second SB LT Lane ⁶	Add lanes to EB, WB, and SB approaches ⁶
SR 99/Stewart Road	-	Install traffic signal	Pay fair share toward signal ⁷	Install traffic signal
South Walton Avenue/Bogue Road	-	Install traffic signal and additional lanes	Pay fair share toward signal and additional lanes	Install traffic signal and additional lanes
Phillips Road/Bogue Road	Install traffic signal ³	Install traffic signal	Install traffic signal	Install traffic signal
Railroad Avenue/Lincoln Rd	-	Install traffic signal	-	-
Phillips Road/Lincoln Rd	-	-	Pay fair share toward signal	-
Railroad Avenue/Bogue Rd	Install traffic signal and additional lanes ⁴	Install traffic signal and additional lanes	Install traffic signal and additional lanes	Install traffic signal and additional lanes
Gilsizer Ranch Way/Bogue Rd	-	Install traffic signal	Pay fair share toward signal	Install traffic signal
Garden Hwy/Bogue Road	-	-	-	Pay fair share for additional lanes

NOTES:

1. Refer to previous pages for more-in depth description of mitigation measures.
2. Required when 21-acre retail center located in the southwest quadrant of the Bogue Road/Phillips Road intersection and 20 additional acres of residential in Newkom Ranch or Kells East Ranch are developed.
3. Improvement shall be required at such time that the retail center in the southwest quadrant of the Bogue Road/Phillips Road intersection is constructed. It shall also be required at such time that two-thirds of the total dwelling units (for example, 383 single-family units and 226 multi-family units, or a different mix of residential uses with an equivalent level of trip generation) within Newkom Ranch and Kells East Ranch are developed.
4. Improvement shall be required at such time that two-thirds of the total dwelling units within Newkom Ranch and Kells East Ranch are developed.
5. The timing of the need for these improvements will depend on the amount of development on the west versus east side of SR 99, mix of land uses, and level of background traffic growth. The applicant shall coordinate with City staff regarding construction of these improvements as individual projects within the BSMP are proposed.
6. Additionally, fair share contributions are required for additional lanes (beyond those identified as project-specific requirements) needed on the EB, WB, and NB approaches under cumulative conditions (see Impact Statement 3.14-9)).
7. Additionally, fair share contributions are required for a second northbound left-turn lane at this intersection, or widening of Bogue Road to four lanes from Gilsizer Way to South Walton Avenue.

“ - ” = Mitigation not required for particular scenario.

SOURCE: Fehr & Peers, 2017

Stewart Road – According to Figure 3.14-16, this roadway (on either side of SR 99) along the BSMP frontage is anticipated to carry up to 6,000 vehicles per day. This volume of traffic can be adequately served by a street with a single lane in each direction (the project description identifies two westbound lanes and one eastbound lane on this segment). However, left-turn pockets are recommended at public street accesses and well-utilized private access driveways along the street.

Phillips Road – is a proposed four-lane street between Bogue Road and Newkom Ranch Road. According to Figure 3.14-16, the segment of this roadway south of the 21-acre community commercial parcel is projected to carry 4,700 vehicles per day, which can be accommodated by a two-lane street. However, along the community commercial frontage (west side street south of Bogue Road), this facility is recommended to consist of two lanes in each direction separated by a median that may consist of landscaping, channelized left-turn ingress, or a two-way left-turn lane. A detailed evaluation of access to the community commercial parcel (as well as the 8.25-acre office park parcel located on the east side of the street) should be performed once a site plan is prepared. The transition of this facility from four to two lanes should occur prior to the roundabout located at Newkom Ranch Road.

These recommended cross-section changes would not affect any of the previous conclusions pertaining to project-specific or cumulative impacts and mitigation measures. This conclusion is based on cumulatively acceptable operations (i.e., generally LOS B or better) at intersections where these changes would occur.

No changes in the number of through travel lanes are recommended along Gilsizer Ranch Way, Kell Ranch Drive, Newkom Ranch Road, Changaris Way, Railroad Avenue, or Halprin Ranch Drive.

3.15 Utilities and Service Systems

This section provides a summary of existing utilities and service systems provided to the BSMP site and vicinity including water, stormwater, wastewater, solid waste, and energy demand and conservation. Pertinent regulations and requirements at the federal, state, and local level are described. Potential impacts on utilities and service systems that could result from project implementation are discussed, and mitigation measures are described, where appropriate, to minimize the intensity of impacts related to utilities and service systems. Potential impacts on stormwater conveyance facilities are also discussed in this section. For a discussion of stormwater quality management and the proposed stormwater drainage system, please refer to Section 3.9, Hydrology and Water Quality. For a discussion on energy demand, please refer to Section 3.7, Greenhouse Gas Emissions and Energy.

Letters received in response to the notice of preparation included comments regarding the capacity of water treatment plants to meet increased demand and how upcoming state restrictions for groundwater pumping would affect the proposed BSMP.

The analysis included in this section was developed based on characteristics of the proposed development under the BSMP, data provided by the City with respect to existing water use, additional data and information gathered from the Yuba City General Plan,¹ the Sutter County General Plan,² the City of Yuba City Wastewater System Master Plan Update,³ utility technical memos, and other published technical reports, as indicated in the footnoted references.

3.15.1 Wastewater and Drainage

This section evaluates the capacity of City systems for collection, conveyance, and treatment of wastewater flows and storm drainage associated with the proposed BSMP. Issues associated with water quality are evaluated in Section 3.9, Hydrology and Water Quality.

Environmental Setting

Existing Wastewater System

Yuba City owns, operates, and maintains the wastewater collection, treatment, and disposal system that provides sewer service to approximately 50,000 residents and businesses. The remainder of the residents and businesses in the Yuba City sphere of influence (SOI) are currently serviced by private septic systems. In the early 1970s, the City's original sewage treatment plant was abandoned and the current Wastewater Treatment Facility (WWTF) was constructed. The Yuba City WWTF is located on Burns Drive near Garden Highway about three-quarters of a mile northeast of the corner of the BSMP site.⁴

¹ City of Yuba City, 2004. *Yuba City General Plan*. April 8, 2004.

² Sutter County, 2011. *Sutter County 2030 General Plan*. Adopted March 29, 2011.

³ City of Yuba City, 2006. *Wastewater System Master Plan Update*. March 2006.

⁴ MHM Inc., 2016. *Technical Report, Sanitary Sewer, Bogue Stewart Master Plan Area*. October 2016.

Conveyance capacity needed for wastewater flows from other parts of Yuba City are separate from the interceptor that would serve the BSMP site. In unincorporated areas of the SOI, with limited exceptions, municipal sewage treatment has not been available to county residents. The project site is currently not served by the Yuba City sewer system. Wastewater generated by existing residences on the project site is disposed of through on-site private septic systems. Connection to the Yuba City sewer system is required for new development in the SOI, including the proposed plan.

Wastewater Treatment Facility

The WWTF has a National Pollutant Discharge Elimination System (NPDES) Permit that allows maximum effluent discharge of 10.5 mgd.⁵ The system includes 17 lift stations throughout the City, built between 1949 and 2012 with pipe sizes that range in diameter from 6 to 42 inches.⁶

The WWTF uses a pure oxygen activated sludge secondary treatment process, with disinfection and de-chlorination. Wastewater is sent through bar screens, a grit remover, primary clarifiers, an oxygen activated sludge process, secondary clarifiers and then disinfection and de-chlorination prior to being discharged into the Feather River. The treated wastewater can also be discharged in the percolation ponds located on the east side of the Feather River in the floodplain. Sludge from the clarifiers is transferred to anaerobic digesters, dewatered by belt presses, then transported to a landfill.

Historical Flow

The evaluation of the historical influent data compiled for the Wastewater System Master Plan Update included the period from January 1, 2000 to December 31, 2004. The maximum day, and the corresponding peaking factor are summarized in **Table 3.15-1**. It should be noted that the influent data provided in the update were measured downstream of the WWTF influent pumping station and upstream of the grit basin, which includes internal recirculated flows.

**TABLE 3.15-1
 HISTORICAL INFLUENT FLOWS FROM 2000 TO 2004**

Parameters	2000	2001	2002	2003	2004	Average 2000 to 2004
Average Annual Flow	5.82	5.54	5.86	6.60	6.06	6.01
Maximum Day Flow	9.06	7.18	8.06	8.22	8.23	8.13
Peaking Factory (maximum day)	1.6	1.3	1.4	1.25	1.4	1.4
Maximum Hour Flow	11.10	10.64	10.56	10.38	10.54	10.65
Peaking Factor (maximum hour)	1.9	1.9	1.8	1.6	1.7	1.8

SOURCE: City of Yuba City, 2006. *Wastewater System Master Plan Update*. March 2006. Table 2-3, p. 2-5.

⁵ Central Valley Regional Water Quality Control Board, 2013. Waste Discharge Requirements for the City of Yuba City Wastewater Treatment Facility, Sutter County, Order R5-2013-0094. July 2013.
⁶ City of Yuba City, 2004. *Yuba City General Plan*. Adopted Resolution #04-049. April 8, 2004.

Current Flow

The influent flow measured at the WWTF consists of the following contributing flows: domestic, commercial, industrial, septage, and internal recirculated flow from various plant processes. Septage is the waste, refuse, effluent, sludge, and any other materials from septic tanks, cesspools, or any other similar facilities that are discharged into the wastewater system.

The WWTF treats an average dry weather flow of approximately 6.5 million gallons per day (mgd) and a peak-hour flow of approximately 12 mgd. The WWTF has the permitted capacity to treat a maximum flow of 10.5 mgd (dry weather flow).

According to the Yuba City General Plan, there is no convenient way to separate the commercial from domestic contributions. Industrial contribution is highly variable. The Sunsweet, prune-packing plant is the main industrial discharger within the city limits and typically operates six days per week, year-round. The current average flow contribution from the Sunsweet plant is metered to be 1.2 mgd. The average septage flow is estimated to be 5,000 gpd, and internal recirculated flows are estimated to be 0.4 mgd.⁷

Gilsizer County Drainage District

The Gilsizer County Drainage District is comprised of an approximately 5,700-acre area that drains into Gilsizer Slough. The District is guided by a Board comprised of three County supervisors and two City Council members. Sutter County manages the District with Neal Hay acting as the interim District Engineer/Manager.

Regulatory Setting

Federal

Federal and State Clean Water Acts

The federal Clean Water Act (CWA) of 1972 and regulations set forth by the California Department of Health Services and SWRCB are aimed primarily at discharges of effluent to surface waters. Discharges to waters regulated under the CWA are subject to the requirements of the NPDES permitting process, pursuant to Section 402 of the CWA. In addition, Section 303 of the CWA requires individual states to adopt water quality standards which “consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such values.”

California had previously enacted its own version of this in 1969, when the state legislature adopted the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act set out the functions of the SWRCB with respect to water quality control. The Act also established nine regional water quality control boards (Regional Boards), with the Central Valley Regional Board having jurisdiction of the BSMP site. Each of the Regional Boards is charged with preparing a water quality plan (Basin Plan) for that region, as described under California Water Code (Water Code) Section 13240. Basin Plans have three components: they list the

⁷ City of Yuba City, 2006. *Wastewater System Master Plan Update*. March 2006.

beneficial uses to be protected, the water quality objectives that have been established, and outline an implementation program to ensure that these objectives are met. The Central Valley Regional Board's Basin Plan covers the Sacramento and San Joaquin River Basins.

Environmental Protection Agency's National CSO Control Policy

The U.S. Environmental Protection Agency (USEPA) initiated its Combined Sewer Overflow (CSO) Control Policy (40 CFR 122) in April, 1994. The CSO Policy provides a national level framework for the control and management of CSOs. The CSO Policy provides guidance regarding how to achieve Clean Water Act goals and requirements when faced with management of a CSO. Key components of the CSO Policy that are relevant to the proposed plan include a requirement for Nine Minimum Controls (NMCs), which apply to every CSS in the nation. The NMCs are minimum technology-based actions or measures that are designed to reduce CSOs and their effects on receiving water quality. The intent of the NMCs is to be implementable without extensive engineering studies or major construction. The policy requires that at least 85 percent of the average annual CSS storm flow must be captured and routed to at least primary treatment with disinfection prior to discharge.

State

NPDES

As authorized by the CWA, the NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The NPDES Program is a federal program which has been delegated to the State of California for implementation through the SWRCB and the nine RWQCBs (collectively, Water Boards). Each NPDES permit for point discharges contains limits on allowable concentrations of pollutants contained in discharges. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the USEPA must consider in setting effluent limits for priority pollutants.

Local

Yuba City General Plan

The following guiding and implementing policies from the City of Yuba City General Plan are relevant to wastewater and drainage.

Guiding Policy 5.4-G-1 Ensure that adequate wastewater treatment capacity is available to serve existing and future needs of the City.

Implementing Policies

- 7.2-I-1 Maintain existing levels of wastewater service by preserving and improving infrastructure, including replacing sewer mains as necessary.
- 7.2-I-2 Evaluate the adequacy of sewer infrastructure in areas where land use intensification is anticipated to occur, and develop a strategy to address potential deficiencies in capacity.

- 7.3-I-3 Coordinate capital improvements planning for all sewer service infrastructure with the direction, extent, and timing of growth.
- 7.2-I-4 Decline requests for sewer extensions beyond the Urban Growth Boundary (UGB), except in cases of existing documented health hazards and in areas where the City has prior agreements to provide services.
- 7.2-I-5 Establish equitable methods for distributing costs associated with providing wastewater services to development, including impact mitigation fees where warranted.

As described in the following impact discussions, the proposed BSMP would minimize the potential for inadequate wastewater capacity through compliance with the above regulations and City design criteria. The proposed BSMP would be consistent with the above General Plan policies.

Analysis, Impacts, and Mitigation

Significance Criteria

The proposed BSMP would result in a significant impact on wastewater or storm drainage utilities if it would:

1. Result in inadequate wastewater capacity to serve the BSMP's demand in addition to existing commitments; or
2. Require or result in either the construction of new wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts.

Methodology and Assumptions

The following impact analysis evaluates the potential for the proposed BSMP to result in changes to existing wastewater infrastructure capacity. Anticipated wastewater generation was estimated based on the City's standard wastewater generation factors. Wastewater generation was calculated by proposed type of use within the BSMP site.

Proposed Land Use Factors

The Technical Report on the Sanitary Sewer for the Bogue Stewart Master Plan prepared for the City used land use acreage and other conversion factors to calculate the average dry weather flows (ADWF) from the proposed BSMP as shown in **Table 3.15-2**.⁸ The sewer flow requirements would be a combination of demand rate for each land use type. The design of the sewer conveyance system was based on a flow rate of 330 gpd ADWF. The table below shows the sewer demand rates for each proposed land use in the BSMP site.

Table 3.15-3, below, shows the breakdown for each development area within the proposed BSMP site.

⁸ MHM Inc., 2016. Technical Report Sanitary Sewer. Bogue Stewart Master Plan Area. October 2016.

**TABLE 3.15-2
 AVERAGE DRY WEATHER FLOW (ADWF)**

Land Use Designation	Dwelling Unit (du/ac)	Unit Flow Rate (gpd/DU or gpd/ac)	Land Use (acres)	Flow Rate Demand (gal/day)
Residential	a	b	c	d = a * b * c
Low Density Residential	4.25	330	370.3	446,000
Medium/Low Density Residential	9	275	59.5	144,000
Medium/High Density Residential	24.0	275	31.6	201,000
Non-Residential				
Office and Office Park	-	1,320	8.3	11,000
Neighborhood Commercial	-	1,980	6.7	14,000
Community Commercial	-	1,650	35.9	58,000
Business, Technology, & Light Industry	-	1,320	54.6	70,000
Civil Amenities				
Elementary/Middle School	-	2,936	20.2	59,000
Parks	-	-	18.0	-
Open Space	-	-	9.1	-
Basin (PF-Detention Pond)	-	-	20.5	-
Channel (PF-Gilsizer Slough)	-	-	31.7	-
Semi Public (PG&E Substation)	-	-	3.1	-
Public and Semi Public	-	1,320	1.8	2,500
Right of Way	-	-	70	-
Total			741.3	1,005,500

SOURCE: MHM Inc., 2016. Technical Report Sanitary Sewer. Bogue Stewart Master Plan Area. October.

**TABLE 3.15-3
 DESIGN SCENARIO(S)**

Design Scenario	Design Flow
Newkom Ranch Tentative Map (161.2 acres)	246,000 gpd
Kells East Tentative Map (93.5 acres)	108,000 gpd
Future Phase Areas (486.6 acres)	651,500 gpd
Bogue Stewart Master Plan (741.3 acres)	1,005,500 gpd

SOURCE: MHM Inc., 2016. Technical Report Sanitary Sewer. Bogue Stewart Master Plan Area. October.

The proposed BSMP would generate approximately 1 mgd ADWF and 2.28 mgd peak wet weather flow. The operation of the City’s collection system was analyzed with the estimated flows for the proposed BSMP to determine the effect that these flows would have on the

operation of the existing collection system, and to determine if the system improvements that have been proposed are adequate.

Impacts and Mitigation Measures

Impact 3.15-1: Implementation of the proposed BSMP could result in inadequate wastewater treatment capacity.

Full Master Plan

The majority of the BSMP site is currently undeveloped and not served by the City's WWTF. Development of the proposed BSMP would result in the construction of a wastewater conveyance system that would discharge to the City's WWTF. As described previously, the design of the proposed BSMP sewer conveyance system was based on a flow rate of 330 gpd ADWF. The proposed BSMP would generate approximately 1 mgd ADWF. The current daily flow to the Yuba City WWTF is 6.5 mgd ADWF and the WWTF is currently permitted for 10.5 mgd of ADWF,⁹ which provides up to 4 mgd ADWF current excess capacity.

The proposed BSMP would result in the discharge of approximately 2.3 mgd peak wet weather flow (PWWF). The WWTF has maximum capacity peak-hour flow of 19 mgd, with an excess capacity to serve the BSMP PWWF of approximately 10 mgd. Therefore, there would be adequate capacity to serve plan's wastewater demands in addition to existing flow to the WWTF. Therefore, the capacity of the WWTF would be sufficient to serve the wastewater flows from the proposed BSMP, and this impact would be **less than significant**

Newkom Ranch and Kells East Ranch

Buildout of the Newkom Ranch and Kells East Ranch sites would result in an increase in wastewater flows discharged to the City WWTF of approximately 246,000 gpd and 108,000 gpd ADWF, respectively. In addition, development of the Newkom Ranch and Kells East Ranch would result in the discharge of approximately 459,088 gpd and 266,390 gpd PWWF, respectively to the WWTF. Because the WWTF has excess treatment capacity of 4 mgd ADWF and 10 mgd PWWF, development of the Newkom Ranch and Kells East Ranch sites would not exceed the WWTF capacity, and this impact would be **less than significant**.

Summary

There would be adequate capacity to serve the proposed BSMP demand for wastewater treatment in addition to existing flow and impacts would be **less than significant**.

Mitigation Measure

None required.

⁹ MHM Inc., 2016. Technical Report Sanitary Sewer. Bogue Stewart Master Plan Area. October 2016.

Impact 3.15-2: The proposed BSMP could result in either the construction of new wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts.

Full Master Plan, Newkom Ranch and Kells East Ranch

The wastewater conveyance and treatment system that would serve the BSMP area, including the Newkom Ranch and Kells East Ranch sites, is discussed in detail in the Utilities subsection of Section 2.3.5, Description of Project Elements. A network of sanitary sewer lines would direct wastewater from the BSMP area generally north and east to larger existing or proposed mains in Garden Highway. From Garden Highway, the wastewater would be directed north to the City's existing WWTF approximately 0.75 mile northeast of the BSMP site. The conveyance system would be designed in accordance with City standards.

Potential onsite and offsite environmental impacts that could result from construction of the proposed wastewater conveyance system, including impacts related to ground-disturbing construction activities, are addressed in the applicable technical sections of this EIR. As noted above in the analysis of Impact 3.15-1, there is sufficient treatment capacity at the City's existing WWTF to accommodate the full development of the BSMP, including Newkom Ranch and Kells East Ranch. Therefore, the proposed BSMP would not result the construction of new wastewater treatment facilities or the expansion of existing facilities. Therefore, this impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

Cumulative impacts on the WWTF are based on consideration of all future growth assumed within the area served by Yuba City Utilities Department Wastewater System Master Plan, which includes buildout of the Yuba City General Plan to 2030. The following impact analysis considers whether a cumulative impact would occur, and if so, whether the contribution of the proposed BSMP to the cumulative impact would be considerable.

Impact 3.15-3: Implementation of the proposed BSMP, in combination with other past, present, and reasonably foreseeable cumulative development, would contribute to the need for construction of new or expanded wastewater facilities, which could cause significant environmental impacts.

Development of the proposed BSMP, in addition to buildout of the Yuba City General Plan would increase demand for wastewater treatment. The average daily dry weather flow to the WWTF at full build-out of the General Plan is estimated at 18.2 mgd ADWF and peak daily flow of 32.7 mgd.¹⁰ These wastewater demands would exceed the current capacity of the City WWTF.

¹⁰ Kennedy/Jenks Consultants, 2006. *Wastewater System Master Plan Update*. March 2006.

The City's Wastewater System Master Plan provides for a phased expansion of the WWTF as growth occurs in the City, ensuring that the City WWTF has sufficient capacity to meet planned growth in the service area through the year 2030 based on higher growth projections than expected in the current General Plan. Any necessary changes to capacity would occur incrementally, as regional population growth demands greater treatment capacity. Because implementation of the Wastewater System Master Plan is expected to ensure that capacity is available as growth occurs, the proposed BSMP's contribution of 1 mgd to cumulative wastewater treatment demand would be less than considerable because it could be accommodated within the growth projections used in the City's Wastewater System Master Plan. Therefore, the proposed BSMP's contribution would not be considerable, and the resulting impact would be **less than significant**.

Mitigation Measure

None required.

3.15.2 Water Supply

This section describes the water supply that would serve the proposed BSMP project in relation to overall water supplies provided by Yuba City. The analysis estimates the expected water demand resulting from the proposed project, evaluates the effects of the proposed project on existing and future water infrastructure, and recommends mitigation measures where appropriate.

Environmental Setting

Existing Water Sources and Supplies

The water supply source for the City is surface water from the Feather River with use of a backup groundwater well. The City of Yuba City is a public water agency with approximately 18,045 connections. City policy only allows areas annexed into the city limits to be served by the surface water system. Currently, the BSMP site is not within the City's SOI and would require amending the SOI and annexing prior to connecting to the City's water system.

Today private wells provide water to existing residences and other uses present within the BSMP site. Existing city-owned water infrastructure is located to the north of and adjacent to the BSMP site to the east.¹¹

Surface Water Supplies

The City's water supplies historically and projected to serve its existing and likely future water service area are derived from multiple surface water rights and contracts, as well as the City's rights to groundwater. All water supplies derived from these sources are managed in order to best meet the City's demands in different year types, reduce delivery costs, manage water quality issues, and handle drought and emergency situations. As such, water deliveries from each identified source may fluctuate in any given year because of management decisions, regulatory

¹¹ City of Yuba City, 2016. *City of Yuba City 2015 Urban Water Management Plan Public Review Draft*. June 2016.

constraints, and hydrological conditions. The City possesses entitlements to 20,960 acre-feet per year (afy) of surface water during normal water years; however, during consecutive dry years the City implements the Water Shortage Contingency Plan to reduce water consumption with voluntary and mandatory prohibitions, restrictions, and penalties depending on the magnitude of the water shortage. The City's water supply is derived from four permitted diversions, described below.

SWRCB License 13855

This Feather River water right has a seniority date of March 5, 1958, and was licensed by the SWRCB as of December 2011. The right is limited to 15.6 cubic feet per second (cfs) – equivalent to about 925 acre-feet per month if diverted at the limit – with an annual limit of 6,500 acre-feet. The City is allowed to divert the water directly from the Feather River except during the months of July and August. The City uses this source to meet full demands, or as otherwise constrained by the diversion limit, during the early months of each calendar year. The right includes Term 91 provisions, which curtail the City's diversions when the SWRCB invokes this condition. When natural flows to the Sacramento River and San Joaquin River Delta (Delta) are insufficient to meet water quality standards, the State Water Project (SWP) and the Central Valley Project (CVP) operate to meet instream water quality standards by releasing supplemental, stored water, thus initiating Term 91. Term 91 is a permit condition that curtails downstream diverters from taking diversions from streams and rivers when the SWP and CVP are releasing water from storage to meet the water quality standards.

Term 91 occurs during hydrologically dry conditions, potentially as early as March or April, and also potential limit diversions into October or November. During the recent drought (2014 through 2016), Term 91 limited diversions more extensively than has been experienced in the past several decades. For instance, Term 91 was in affect from May 1, 2015 to December 15, 2015, severely limiting the City's diversion under this license.

SWRCB Permit 18558

This Feather River water right has a seniority date of May 31, 1978, and is still only a permitted use (meaning the City has yet to fully utilize the right). The right is limited to 21 cfs – equivalent to about 1,250 acre-feet per month if diverted at the limit – with an annual limit of 9,000 acre-feet. The City is allowed to divert the water directly from the Feather River except during the months of July, August, and September, but is also subject to Term 91 restrictions. The City began diverting under this permit in 2000.

North Yuba Water District Agreement

The City originally entered into a contract for surface water supplies with North Yuba Water District (NYWD) in December 1980. Prior to expiration in 2010, the City and NYWD entered into an amended agreement that continued the availability of up to 4,500 acre-feet annually to be delivered into the Feather River for diversion by the City at its Feather River water treatment plant intake. The current agreement expires in 2035 and includes the provision that

“[r]epresentatives of the District and city will meet sometime between December 31, 2030 and June 1, 2031 to discuss the potential to further extend” the agreement.

While the agreement allows for the monthly delivery to be varied based on discussions each year between the City and NYWD, if the full 4,500 acre-feet are requested, the monthly volumes are limited to the following:

April	= 181 acre-feet;
May	= 492 acre-feet;
June	= 893 acre-feet;
July	= 922 acre-feet;
August	= 922 acre-feet;
September	= 714 acre-feet; and
October	= 376 acre-feet.

These monthly limits are used for the assessment of water supply availability and reliability. The City relies on this supply during summer months, in conjunction with the SWP water (discussed below), to address the constraints in its licensed and permitted water rights. For purposes of the analysis, the agreement for provision of the full 4,500 acre-feet is assumed to be renewed, and this supply will continue to be available well beyond 2040.

SWP Contract

The City entered into a contract with the State of California for water from the SWP in 1963. The contract remains in effect through 2035, with specified renewal provisions that provide long-term reliability for this supply well beyond 2040. Each SWP contract defines a “Table A” quantity available for to the contractor. Each spring, DWR determines the percentage of Table A quantities that will be available during the coming months, based upon hydrology, forecast runoff, storage levels and contractor demands. The City’s maximum Table A quantity is 9,600 acre-feet.

As a result of a recent settlement agreement with DWR, SWP contractors that are north of the Delta, which includes the City, have a defined north of Delta Table A allocation (NOD Allocation) that can be greater than the baseline allocation available to SWP contractors south of the Delta. As an example of the incremental increase in the Table A allocations, the NOD Allocation was: 0 percent (2014), 5 percent (2015), and 15 percent (2016) above the baseline allocation in each year. During normal water supply conditions, the NOD Allocation likely will include a 10 percent increase over the baseline Table A allocation. For instance, normal year Table A allocations have been suggested as 65 percent of a SWP contractor’s Table A quantity. The NOD Allocation would increase this to 75 percent for the City. For purposes of the analysis, the normal year Table A allocation is assumed to be 75 percent of the 9,600 Table A maximum – or 7,200 acre-feet.

SWP Carryover Water

SWP Carryover water is Table A water unused during one allocation season that is “stored” in a SWP reservoir. The Carryover water can supplement a future year’s Table A allocation, so long as the SWP reservoir has not “spilled” the carryover supply. The amount of the City’s Table A allocation that can be stored each year is governed by Article 56 of the SWP contract. There is no contractual limit on the cumulative volume that can be stored, though the SWP reservoirs would likely “spill” if all SWP contractor carryover volumes became excessive. Carryover water is spilled equally among all those with carryover. For purposes of the analysis, the City is expected to add to its Carryover supply during normal conditions when it uses less than the assumed 7,200 acre-feet annual allocation. The City is expected to develop and maintain 6,000 acre-feet as Carryover supply, which becomes available to help offset shortages during dry conditions.

SWP Advanced Table A

The 2013 settlement also included a unique provision for the north of Delta SWP contractors termed “Advanced Table A” (ATA). The ATA is supplemental SWP water that can be used to make up shortages in the NOD Allocation under certain defined circumstances. The City’s ATA is limited to 5,000 acre-feet, and is only accessible when the SWP base allocation exceeds 20 percent and all of the City’s available SWP Table A and Carryover water is used. For purposes of the analysis, the ATA becomes available under multiple dry-year conditions after the City’s exhausted its Carryover reserves.

Groundwater Supplies

The City currently maintains one back-up/standby groundwater well at the City’s surface water treatment plant (WTP). The WTP well has a capacity of approximately 2.9 mgd, or 2,600 afy based on an 80 percent utilization of the pumping capacity. The groundwater is treated and blended with available surface water. During the recent drought, the City has used approximately 2,000 acre-feet, 1,100 acre-feet and 400 acre-feet in 2014, 2015 and 2016 respectively, to augment limited surface water supplies. For purposes of the analysis, the well is assumed to functionally provide up to 200 acre-feet per month when needed (equivalent to about 2.2 mgd continuously pumped during a month). Because of ample surface water sources available to meet local demands and providing recharge benefits, groundwater levels have remained fairly stable underlying the City, even with the City’s increased use of groundwater during the 2014-2016 drought.

Current Water Use

Water demands served by the City of Yuba are primarily residential (single-family residential and multi-family residential), commercial/institutional, industrial, and landscape irrigation.

Table 3.15-4 presents water use sectors and associated metered and unmetered deliveries that were reported in the City’s 2015 Urban Water Management Plan (UWMP).

**TABLE 3.15-4
 2010 WATER DELIVERIES**

Water Use Sector	Metered		Unmetered		
	Number of accounts	Deliveries AFY	Number of Deliveries ¹ Accounts	Deliveries AFY	
Single Family Residential	15,311	7,911	2	1	7,912
Multi-Family Residential	1,060	1,681	0	0	1,681
Commercial/Institutional	1,272	1,668	1	5	1,673
Industrial	5	1,938	0	0	1,938
Landscape Irrigation	380	840	0	0	840
Agriculture	0	0	0	0	0
Other	14	32	0	3,766	3,798
Total	18,042	14,070	3	3,772	17,842

NOTE:

1 Unmetered deliveries are estimates based on metered consumption data.

SOURCE: City of Yuba City. 2016. *City of Yuba City 2015 Urban Water Management Plan, Public Review Draft*. June.

Water Treatment Plant

The City’s WTP was placed into operation in 1969 and is located on approximately 25 acres in north Yuba City. Although a portion of the site has been dedicated to a stormwater detention facility, sufficient space remains to more than double the capacity of the existing plant. The WTP was originally designed with conventional coagulation, flocculation, sedimentation, and high-rate filtration processes. The permitted capacity of the conventional processes at the WTP is 24 mgd.

In 2007, the WTP was expanded with membrane treatment technology. The membrane treatment system consists of coagulation, flocculation, and the membrane filtration units. The permitted capacity of the membrane WTP is 12 mgd. Water produced from the conventional and membrane plants is blended for chlorine disinfection. The total WTP capacity is 36 mgd with both conventional and membrane treatment systems online. The quality and reliability of the treated water is protected by the WTP instrumentation, alarms, stand-by equipment, and back-up power generation.¹² The current maximum daily demand is approximately 27 mgd with an annual average daily demand of approximately 13 mgd for the years 2013 through 2016.¹³

Regulatory Setting

Federal

U.S. Environmental Protection Agency

The USEPA established primary drinking water standards in the Clean Water Act (CWA) Section 304 and states are required to ensure that potable water for the public meets these standards.

¹² City of Yuba City, 2016. *City of Yuba City 2015 Urban Water Management Plan Public Review Draft*. June 2016.

¹³ Young, Greg, Tully & Young, Personal Communication, August 2017.

Standards for 81 individual constituents have been established under the Safe Drinking Water Act, as amended in 1986. The USEPA may add additional constituents in the future.

Safe Drinking Water Act

The USEPA administers the Safe Drinking Water Act (SDWA), the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The California Department of Health Services (DHS – now Division of Drinking Water with the State Water Resources Control Board) implements the SDWA and oversees public water system quality statewide. DHS establishes legal drinking water standards for contaminants that could threaten public health.

State

The California Department of Public Health (DPH), SWRCB, and the Department of Water Resources (DWR) would have input into the provision of water for the project site. In compliance with State Water Code Section 10910(a) and 10910(c)(1), the water supplier for the proposed project is required to prepare a WSA for the water service request as part of the CEQA EIR process. The SWRCB regulates the water quality functions of the State and manages the State's Water Code. State primary and secondary drinking water standards are promulgated in California Code of Regulations (CCR) Title 22 Sections 64431-64501. Secondary drinking water standards incorporate non-health risk factors including taste, odor, and appearance.

Water Rights and Entitlements

Since 1914, the SWRCB administers and controls all water rights permits in California. Under this process, an application is filed and the SWRCB issues a permit for surface water diversion, including the approved “point of use” for that water. California water law typically applies only to surface water resources, although according to the SWRCB, “California law also recognizes and protects rights to extract and use waters percolating beneath the surface of the land.”¹⁴

Urban Water Management Planning Act

California Water Code section 10610 (et seq.) requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 afy, must prepare an UWMP. The DWR provides guidance to urban water suppliers in the preparation and implementation of UWMPs. UWMPs must be updated at least every five years on or before December 31, in years ending in five and zero. The City prepared an UWMP in 2005.

Water Supply Assessments

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910 et seq. The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as

¹⁴ State Water Resources Control Board, Statutory Water Rights Law, 1999.

general plans and specific plans form the basis for the demand information contained in an UWMP, as well as WSAs required under SB 610.

Water Code Section 10910(c)(4) states: “If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.”

Water supply planning under SB 610 and SB 221 (see below) requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand for the general region over the next 20 years, under a broad range of water conditions. This information is typically found in the current UWMP of the public water supplier. SB 610 requires the identification of the public water supplier; the City has been identified in the WSA as the public water supplier to the proposed project.

In addition, SB 610 requires the preparation of a WSA if a project meets the definition of a “Project” under Water Code Section 10912 (a). The code defines a “Project” if it meets any of the following criteria:

- A proposed residential development of more than 500 dwelling units (du);
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sf) of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 sf of floor space;
- A hotel or more with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sf of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a “Project” includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system. The proposed project includes more than 500 du, and, therefore, qualifies as a “Project” under Section 10912(a) of the Water Code. Thus, the City has prepared a WSA as required by these criteria under SB 610 (included as **Appendix H**).

Water Code section 10910(d)(1) states: “The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts

relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights or water service contracts.”

Section 10910(d)(2) of the Water Code further defines requirements of WSAs, including: (A) documentation showing proof of water supply entitlements, water rights, or existing water service; (B) copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system; (C) copies of federal, state, or local permits for construction of necessary infrastructure associated with delivery of the water supply; and (D) copies of any necessary regulatory approvals that are required to convey or deliver the water supply.

Written Verification of Water Supply

Government Code Section 66473.7(a)(1) requires an affirmative written verification of sufficient water supply. Senate Bill 221 is designed as a “fail-safe” mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs early in the planning process. This verification must also include documentation of historical water deliveries for the previous 20 years, as well as a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources of the region. Government Code section 66473.7 (b) (1) states:

The legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove the tentative map, shall include as a condition in any tentative map that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply shall be requested by the subdivision applicant or local agency, at the discretion of the local agency, and shall be based on written verification from the applicable public water system within 90 days of a request.

In other words, as a result of the information contained in the written verification, the city or county may attach conditions to assure there is an adequate water supply available to serve the proposed project as part of the tentative map approval process.

While in most cases, following project certification, additional water supply verification is required to be completed at the Tentative Map stage, prior to adoption of the Final Map, for certain tentative maps. Pursuant to Government Code §66473.7(i), additional water supply verification is not required for:

Any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low income households.

Drinking Water Quality

The California Department of Health Services (DHS) is responsible for implementing the federal Safe Drinking Water Act of 1974 and its updates, as well as California statutes and regulations related to drinking water. As part of their efforts, the DHS inspects and provides regulatory oversight for public water systems within California. The CVRWQCB also has the responsibility for protecting the beneficial uses of the State's waters, including groundwater, and these include municipal drinking water supply, as well as various other uses. Public water system operators are required to monitor their drinking water sources regularly for microbiological, chemical, and radiological contaminants to show that drinking water supplies meet the regulatory requirements listed in Title 22 of the California Code of Regulations (CCR) as primary maximum contaminant levels (MCLs). Primary standards are developed to protect public health and are legally enforceable. Among these contaminants are approximately 80 specific inorganic and organic contaminants and six radiological contaminants that reflect the natural environment, as well as human activities. Examples of potential primary inorganic contaminants are aluminum and arsenic, while radiological contaminants can include uranium and radium.

Public water system operators are also required to monitor for a number of other contaminants and characteristics that deal with the aesthetic properties of drinking water. These are known as secondary MCLs. Secondary standards are generally associated with qualities such as taste, odor, and appearance, but these are generally non-enforceable guidelines. However, in California secondary standards are legally enforceable for all new drinking water systems and new sources developed by existing public water suppliers. The public water system operators are also required to analyze samples for unregulated contaminants, and to report other contaminants that may be detected during sampling.

Urban Water Management Planning Act

California Water Code Section 10610 (et seq.) requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 AFY, must prepare an Urban Water Management Plan (UWMP). UWMPs represent key water supply planning documents for municipalities and water purveyors in California, and often form the basis of Water Supply Assessments (see below) prepared for individual projects. UWMPs must be updated at least every five years on or before December 31, in years ending in five and zero.

Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code Section 10720.3). (The SGMA is comprised of three separate bills: Senate Bill 1168, Senate Bill 1319, and Assembly Bill 1739. All three were signed into law by the Governor on September 16, 2014.) By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1).

Pursuant to SGMA, any local agency that has water supply, water management, or land use responsibilities within a groundwater basin may elect to be a “groundwater sustainability agency” for that basin (Water Code Section 10723). Local agencies have until January 1, 2017 to elect to become or form a groundwater sustainability agency. In the event a basin is not within the management area of a groundwater sustainability agency, the county within which the basin is located will be presumed to be the groundwater sustainability agency for the basin. However, the county may decline to serve in this capacity (Water Code Section 19724).

Groundwater authorities will have additional powers under the SGMA to manage groundwater within the basin, including, for example, the power to: conduct investigations of the basin, to require registration of groundwater extraction facilities and metering of groundwater extractions, regulate groundwater extractions from individual groundwater wells or wells generally, and to assess fees on groundwater extractions (see generally, Water Code Section 10725 et seq.). SGMA also provides local agencies with additional tools and resources designed to ensure that the state’s groundwater basins are sustainably managed.

SGMA also requires DWR to categorize each groundwater basin in the state as high-, medium-, low-, or very low priority (Water Code Sections 10720.7, 10722.4). The North American sub-basin has been categorized as high priority.¹⁵ All basins designated as high- or medium-priority basins must be managed by a groundwater sustainability agency under a groundwater sustainability plan that complies with Water Code Section 10727 et seq. In lieu of preparation of a groundwater sustainability plan, a local agency may submit an alternative that complies with the SGMA no later than January 1, 2017 (Water Code Section 10733.6).

Local

Yuba City General Plan

The Yuba City General Plan (2004) includes the following guiding and implementing policies that are applicable to the provision of water to City residents.

- Guiding Policy 7.1-G-1** **Ensure that an adequate supply of water is available to serve existing and future needs of the City.**
- Guiding Policy 7.1-G-2** **Ensure that necessary water supply infrastructure and storage facilities are in place prior to construction of new development.**
- Guiding Policy 7.1-G-3** **Maintain existing levels of water service by preserving and improving infrastructure, replacing water mains as necessary, and improving water transmission facilities.**
- Guiding Policy 7.1-G-4** **Encourage water conservation with incentives for decreased water use and active public education programs.**

¹⁵ California Department of Water Resources, 2014. CASGEM Groundwater Basin Prioritization Results, May 28, 2014.

Implementing Policies

- 7.1-I-1 Evaluate the adequacy of water infrastructure in areas where intensification of land use is anticipated to occur, and develop a strategy to implement projects in the Water Supply Master Plan to offset deficiencies in capacity.
- 7.1-I-2 Coordinate capital improvements planning for all municipal water service infrastructure with the direction, extent, and timing of growth.
- 7.1-I-3 Decline requests for extension of water beyond the SOI, except in cases of existing documented health hazards and in areas where the City has agreements to provide services.
- 7.1-I-4 Establish equitable methods for distributing costs associated with providing water service to development, including impact mitigation fees where warranted.
- 7.1-I-5 Explore ways to encourage use of reclaimed water for irrigation and landscaping purposes.
Utilizing reclaimed water is currently not cost-effective. Should the costs of reclaimed water become more attractive, the City should define a program for encouraging reclaimed water use.
- 7.1-I-6 Establish guidelines and standards for water conservation and actively promote use of water-conserving devices and practices in both new construction and major alterations and additions to existing buildings.

As described in the following impact discussions, the proposed BSMP would minimize the potential for inadequate water supply to meet demands through compliance with the above regulations and implementation of mitigation measures to ensure additional water supplies for potential future shortfalls during dry years. The BSMP would be consistent with the above General Plan policies.

Analysis, Impacts, and Mitigation

Significance Criteria

The proposed plan would result in a significant impact on water supply if it would:

1. increase demand for potable water in excess of existing supplies; or
2. result in inadequate capacity in the City's water supply facilities to meet the water supply demand, so as to require the construction of new water supply facilities.

Methodology and Assumptions

The following impact analysis evaluates potential for the proposed BSMP to result in changes to existing infrastructure and supply relating to water availability. The analysis for water supply centers on a comparison of existing demand to future water demand with implementation of the proposed BSMP. Net water demand was compared to water supplies available to the City, in accordance with City procedures, and a determination made regarding sufficiency of supply for the proposed BSMP using the water supply assessment (WSA) prepared for the City by Tully &

Young. The following information from the WSA describes reasonable assumptions about water supply reliability, growth, and water demand, and presents the current and future estimated supplies and demands.

BSMP Water Use

Construction Water

The proposed BSMP would include site grading and infrastructure installation during early phases of construction that require dust suppression and other incidental water uses. These uses would not continue beyond the construction phases of the proposed BSMP. For purposes of identifying incremental water demands, construction water is assumed to be 4 afy (this is about 1,200,000 gallons – or about 300 fill-ups of a 4,000-gallon water truck per year).

Operation Water

The proposed BSMP would include slightly over 2,500 residential units and accompanying infrastructure and improvements such as streetscapes, along with retail, office and technical center space, civic amenities, parks, and an elementary school. To estimate the water needs of the proposed BSMP, the method employed uses population projections in conjunction with the City's 2020 per-capita water use target identified in its 2015 UWMP. This method is often used to evaluate potential demand for an entire water purveyor's service area, such as the entire City, as it reflects a blend of existing and future residential and non-residential uses.

In July 2016, the City adopted its 2015 UWMP, part of an on-going series of updates mandated by the State to occur every 5 years. As represented in the City's 2015 UWMP, the 2020 per-capita target is 192 gallons per person per day (gpcd). While this represents a blended value reflecting a wide array of existing water customers and any new customers since the 2001-2010 baseline value was determined in the 2015 UWMP, it can be used to establish a conservative estimate of future demand of only the new customers anticipated with the proposed BSMP.

The proposed BSMP would include residential units representing a combination of single-family homes and multi-family homes (e.g. apartments). For purposes of the analysis, the single-family housing assumes an average occupancy rate of 3.3 people per house, with an assumption of 2 persons per house for medium/high-density residential designations. Using the residential unit totals, the population of the proposed BSMP at build-out would be 7,320 people, with about 80 percent in single-family homes and 20 percent in multi-family housing. This assumed population is slightly higher, and thus more conservative, than that presented in Table 3.12-3 in Section 3.12, Population and Housing in this EIR. **Table 3.15-5** provides a demand forecast based on the above population assumptions and the City's per capita demand targets. Using this method, the proposed BSMP is forecast to result in a demand for 1,574 acre-feet annually at full buildout.

**TABLE 3.15-5
 PROJECTED POPULATION AND WATER DEMAND FOR THE BSMP 2020 - 2040**

Population					GPCD	Demand (af/yr)				
2020	2025	2030	2035	2040		2020	2025	2030	2035	2040
386	1,955	3,761	5,779	7,320	192	83	420	809	1,243	1,574

SOURCE: Tully & Young. 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

Yuba City Projected Population and Water Demand

For purposes of this analysis, the City chose to reflect a modified annual growth rate reflecting the period of 2006 through 2016 instead of the growth rate used in the 2015 UWMP. While a few years early in the 2000’s added nearly 1,000 units (and may have exceeded 1,000 when considering multi-family units), the majority of years were significantly lower, with only 12 new permits issued in 2011 (see Appendix H).¹⁶ According to City data, the population during this period increased at an average rate of 1.4 percent, slowing to less than 0.5 percent since 2010. Given this data, the City recognizes that the 3 percent growth rate assumed in the 2015 UWMP is unrealistic. While growth rates are affected by many factors, using 1.4 percent – reflecting an annual average of about 300 new units annually – accounts for future variations in growth rate. The resulting population estimates on 5-year increments from 2020 to 2040 are shown in **Table 3.15-6**. For comparison, this revised population forecast of approximately 95,000 is much lower and more realistic than the 2015 UWMP’s projection of 148,000 based on a growth rate of 3 percent.

**TABLE 3.15-6
 YUBA CITY PROJECTED POPULATION 2020 - 2040**

Projected Population				
2020	2025	2030	2035	2040
71,944	77,123	82,675	88,626	95,006

SOURCE: Tully & Young. 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

To keep the proposed BSMP separate from a forecast for this category, the estimated population from the proposed BSMP is subtracted from the City-wide population projection presented in Table 3.15-6. The remaining population is multiplied by the City 192 gpcd per-capita target to derive an estimated future demand for each of the 5-year increments as presented in **Table 3.15-7**.

¹⁶ Tully & Young, 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

**TABLE 3.15-7
 YUBA CITY PROJECTED POPULATION MINUS THE BSMP AND RESULTING
 WATER DEMAND 2020 – 2040**

	Population				
	2020	2025	2030	2035	2040
City-wide	71,944	77,123	82,675	88,626	95,006
Proposed Project	386	1,955	3,761	5,779	7,320
Existing and Other Planned Future	71,558	75,168	78,914	82,847	87,686
	Demand (afy)				
	2020	2025	2030	2035	2040
Existing and Other Planned Future	15,390	16,166	16,972	17,818	18,858

SOURCE: Tully & Young. 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

Total Estimated Demand

Combining the proposed BSMP estimated water demands of 1,574 acre-feet annually (see Table 3.15-5) with the City’s estimated existing and planned future water demands of approximately 18,858 acre-feet annually (see Table 3.15-7), a City-wide total estimated demand for water supplies by 2040 is determined. Estimated existing and planned future water demands for each 5-year increment to 2040 are presented in **Table 3.15-8**. The estimated City-wide demand for water supplies in 2040 is approximately 20,433 acre-feet.

**TABLE 3.15-8
 YUBA CITY PROJECTED WATER DEMAND WITH BSMP 2020 – 2040**

	Demand (afy)				
	2020	2025	2030	2035	2040
Proposed Project	83	420	809	1243	1574
Existing and Other Planned Future	15,390	16,166	16,972	17,818	18,858
Total	15,473	16,587	17,781	19,061	20,433

SOURCE: Tully & Young. 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

The estimated water demand for 2040 presented in Table 3.15-8 is significantly lower than the 2015 UWMP demand forecast to be approximately 32,000 afy. As explained previously, the difference is due primarily to the use of a smaller growth rate of 1.4 percent in the WSA compared to the 2015 UWMP’s unrealistic growth rate of 3 percent. This difference is important when evaluating the sufficiency of water supplies and comparing to the 2015 UWMP’s analysis and conclusions.

Water Reliability Assumptions

The previous section discussed the array of water supplies available to Yuba City to manage various hydrologic, contractual, and customer demand considerations. But, since each year does not fit exactly within the desired hydrologic constraints, assumptions regarding the reliability of the aforementioned supplies for specific hydrologic conditions are taken into account in the analysis. The following assumptions are made for each supply source, as represented in **Tables 3.15-9 through 3.15-11**, and become the source for integration with the estimated demands. Tables 3.15-9 through 3.15-11 provide the required projections of water supply and demand forecasted through 2040 for the proposed BSMP and the rest of the City’s service area under normal, single-dry, and multi-dry water years.

**TABLE 3.15-9
 NORMAL YEAR WATER SUPPLIES 2020 – 2045**

Supply Source (afy)	2020	2025	2030	2035	2040	2045
License 13855	6,500	6,500	6,500	6,500	6,500	6,500
Permit 18558	6,000	6,000	6,000	6,000	6,000	6,000
NYWD Agreement	3,180	3,180	3,180	3,180	3,180	3,180
SWP Contract	5,280	5,280	5,280	5,280	5,280	5,280
SWP Carryover	0	0	0	0	0	0
Groundwater	0	0	0	0	0	0
Total Supply	20,960	20,960	20,960	20,960	20,960	20,960

SOURCE: Tully & Young. 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

**TABLE 3.15-10
 SINGLE-DRY YEAR WATER SUPPLIES 2020 – 2045**

Supply Source (afy)	2020	2025	2030	2035	2040	2045
License 13855	4,160	4,160	4,160	4,160	4,160	4,160
Permit 18558	1,080	1,080	1,080	1,080	1,080	1,080
NYWD Agreement	4,500	4,500	4,500	4,500	4,500	4,500
SWP Contract	960	960	960	960	960	960
SWP Carryover	5,500	5,500	5,500	5,500	5,500	5,500
Groundwater	1,350	1,350	1,350	1,350	1,350	1,350
Total Supply	17,550	17,550	17,550	17,550	17,550	17,550

SOURCE: Tully & Young. 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

**TABLE 3.15-11
MULTI-DRY YEAR WATER SUPPLIES 2020 – 2045**

Supply Source (afy)	2020	2025	2030	2035	2040	2045
Multi-dry Year 1^a						
License 13855	4,160	4,160	4,160	4,160	4,160	4,160
Permit 18558	1,080	1,080	1,080	1,080	1,080	1,080
NYWD Agreement	4,500	4,500	4,500	4,500	4,500	4,500
SWP Contract	960	960	960	960	960	960
SWP Carryover	5,500	5,500	5,500	5,500	5,500	5,500
Groundwater	1,350	1,350	1,350	1,350	1,350	1,350
Total Supply	17,550	17,550	17,550	17,550	17,550	17,550
Multi-dry Year 2						
License 13855	6,500	6,500	6,500	6,500	6,500	6,500
Permit 18558	2,340	2,340	2,340	2,340	2,340	2,340
NYWD Agreement	4,000	4,000	4,000	4,000	4,000	4,000
SWP Contract	3,360	3,360	3,360	3,360	3,360	3,360
SWP Carryover	2,000	2,000	2,000	2,000	2,000	2,000
Groundwater	1,200	1,200	1,200	1,200	1,200	1,200
Total Supply	19,550	19,550	19,550	19,550	19,550	19,550
Multi-dry Year 3						
License 13855	6,500	6,500	6,500	6,500	6,500	6,500
Permit 18558	2,340	2,340	2,340	2,340	2,340	2,340
NYWD Agreement	4,000	4,000	4,000	4,000	4,000	4,000
SWP Contract	3,360	3,360	3,360	3,360	3,360	3,360
SWP Carryover	0	0	0	0	0	0
Groundwater	1,000	1,000	1,000	1,000	1,000	1,000
Total Supply	19,000	19,000	19,000	19,000	19,000	19,000

NOTE:

a Same as "single dry"

SOURCE: Tully & Young, 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

1. License 13855:

- a. Normal year – fully available within limits of right; fully able to meet build-out demand in early months; shared with the Permit 18558 supply (below) at the direction of operators throughout the allowed diversion months.
- b. Single-dry year – Assumed to be constrained by Term 91 conditions beginning mid-April through November, but otherwise limited by rate of diversion limits or customer demands.

- c. Multiple dry years – the first of a series of three years is assumed to mimic a single-dry year; subsequent years have Term 91 beginning June 1 through mid-October; license cap is limiting on an annual basis, even with Term 91 limits.
2. Permit 18558:
 - a. Normal year – fully available within limits of right; fully able to meet build-out demand in early months; shared with the License supply at the direction of operators throughout the allowed diversion months.
 - b. Single-dry year – Assumed to be constrained by Term 91 conditions beginning mid-April through November, but otherwise limited by rate of diversion limits or customer demands.
 - c. Multiple dry years – the first of a series of three years is assumed to mimic a single-dry year; subsequent years have Term 91 beginning June 1 through mid-October; license cap is limiting on an annual basis, even with Term 91 limits.
3. North Yuba Water District contract:
 - a. Normal year – full contract amount is not needed due to ample License and Permit water; fully use monthly quantities per contract from July through September.
 - b. Single-dry year – Fully use contract maximum to compensate for limits on License and Permit; match monthly contract limits.
 - c. Multiple dry years – Use slightly less than contract maximum due to additional License and Permit water with assumed delay in Term 91 conditions.
4. SWP Contract:
 - a. Normal year – assume 75 percent of Table A is available, equal to 7,200 acre-feet; with ample License and Permit water, only use 5,200 acre-feet, with remaining 2,000 added to Carryover account (assume a full Carryover of 7,500 acre-feet for dry-year contingency).
 - b. Single-dry year – Allocation is limited to 10 percent (960 acre-feet); begin using in April or May when License and Permit are constrained; balance use with available Carryover.
 - c. Multiple dry years – Allocation is limited to 35 percent (3,360 acre-feet); begin using in June with NYWD supplies; likely exhaust supply by August.
5. SWP Carryover:
 - a. Normal year – no Carryover is used, however excess SWP Table A allocation is added to the account; City set objective to maintain 6,000 acre-feet minimum in account and adds anytime allocations exceed 60 percent.
 - b. Single-dry year – use a significant portion of Carryover supply in first dry year (with assumed significant constraints on License and Permit, and only 10 percent SWP allocation); intent is to use 5,500 acre-feet from April through November.

- c. Multiple dry years – use remaining 2,000 acre-feet held over from first single dry year; SWP allocation is higher and slightly more License and Permit water is available; zero Carryover will be available in third year of dry cycle.
6. SWP Advanced Table A
 - a. Normal year – none used.
 - b. Single-dry year – none used; use is contractually constrained until all SWP Allocation and Carryover water is used.
 - c. Multiple dry years – assume small increment (100 to 200 acre-feet) is used in latter part of second dry year; assume 1,500 to 2,000 acre-feet is used in third year as there will be limited Table A allocation and zero Carryover.
 7. Groundwater:
 - a. Normal year – no groundwater is used, although well may be periodically operated for maintenance purposes.
 - b. Single-dry years – groundwater use begins in May to complement NYWD and SWP Table A supplies; maximum of 200 acre-feet is used from June through November for annual total of 1,200 to 1,400 acre-feet.
 - c. Multiple dry years – groundwater is maximized at 200 acre-feet from June through October, with minor additional pumping as needed. First year after the Single-dry event is assumed to pump from 1,000 to 1,200 acre-feet. Third year in the dry series uses less than 1,000 due to demand constraints from the City’s Water Shortage Contingency Plan.

Impacts and Mitigation Measures

Impact 3.15-4: The proposed project could increase demand for potable water in excess of existing supplies.

Full Master Plan

Normal Year

New development pursuant to the proposed BSMP would result in an increased demand for potable water, as estimated previously. Under normal year conditions, the City has ample supplies to meet projected future demands, including the BSMP. **Table 3.15-12** presents the comparison of supply and demand for 5-year increments to 2040. While the excess supply in 2040 shown in the table is limited, actual supplies available to the City would be greater because, as described previously, all available supplies are not used under normal conditions. Therefore, supplies could actually exceed demand by several thousand acre-feet resulting in a less-than-significant impact.

**TABLE 3.15-12
 NORMAL YEAR WATER SUPPLY RELIABILITY 2020 – 2040**

(afy)	2020	2025	2030	2035	2040
Supplies	20,960	20,960	20,960	20,960	20,960
Demands	15,470	16,590	17,780	19,060	20,430
Difference	5,490	4,370	3,180	1,900	530

NOTE:

This Table presents the same supply for all years, resulting in excess supply shown. However, actual operations will only use the supplies needed to meet demand, providing the City with additional flexibility in how it manages available sources. Also, this table does not reflect the operational and water asset restrictions that can affect availability on a daily and month-by-month basis. The comparison of annually available supplies and annual demand therefore should not be considered representative of availability in a particular month.

SOURCE: Tully & Young. 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

Single-Dry Year

Under a single-dry year, the availability of water supplies is based on several assumptions, as described previously. Forecast citywide demand is also increased over the forecast normal conditions to reflect trends of increased landscape irrigation when rainfall is limited. Since this increase would only apply to the outdoor portion of a customer’s demand, an adjustment factor of five (5) percent was applied to the total normal-year demand values to conservatively reflect the expected increase in demand for water. Using conservative supply assumptions and increased demand would result in a predicted supply shortage of about six (6) percent beginning in 2030. By 2040, the shortage during a single-dry year condition would be predicted to increase to 18 percent of demand – or about 4,000 acre-feet (see **Table 3.15-13**), resulting in a significant impact.

**TABLE 3.15-13
 SINGLE-DRY YEAR WATER SUPPLY RELIABILITY 2020 – 2040**

(afy)	2020	2025	2030	2035	2040
Supplies	17,550	17,550	17,550	17,550	17,550
Demands	16,200	17,400	18,700	20,000	21,500
Difference	1,350	150	(1,150)	(2,450)	(3,950)

NOTE:

This table does not reflect the operational and water asset restrictions that can affect availability on a daily and month-by-month basis. The comparison of annually available supplies and annual demand therefore should not be considered representative of availability in a particular month.

SOURCE: Tully & Young. 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

Multi-Dry Year

Under the multi-dry year scenario, demand would vary by setting the forecast demands for the first of three years equal to the demand used in the single-dry year scenario, above. In the second year, the City would initiate the Water Shortage Contingency Plan (WSCP), resulting in a demand reduction for that year. A resulting five (5) percent reduction from the projected normal year demand would be anticipated. Similarly, in the third year, the City would expect further

reductions resulting from implementing additional stages of the WSCP actions.¹⁷ For the third year, the reduction would be assumed to be 15 percent lower than the normal year forecast demand. As a result of the demand reduction efforts imposed by the City’s WSCP, the City would not anticipate any shortfall during the second and third year of a multi-dry year event. This conclusion is consistent with circumstances during 2015 and 2016, which followed an initial dry year in 2014, and reflect the City’s WSCP implementation to manage demands to match available supplies. During the 2015-2016 period, the City achieved demand reductions well in excess of 20 percent compared to 2013 demand conditions.

Table 3.15-14 presents the supply and demand comparison for this scenario. The first year of the multi-dry year scenario would be similar to a single-dry year event. As discussed previously, the City would anticipate a supply shortfall of about 20 percent due partly to the 5 percent expected increase in demand, more as a result of severely constrained License and Permit supplies, as well as only a 10 percent SWP Table A allocation. This would result in a significant impact.

**TABLE 3.15-14
 MULTI-DRY YEAR WATER SUPPLY RELIABILITY 2020 – 2040**

	(afy)	2020	2025	2030	2035	2040
Year 1	Supplies	17,550	17,550	17,550	17,550	17,550
	Demands	16,200	17,400	18,700	20,000	21,500
	Difference	1,350	150	(1,150)	(2,450)	(3,950)
Year 2	Supplies	19,550	19,550	19,550	19,550	19,550
	Demands	14,700	15,700	16,900	18,100	19,500
	Difference	4,8050	3,850	2,650	1,450	50
Year 3	Supplies	19,000	19,000	19,000	19,000	19,000
	Demands	13,900	14,900	16,000	17,100	18,400
	Difference	5,100	4,100	3,000	1,900	600

NOTE:
 This table does not reflect the operational and water asset restrictions that can affect availability on a daily and month-by-month basis. The comparison of annually available supplies and annual demand therefore should not be considered representative of availability in a particular month.

SOURCE: Tully & Young, 2017. Bogue Stewart Master Plan Project SB 610 Water Supply Assessment. August 2017.

Implementation of Mitigation Measure 3.15-1(a)-(c) would ensure that the City is able to meet water supply demands through 2040 for the proposed BSMP and estimated growth in other areas of the City.

¹⁷ All urban water suppliers are required by the Urban Water Management Planning Act (specifically, Water Code Section 10632(a)) to have an adopted Water Shortage Contingency Plan that addresses demand management actions taken under increasingly restricted water supply circumstances.

Mitigation Measure

Mitigation Measure 3.15-1: Wastewater Treatment Capacity (BSMP/NR/KER)

- a) Individual project applicants shall pay the fair share of costs for each development's proportion of the water supply deficits estimated through 2040. The payments shall be directed to a City fund for the construction and operation of new groundwater well(s) as determined by the City. The City shall reflect the requirement for the fair share payment for each development in any future development agreement in the BSMP site, and payment shall be made to the City prior to final tentative map approval and building permit.
- b) The City shall construct new groundwater well(s) to be operable and sufficient to serve the water supply demands of each development approved prior to year 2030. The groundwater well(s) shall be constructed to produce sufficient water to make up the shortfalls in any given single-dry year or the first year of a multi-dry year scenario as determined by the City.
- c) The City shall not approve a final tentative map or building permit for any development pursuant to the proposed BSMP or City beyond the supplies available from 2030 through 2040 without a reliable source of water supply to meet the shortfalls in the single-dry year or the first year of a multi-dry year scenario, as detailed above.

Significance after Mitigation: Implementation of **Mitigation Measures 3.15-1(a) through (c)** would reduce impacts related to shortfalls of water supply to **less-than-significant** levels through the construction of groundwater well(s). Impacts of constructing groundwater well(s) would be limited to light construction work for drilling and installing the well(s), well pad(s), and pumping equipment. Operation of the well(s) and pump(s) would be limited to times when shortfalls are expected, and, therefore, are not expected to impact the underlying aquifers. The City would be required to prepare the appropriate CEQA documentation prior to approval of constructing groundwater well(s).

Alternative Water Supply Analysis

Background

The proposed BSMP would increase demand for potable water in excess of existing supplies during normal, and single- and multi-dry years for the reasons described above, resulting in a significant impact. In *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* ((2007) 40 Cal 4th 412) (hereafter *Vineyard*), the California Supreme Court identified specific requirements for an adequate analysis of water supply issues in an EIR. The Court explained that future water supplies identified and analyzed in an EIR must be proven to be reasonably likely to be available. Speculative water sources and unrealistic water allocations do not provide an adequate basis for a public agency's decision-making. The Court opined that when a full analysis of future water supplies for a project leaves some uncertainty regarding the availability of the identified future supplies, the EIR must discuss possible replacement or alternative supply sources, and the EIR must discuss the environmental effects of relying on those alternative supply sources. The Court held that it is not sufficient to address issues relating to future water supplies

by stating that future development would not proceed in the absence of a sufficient water supply.¹⁸

The Court also recognized that the ultimate question under CEQA “is not whether an EIR establishes a likely source of water, but whether it adequately addresses the reasonably foreseeable impacts of supplying water to the project”.¹⁹ Accordingly, if uncertainties inherent in long-term planning make it impossible to identify the future water sources with certainty, an EIR may satisfy CEQA if it acknowledges the degree of uncertainty involved, discusses the reasonably foreseeable water supply alternatives, and discloses the significant foreseeable environmental effects of each alternative, as well as mitigation measures to minimize each adverse impact.²⁰

Accordingly, the *Vineyard* opinion outlined the following general principles governing an EIR’s analysis of water supply issues:

- An adequate environmental impact analysis for a long-range development plan cannot be limited to the water supply for the first stage of development. It must consider supplies necessary for the entire development.
- Future water supplies identified and analyzed in an EIR must be reasonably likely to prove available. Speculative sources and unrealistic paper allocation do not provide an adequate basis for decision making under CEQA.
- When, despite a full analysis, “it is impossible to confidently determine that anticipated future water sources will be available,” CEQA requires some discussion of possible replacement or alternative supply sources, and of the environmental consequences of resorting to those sources.
- An EIR for a land use plan need not demonstrate that the water supply for the project is assured through enforceable agreements with a provider and built or approved treatment and delivery facilities. To interpret CEQA as requiring firm assurances of future water supplies at early stages of the planning process would be inconsistent with the water supply statutes, which call for an assured supply only at the end of the approval process.
- The “ultimate question under CEQA is not whether an EIR establishes a likely source of water, but whether it adequately addresses the reasonably foreseeable impacts of supplying water to the project.”²¹

Consistent with the guidance of the *Vineyard* decision, the information that follows characterizes an alternative water source for the identified development to meet the shortfalls that are expected under all the water-year scenarios analyzed above.

¹⁸ California Supreme Court. 2007. *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (40 Cal 4th 412). February 2007.

¹⁹ California Supreme Court. 2007. *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (40 Cal 4th 412). February 2007.

²⁰ California Supreme Court. 2007. *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (40 Cal 4th 412). February 2007.

²¹ California Supreme Court. 2007. *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (40 Cal 4th 412). February 2007.

Analysis

As described previously, the City's water supplies are derived from several sources – SWP water, NYWD water, and groundwater. These water supplies are available to the City for serving potable water demand. Based on the analysis presented above, the potential demands that could need to be met with the alternative supplies are the 4,500 acre-feet/year from the NYWD contract that is not guaranteed in the future due to contract terms, in addition to regulatory restrictions. In the event that the availability of the water supplies earmarked for the proposed BSMP would be reduced, the City could use additional groundwater supply to meet demands. The City anticipates using these sources of water to meet the proposed BSMP demand for potable water with additional water supplied from a future groundwater aquifer storage and a recovery well constructed within the City boundary.

The City conducted a preliminary feasibility study for installing an aquifer storage and recovery system (ASR) on the City's WTP site. The ASR would use excess water supplies when available to the City (e.g., during winter months or wetter years) to pump into the upper and lower aquifers to bank for future use. During normal years, water supply available to the City to use for banking in the ASR would come from perfecting its Feather River water right permit 18558 of 3,000 acre-feet/year and SWP Contract Table A water of up to 1,920 acre-feet/year. The combined amount available to bank during normal years would be 4,920 acre-feet/year which is more than enough to offset the potential loss of availability from the NYWD contract amount of 4,500 acre-feet/year.

The construction and operation of an ASR on the WTP site would result in limited construction and operational impacts. Construction an ASR on the WTP site could result in impacts on air quality, terrestrial biological species, greenhouse gases, noise, and lighting. Because the ASR would be located adjacent to the WTP units, there would likely be less than an acre of ground disturbance for constructing the well head and pad and the pipeline from the well head to the treatment works. Operation of the ASR would use existing raw water pipelines to connect with the well head and use of electrical pumps at the well head for storage and recovery of water. Operation of the ASR would have minimal impacts on energy use, and could be beneficial to the two underlying aquifers by injecting better quality water than existing groundwater. Prior to implementing an ASR projects at the City WTP, the City would be required to undertake CEQA review and to the extent there would be significant impacts, as described above, implement all feasible mitigation measures.

Impact 3.15-5: The proposed BSMP project could result in inadequate capacity in the City's water supply facilities to meet the water supply demand, resulting in the construction of new water supply facilities.

BSMP

The proposed BSMP would increase the demand for water supplied by the City's WTP. The current maximum daily demand of the WTP is approximately 27 mgd with an annual average

daily demand of approximately 13 mgd for the years 2013 through 2016²² resulting in an excess treatment capacity of approximately 9 mgd and 14 mgd for maximum and average daily demands, respectively. The proposed BSMP would construct transmission mains and a supply grid to provide sufficient flow and pressure to meet the demand and required fire flows and pressure within the BSMP site. The existing water system would require strategic upgrades to serve the proposed BSMP to connect with the City's water supply mains. Extensions of the existing distribution main system and construction of water storage tanks would provide adequate service to the future development within the BSMP site.

The design and modeling of the fire flows and pressures required to serve the project were documented in the Stewart Area Water Analysis (**Appendix I**) under the direction of the City using a demand factor of 216 gallons per capita per day to size and test the supply grid under various emergency scenarios within the BSMP site. The total potential maximum daily demand from the proposed BSMP would be three (3) mgd and would meet the required fire flows and pressures under the modeled emergency scenarios.²³ In addition, the maximum daily demand for water supply would be less than the available treatment capacity at the WTP and would not require construction of additional treatment facilities. Therefore, the impact related to the capacity of the water supply system would be **less than significant**.

Newkom Ranch and Kells East Ranch

The Newkom Ranch and Kells East Ranch sites would construct water supply mains and a grid system sized according to the City standards to meet fire flows and pressures as stated above for the proposed BSMP project. The Newkom Ranch and Kells East sites would require maximum daily demands of 743,040 gpd and 310,176 gpd, respectively, which are individually and collectively within under the excess treatment capacity at the WTP, and the impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative context for water supply considers the potential environmental effects of supplying and treating water to serve the proposed BSMP in addition to water demands generated by build-out of the City's General Plan. The cumulative context for the capacity of the City's water supply facilities is the capacity of the WTP to deliver maximum daily flows to the build-out of the City's General Plan. Because the water supply infrastructure of the proposed BSMP would be built to serve only those lots within the BSMP site, impacts of capacity of the water supply infrastructure within the BSMP would not combine with the water supply infrastructure of other individual projects within the City.

²² Young, Greg. 2017. Personal Communication with Greg Young of Tully & Young. August 2017.

²³ MHM Inc. 2016. Technical Memorandum Domestic Water, Bogue Stewart Master Plan Area. December 2016.

Impact 3.15-6: Implementation of the proposed BSMP, in combination with other past, present, and reasonably foreseeable cumulative development, would contribute to cumulative increases in demand for water supply.

As described previously in Impact 3.15-1, implementation of the proposed BSMP along with buildout of the Yuba City General Plan would result in a shortfall of water during a single-dry year and the first year of a multi-dry year starting in 2030 and increasing out to 2040. This is considered a **significant** cumulative impact. The proposed BSMP would have a considerable contribution to this significant cumulative impact because it would result in an increase in demand on the limited water supply sources of the City of up to 1,574 acre-feet/year.

As described previously, implementation of Mitigation Measure 3.15-1(a) through (c) would reduce impacts of the proposed BSMP to less than considerable levels resulting in a **less-than-significant** impact.

Mitigation Measure

Mitigation Measure 3.15-6: Wastewater Treatment Capacity (BSMP/NR/KER)

Implement Mitigation Measure 3.15-1(a) through (c).

Impact 3.15-7: Implementation of the proposed BSMP, in combination with other past, present, and reasonably foreseeable cumulative development, would contribute to cumulative increases in demand for water treatment.

Implementation of the proposed BSMP, in combination with buildout of the Yuba City General Plan, would increase the demand for water treatment at the City's WTP that would exceed the current capacity of the WTP. The proposed BSMP would result in a total maximum daily demand increase for treated water of 3 mgd or one-third of the remaining capacity at the WTP. However, the Yuba City Update to Water Demand and Infrastructure System Evaluation provides a plan for phased expansion of the water WTP to meet the future demands of buildout within the City's SOI.²⁴ Financing for the expansion of the WTP and all other water conveyance facilities would be through development fees and local taxes or bond funding. Therefore, the cumulative impact is considered **less than significant**.

Mitigation Measure

None required.

3.15.3 Solid Waste

This section of the EIR characterizes existing solid waste collection services at the BSMP site. Existing plans and policies relevant to solid waste issues associated with implementation of the

²⁴ HDR, Inc. 2006. Technical Memorandum: Yuba City Update to Water Demand and Infrastructure System Evaluation. July 2006.

proposed BSMP are also provided. Potential impacts to solid waste collection services due to the proposed BSMP are evaluated based on analyses of service levels and plan data. The disposal of hazardous waste is discussed in Section 3.8, Hazards and Hazardous Materials.

The analysis included in this section was developed based on information included in the BSMP, data provided by the Yuba City and Sutter County General Plans, CalRecycle's Solid Waste Information System, and other published technical reports, as indicated in the footnoted references.

Environmental Setting

Solid waste generated in the Yuba City is collected by Recology Yuba-Sutter. Recology offers residential, commercial, industrial, electronic, and hazardous waste collection, processing, recycling and disposal, as well as construction and demolition waste processing, diversion, and transfer to a disposal facility. The City's municipal solid waste is delivered to the Ostrom Road Landfill; a State-permitted solid waste facility that provides a full range of transfer and diversion services. This landfill has a remaining capacity of 36,631,000 cubic yards (approximately 84 percent remaining capacity reported in 2016).²⁵

Reuse and Recycling

To guide the waste diversion process, the California Integrated Waste Management Act of 1989 promotes an integrated solid waste management approach which establishes the following hierarchy of goals: (1) source reduction; (2) recycling and composting; (3) environmentally safe transformation and disposal of wastes. On October 1, 2001, the Regional Waste Management Authority (RWMA) implemented one of the most liberal curbside recycling programs in the State, in order to help reach the 50 percent goal by the end of 2003. Separate bins for greenwaste, recyclable materials, and nonrecyclable waste were distributed to households throughout the region. All paper (including magazines and cereal boxes), glass, plastic (#1 through #7), and aluminum products and tin cans are accepted by the recycling system. While recycling is not mandatory, households are charged for waste disposal based on the volume of non-recyclable household waste produced.²⁶

Regulatory Setting

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), Subtitle D, contained in Title 42 of the United States Code (USC) §6901 et seq. contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills. The USEPA waste management regulations are codified in Volume 40 of

²⁵ CalRecycle. 2017. Facility/Site Summary Details: Recology Ostrom Road LF Inc. (58-AA-0011). Available: <http://www.calrecycle.ca.gov/SWFacilities/Directory/58-AA-0011/Detail/>. Accessed August 15, 2017.

²⁶ City of Yuba City, 2004. *Yuba City General Plan*, Resolution #04-049. April 8, 2004.

the Code of Federal Regulations (CFR) pts. 239-282. The RCRA Subtitle D is implemented by Title 27 of the Public Resources Code (PRC), approved by the USEPA.

State

Integrated Waste Management Act (Assembly Bill 939)

Regulation affecting solid waste disposal in California is embodied in Public Resources Code Title 14, known as the Integrated Waste Management Act originally adopted in 1989. Assembly Bill (AB) 939 was designed to increase landfill life by diverting solid waste from landfills within the state and conserving other resources through increasing recycling programs and incentives. AB 939 requires that counties prepare Integrated Waste Management Plans to implement landfill diversion goals, and requires that cities and counties prepare and adopt Source Reduction and Recycling Elements (SRRE). The SRRE must set forth a program for management of solid waste generated with the jurisdiction of the respective city or county. Each source reduction and recycling element must include, but is not limited to, all of the following components for solid waste generated in the jurisdiction of the plan:

- A waste characterization component,
- A source reduction component,
- A recycling component,
- A composting component,
- A solid waste facility capacity component,
- A funding component, and
- A special waste component.

The SRRE programs are designed to achieve landfill diversion goals by encouraging recycling in the manufacture, purchase and use of recycled products. AB 939 also requires that California cities implement plans designed to divert the total solid waste generated within each jurisdiction by 50 percent based on a base year of 2000. The diversion rate is adjusted annually for population and economic growth when calculating the percentage achieved in a particular jurisdiction.

Public Resources Code 41780

The California State Legislature set the policy goal for the state that not less than 75 percent of solid waste generated be source reduced, recycled or composted by the year 2020. Furthermore, a 50 percent diversion rate will be enforced for local jurisdictions.

Assembly Bill 1220

The California Department of Resources Recycling and Recovery (CalRecycle) and the SWRCB completed a parallel rulemaking as a result of AB 1220 (Chapter 656, Statutes of 1993). AB 1220 required clarification of the roles and responsibilities of the two boards, the Regional Water Quality Control Boards (Regional Water Boards) and CalRecycle's local enforcement agencies in regulating solid waste disposal sites. The approved Title 27 regulations combine prior disposal site/landfill regulations of CalRecycle and the SWRCB that were maintained in Title 14 CCR and

Chapter 15 of Title 23 CCR (which contains requirements for disposal of hazardous waste). The purpose for CalRecycle standards in this subdivision is to protect public health and safety and the environment. The regulations apply to active and inactive disposal sites, including facilities or equipment used at the disposal sites. These standards make clear that the primary responsibility for enforcing state minimum standards rests with the local enforcement agency in cooperation with the Regional Water Board or other oversight agency. Subchapters of Title 27 include operating criteria for landfills and disposal sites, requirements to have enough materials to cover waste to prevent a threat to human health and the environment, requirements for operations at solid waste facilities for the handling of waste and equipment needs of the site, requirements for controlling activities on site, requirements for controlling landfill gas that is made from the decomposition of wastes on site, and requirements of the owner/operator of a facility to properly operate the site to protect the site from fire threat.

Assembly Bill 341

In an effort to reduce greenhouse gas emissions from disposing of recyclables in landfills, AB 341 requires local jurisdictions to implement commercial solid waste recycling programs. Businesses that generate four cubic yards or more of solid waste per week or multifamily dwellings of five units or more must arrange for recycling services. In order to comply with AB 341, jurisdictions' commercial recycling programs must include education, outreach and monitoring of commercial waste generators and report on the process to CalRecycle. Jurisdictions may enact mandatory commercial recycling ordinances to outline how the goals of AB 341 will be reached. For businesses to comply with AB 341, they must arrange for recyclables collection through self-haul, subscribing to franchised haulers for collection, or subscribing to a recycling service that may include mixed waste processing that yields diversion results comparable source separation.²⁷

Assembly Bill 1826

In order to further reduce greenhouse gas emissions from disposing of organics materials in landfills, AB 1826 requires businesses to recycle their organic waste beginning on April 1, 2016, depending on the amount of solid waste they generate per week. Similar to AB 341, jurisdictions are required to implement an organic waste recycling program that includes the education, outreach and monitoring of businesses that must comply. Organic waste refers to food waste, green waste, landscaping and pruning waste, nonhazardous wood waste, and food-soiled paper that is mixed with food waste.

Local

Yuba City General Plan

Please be sure that the goals and policies that you cite here are relevant to the proposed project. Do not include policies that are extremely broad or that have little applicability to the proposed project. In some cases, this list of applicable goals and policies may be short, and that's okay.

²⁷ CalRecycle. 2017. Assembly Bill 341: Mandatory Commercial Recycling, 2011. Available: <http://www.calrecycle.ca.gov/recycle/commercial/#Elements>. Accessed August 14, 2017.

Don't throw in policies just to make this section larger. All goals and policies should be listed verbatim.

The following guiding and implementing policies from the City of Yuba City General Plan are relevant to solid waste.

Guiding Policy 7.3-G-1 Meet the City's solid waste disposal needs, while maximizing opportunities for waste reduction and recycling.

Guiding Policy 7.3-G-2 Manage solid waste so that State diversion goals are exceeded and the best possible service is provided to the citizens and businesses of Yuba City.

Implementing Policies

- 7.3-I-2 Expand recycling efforts in multi-family residential and commercial projects, and continue to encourage recycling by all residents.
- 7.3-I-3 Require builders to incorporate interior and exterior storage areas for recyclables and convenient access to recycle areas into new commercial and residential remodeled buildings, and encourage remodeled buildings (both residential and commercial) to make recycling activities more convenient for those who use the buildings.
- 7.3-I-5 Encourage existing commercial businesses and residential development to install recycling receptacles on their premises.
- 7.3-I-6 Comply with State requirements for proper handling and storage of solid waste and recyclables and diversion of solid waste from landfills.

The proposed BSMP would be required to meet the State and City regulations and ordinances regarding solid waste collection and disposal, consistent with the above policies.

Analysis, Impacts, and Mitigation

Significance Criteria

The proposed BSMP would result in a significant impact on solid waste if it would:

1. Require or result in either the construction of new solid waste facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.

Methodology and Assumptions

The following impact analysis evaluates the potential for proposed BSMP-related facilities to result in adverse changes to existing infrastructure and supply relating to solid waste. The analysis focuses on wastes generated by development under the proposed BSMP and potential impacts to facilities located outside of the BSMP site. Potential changes in solid waste generation are evaluated using waste generation factors shown in **Table 3.15-15**. Estimated solid waste generation for the BSMP was also calculated based on factors shown in Table 3.15-15, and

existing waste generation was subtracted from anticipated waste generation to identify the net increase in waste associated with the BSMP.

**TABLE 3.15-15
 PROPOSED BSMP TOTAL SOLID WASTE GENERATION**

Land Use Designation	Proposed	Unit	Factor	Solid Waste per day (tons)	Solid Waste per year (tons)
Low Density Residential	1,329	dwelling unit	8.5 lbs/day/unit	5.6	2,044
Low Medium Density Residential	430	dwelling unit	8.5 lbs/day/unit	1.8	657
Medium High Density Residential	758	dwelling unit	8.5 lbs/day/unit	3.2	1,168
Neighborhood Commercial	82,328	square feet	0.006 lb/sq ft/day	0.25	91
Community Commercial	390,951	square feet	0.006 lb/sq ft/day	1.2	526
Office & Office Park	108,464	square feet	0.006 lb/sq ft/day	0.33	120
Business, Technology & Light Industrial	574,992	square feet	0.006 lb/sq ft/day	1.7	620
Public Facilities	131,987	square feet	0.007 lb/sq ft/day	0.46	168
Total				15	5,284

SOURCE: CalRecycle. 2019. *Estimated Solid Waste Generation Rates*. Available: <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>. Accessed April 4, 2019.

The estimated solid waste disposal demand for the proposed BSMP would be 50-percent of the total solid waste of 5,284, or about 2,642 tons per year. As shown in **Tables 3.15-16** and **3.15-17**, the Newkom Ranch and Kells East Ranch sites would, after 50-percent diversion of recyclable, have waste generation rates of 831 and 756 tons/year. The Ostrom Road Landfill has an expected life span to the year 2096.²⁸ In accordance with state mandates, cities and counties must achieve diversion rates of 50 percent through source reduction, recycling, and composting activities. The Yuba City General Plan supports recycling and source reduction efforts, as a means to achieve the 50 percent diversion rate and to extend the life of the landfill.

**TABLE 3.15-16
 TOTAL SOLID WASTE GENERATION FOR NEWKOM RANCH**

Land Use Designation	Proposed	Units	Factor	Solid Waste per day (tons)	Solid Waste per year (tons)
Low Density Residential	427	dwelling unit	8.5 lbs/day/unit	1.8	657
Medium-High Density Residential	216	dwelling unit	8.5 lbs/day/unit	0.92	336
Community Commercial	229,779	square feet	0.006 lb/sq ft/day	0.69	252
Office & Office Park	108,464	square feet	0.006 lb/sq ft/day	0.33	120

²⁸ CalRecycle. 2017. Facility/Site Summary Details: Recology Ostrom Road LF Inc. (58-AA-0011). Available: <http://www.calrecycle.ca.gov/SWFacilities/Directory/58-AA-0011/Document?SITESCH=58-AA-0011>. Accessed August 15, 2017.

Land Use Designation	Proposed	Units	Factor	Solid Waste per day (tons)	Solid Waste per year (tons)
Public Facilities	5.3	Acres	0.007 lbs/sq ft/day	0.81	296
Total				5	1,661

SOURCE: CalRecycle. 2019. *Estimated Solid Waste Generation Rates*. Available: <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>. Accessed April 4, 2019.

**TABLE 3.15-17
 TOTAL SOLID WASTE GENERATION FOR KELLS EAST**

Land Use Designation	Land Area (Gross Acres) Proposed	Average Density (d.u./acre) Units	Factor	Solid Waste per day (lbs)	Solid Waste per year (lbs)
Low Density Residential	147	dwelling unit	8.5 lbs/day/unit	0.63	230
Medium High Density Residential	122	dwelling unit	8.5 lbs/day/unit	0.52	190
Community Commercial	229,779	square feet	0.006 lb/sq ft/day	0.69	252
Public Facilities	15.2	acres	0.007 lbs/sq ft/day	2.3	840
Total				4	1,512

SOURCE: CalRecycle. 2019. *Estimated Solid Waste Generation Rates*. Available: <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>. Accessed April 4, 2019.

Impacts and Mitigation Measures

Impact 3.15-8: The proposed BSMP could require or result in either the construction of new solid waste facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.

Full Master Plan

Construction

Construction within the BSMP site would result in the generation of various construction waste, including scrap lumber, scrap finishing materials, various scrap metals, and other recyclable and non-recyclable constructed related wastes. Construction waste would be managed in accordance with ordinances promulgated by the RWMA – in particular, to reduce or divert the solid waste stream to the landfills by approximately 50 percent, in compliance with AB 939. Recyclable construction materials, including concrete, metals, wood, and various other recyclable materials would be diverted to recycling facilities.

Development projects under the proposed BSMP would also comply with City requirements to divert a minimum of 50 percent of construction wastes to a certified recycling processor. Adhering to these requirements would minimize the total volume of construction waste that would be landfilled, but would not avoid landfilling entirely. Landfilled waste would be delivered to the Ostrom Road Landfill. In consideration of the large volume of available landfill capacity,

sufficient landfill capacity would be available to accommodate the construction wastes from the proposed BSMP. The proposed BSMP would not require new or expanded solid waste management or disposal facilities, and potential operation period impacts on landfills would be **less than significant**.

Operation

Because the existing land uses within the BSMP site are mostly agricultural and include few rural residences or other urban uses, current solid waste generation from the site is minimal. The proposed BSMP would result in the generation of a substantial increase in solid wastes as a result of the proposed development of new residential, commercial, and industrial land uses. Upon buildout, the proposed BSMP would generate a total of approximately 2,643 tons of solid waste per year after diversion to recycling, as described previously (see Table 3.15-15).

Waste generated from developed uses under the proposed BSMP would be removed from the site by the City and/or private haulers, and either recycled in accordance with City programs and requirements, or landfilled at the Ostrom Road Landfill. As noted previously, these facilities together currently have approximately 39 million cubic yards of available capacity. Solid waste from the proposed BSMP would represent approximately 0.03 percent of total annual solid waste served at the Ostrom Road Landfill.²⁹ Sufficient landfill capacity would be available to serve the proposed BSMP, and would not require new or expanded solid waste management or disposal facilities. Additionally, implementation of typical recycling rates and City recycling requirements would result a portion of the total waste stream being diverted to recycling. Therefore, the impact would be **less than significant**.

Newkom Ranch and Kells East Ranch

Development of the proposed Newkom Ranch and Kells East Ranch would increase solid waste generation from residential, commercial, and industrial land uses. Assuming a 50 percent diversion rate, the estimated solid waste demand of the Newkom Ranch and Kells East Ranch sites would be about of 831 and 756 tons per year, respectively, after 50-percent diversion of recyclables (see Tables 3.15-16 and 3.15-17). As mentioned above, the Ostrom Road Landfill has an expected life span to the year 2096. Waste generated by the Newkom Ranch and Kells East Ranch sites would be removed from the site by the City and/or private haulers, and either recycled in accordance with City programs and requirements, or landfilled at the Ostrom Road Landfill, as discussed previously. As noted previously, this facility currently has approximately 39 million cubic yards of available capacity. In accordance with state mandates, cities and counties must achieve diversion rates of 50 percent through source reduction, recycling, and composting activities.

The proposed Newkom Ranch and Kells East Ranch site solid waste generation together would represent approximately 1.1 percent of total annual waste served by this landfill.³⁰ Sufficient

²⁹ One cubic yard is equivalent to approximately one ton of compacted municipal solid waste at a large landfill facility.

³⁰ One cubic yard is equivalent to approximately one ton of compacted municipal solid waste at a large landfill facility.

landfill capacity would be available to serve the proposed Newkom Ranch and Kells East Ranch sites and would not require new or expanded solid waste management or disposal facilities. Therefore, the impact would be **less than significant**.

Summary

There would be sufficient landfill capacity to service the proposed BSMP that would not require new or expanded solid waste management or disposal facilities.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative context for solid waste impacts on landfill capacity are growth within the service area of the Ostrom Road Landfill and the RWMA.

Impact 3.15-9: Implementation of the proposed BSMP, in combination with other past, present, and reasonably foreseeable cumulative development, would contribute to cumulative increases in solid waste.

The proposed BSMP, in combination with future growth within the service area of the Ostrom Road Landfill and RWMA, would result in an increase in solid waste generated from residential, commercial, and industrial development. Currently, the Ostrom Road Landfill has an average solid waste instream of approximately 630 tons per day and estimates a closure date of 2096.³¹ As described previously for the proposed BSMP, total solid waste generation at buildout would be about 2.9 percent of the total annual solid waste served by the landfill. Therefore, the proposed BSMP would have a less-than-considerable contribution and impact would be **less than significant**.

Mitigation Measure

None required.

³¹ CalRecycle. 2017. Facility/Site Summary Details: Recology Ostrom Road LF Inc. (58-AA-0011). Available: <http://www.calrecycle.ca.gov/SWFacilities/Directory/58-AA-0011/Document?SITESCH=58-AA-0011>. Accessed August 25, 2017.

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CHAPTER 4

Other CEQA Required Considerations

4.1 Introduction

Section 15126 of the State CEQA Guidelines requires that all phases of a project must be considered when evaluating its impact on the environment, including planning, acquisition, construction, and operation. Further, the evaluation of significant impacts must consider direct and reasonably foreseeable indirect effects of the project over the short-term and long-term. As part of this analysis, the EIR must identify (1) significant environmental effects of the proposed project, (2) mitigation measures proposed to minimize significant effects, (3) significant environmental effects that cannot be avoided if the proposed project is implemented, (4) significant irreversible environmental changes that would result from implementation of the proposed project, (5) growth-inducing impacts of the proposed project, (6) potential urban decay effects caused by economic competition created by the project, and (7) alternatives to the proposed project.

Chapter ES, Executive Summary, and Sections 3.1 through 3.17 provide a comprehensive presentation of the proposed project's environmental effects, proposed mitigation measures, and conclusions regarding the level of significance of each impact both before and after mitigation.

Chapter 6, Alternatives, presents a comparative analysis of alternatives to the proposed project.

The other CEQA-required analyses described above are presented in this section.

4.2 Significant and Unavoidable Impacts

Section 15126.2(b) of the State CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures. Project-specific and cumulative impacts that cannot be avoided if the project is approved as proposed include:

4.2.1 Project-Specific Significant and Unavoidable Impacts

Impact 3.1-1: Development pursuant to the proposed BSMP could result in a substantial adverse effect on a scenic vista.

Impact 3.1-2: Development pursuant to the proposed BSMP could substantially degrade the existing visual character or quality of the site and its surroundings.

Impact 3.3-1: Construction of land uses under the BSMP could generate criteria pollutant emissions that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Impact 3.3-2: Operational activities associated with development under the BSMP would result in emissions of criteria air pollutants at levels that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Impact 3.3-3: The proposed BSMP project would conflict with or obstruct implementation of an applicable air quality plan.

Impact 3.5-1: Development pursuant to the proposed BSMP could cause a substantial adverse change in the significance of an historical architectural resource.

4.2.2 Cumulative Significant and Unavoidable Impacts

Impact 3.1-4: Implementation of the proposed project, in conjunction with development of other projects in the Yuba City Sphere of Influence and within nearby Sutter County, could contribute to cumulative impacts on scenic vistas.

Impact 3.1-5: Implementation of the proposed BSMP, in combination with other projects in the Yuba City Sphere of Influence and within adjacent Sutter County, could contribute to cumulative degradation of visual character and quality.

Impact 3.2-3: Implementation of the proposed project would contribute to cumulative conversion of Important Farmland to non-agricultural use.

Impact 3.3-7: The proposed BSMP could contribute to cumulative increases in short-term (construction) emissions.

Impact 3.3-8: The proposed BSMP could contribute to cumulative increases in long-term (operational) emissions.

Impact 3.4-8: Implementation of the proposed project, in combination with other development in the Central Sacramento Valley, could result in the loss of special-status plants and wildlife, protected trees, and wildlife resources.

Impact 3.14-9: Implementation of the proposed BSMP, in combination with other cumulative development, would cause cumulatively significant LOS-related impacts at intersections maintained by Caltrans.

Impact 3.14-10: Implementation of the proposed BSMP, in combination with other cumulative development, would cause significant queuing-related impacts at intersections maintained by Caltrans.

4.3 Significant Irreversible Environmental Effects

Under CEQA, an EIR must analyze the extent to which a project's primary and secondary effects would generally commit future generations to the allocation of nonrenewable resources and to irreversible environmental damage (State CEQA Guidelines sections 15126.2(c); 15127). Specifically, section 15126.2(c) states:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Development of the proposed project would result in the dedication of the BSMP area to mixed use urban development, thereby precluding other conflicting uses for the lifespan of the project. As described in Section 3.2, Agriculture and Forestry Resources, implementation of the proposed project would convert agricultural land to urban uses. Once agricultural land is graded, paved, and developed, the loss of agricultural capabilities would be permanent as it is highly unlikely that the land would be restored for use as open space or agricultural land.

The State CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the project. While the proposed project could result in the use, transport, storage, and disposal of hazardous wastes during construction and operation, as described in Section 3.8 Hazards and Hazardous Materials, all activities would comply with applicable state and federal laws related to hazardous materials, which significantly reduce the likelihood and severity of accidents that could result in irreversible environmental damage.

Implementation of the proposed project would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts are intensification of the visual character of the project site (see Section 3.1, Aesthetics), increased generation of pollutants from vehicle travel and stationary operations (see Section 3.3, Air Quality), and the short-term commitment of non-renewable and/or slowly renewable natural and energy resources, such as water resources during construction activities (see Section 3.15, Utilities and Service Systems). Operations associated with future uses would also consume natural gas and electrical energy. Although the overall level of resource consumption on the project site would increase, resource consumption would be minimized through adherence to building codes and General Plan policies. The unavoidable consequences of the proposed project are described in the appropriate sections in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures.

As is described in Section 3.7, Greenhouse Gas Emissions and Energy, resources that would be permanently and continually consumed by project implementation include electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources. With respect to operational activities, compliance with all applicable building codes, including 2016 Title 24 Energy Efficiency Standards, as well as mitigation measures, planning policies, and standard conservation features, would ensure that natural resources are conserved to the maximum extent possible. It is also possible that, over time, new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the reliance upon nonrenewable natural resources. Nonetheless, construction activities related to the proposed project would result in the ir retrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment.

Over the past decade, our understanding of global climate change and the role that communities can play in addressing it has grown tremendously. There is large scientific consensus that recent increases in global temperatures are associated with corresponding increases of greenhouse gases (GHGs). This temperature increase is beginning to affect regional climates and is expected result in impacts to our region and the world. Climate change has profound implications for the availability of the natural resources on which economic prosperity and human development depend. Although the relative contribution of the proposed project to global warming is not currently possible to determine, this issue is explored in Section 3.7, Greenhouse Gas Emissions.

4.4 Growth-Inducing Effects

As required by section 15126.2(d) of the State CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or

other precedents that directly or indirectly encourage additional growth. The purpose of this section is to evaluate the potential growth-inducing effects resulting from the implementation of the proposed project in the City of Yuba City, and throughout the region. Additional analysis of the growth-inducing effects of the proposed project is provided in Section 3.13, Population and Housing.

In general, a project may foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of the new access to an area; a change in zoning or general plan amendment approval); or economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion, etc.). These circumstances are further described below:

- **Elimination of Obstacles to Growth:** This refers to the extent to which a proposed project removes infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of project approval.
- **Economic Effects:** This refers to the extent to which a proposed project could cause increased activity in the local or regional economy. Economic effects can include such effects as the Multiplier Effect. A “multiplier” is an economic term used to describe inter-relationships among various sectors of the economy. The multiplier effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect acknowledges that the onsite employment and population growth of each project is not the complete picture of growth caused by the project.

4.4.1 Elimination of Obstacles to Growth

The elimination of either physical or regulatory obstacles to growth is considered a growth-inducing effect. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including growth and development policies, could result in new growth.

The proposed project would develop residential, commercial/office, recreational, school, public, and park/open space uses in the City of Yuba City. The project site is currently used for agricultural operations and contains very few homes and no commercial, office, or retail operations. The primary existing growth obstacles in the project area include:

- Limited roadway access within and adjacent to the plan area;
- Lack of public stormwater drainage facilities within the plan area;
- Limited potable water infrastructure;
- Limited wastewater conveyance infrastructure; and
- Limited capacity of the electrical power grid.

Implementation of the proposed project would result in the elimination of these growth obstacles because it would construct and install the infrastructure necessary to serve development of the proposed project. Implementation of the proposed project would limit the extension of utilities infrastructure to the size required for the proposed project. Infrastructure improvements from the proposed plan would not be of sufficient size to serve future development in undeveloped areas outside of the BSMP area. As such, the proposed project would not facilitate unforeseen growth.

4.4.2 Economic Effects

Increased Demand on Secondary Markets

Development (residential or employment-generating uses) typically generates a secondary or indirect demand for other goods and services. The secondary or economic change can be quantified by an economic multiplier, which is an economic term used to describe the inter-relationships among various sectors of the economy. One aspect of the multiplier effect is the potential catalytic force a project can have on satellite or follow-up development because it creates a demand or market to be served (e.g., neighborhood commercial development around residential development).

In addition to the direct employment growth generated by the proposed project, additional local employment could be generated through what is commonly referred to as the "multiplier effect." The multiplier effect refers to the secondary economic effects caused by spending from project-generated residents and employees. The multiplier effect tends to be greater in regions with larger diverse economies due to a decrease in the requirement to import goods and services from outside the region, as compared to the effects of spending in smaller economies where goods and services must be imported from elsewhere.

Two different types of additional employment are tracked through the multiplier effect. Indirect employment includes those additional jobs that are generated through the expenditure patterns of residents and direct employment associated with the project. For example, future residents and workers in the office, hotel and retail portions of the proposed project would spend money in the local economy, and the expenditure of that money would result in additional jobs. Indirect jobs tend to be in relatively close proximity to the places of employment and residence.

The multiplier effect also calculates induced employment. Induced employment follows the economic effect of employment beyond the expenditures of the employees within the proposed project area to include jobs created by the stream of goods and services necessary to support businesses within the project area. For example, when a manufacturer buys products or sells products, the employment associated with those inputs or outputs are considered induced employment. Another example is when an employee from the project goes out to lunch, the person who serves the project employee lunch holds a job that was indirectly caused by the proposed project. When the server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered induced.

The multiplier effect also considers the secondary effect of employee expenditures. Thus, it includes the economic effect of the dollars spent by those employees who support the employees of the project.

As discussed in Section 3.12, Population and Housing, implementation of the proposed project would add approximately 1,156,735 square feet of commercial, office and industrial space; one K-8 school; and public facilities. This development would result in approximately 2,240 new jobs within the plan area.

New employees in the plan area would create an economic incentive for future projects by increasing the surrounding property values. Under the multiplier effect, additional dollars spent for goods and services within the plan area are eventually re-spent on additional goods and services. Therefore, the anticipated increase in spending on secondary and support services could increase growth pressures in the region. However, given the existing urbanization of the rest of the City of Yuba City, most goods and services are already available and would be expanded in response to regional growth, not solely as a result of the proposed project.

Increased Pressure on Land Use Intensification

Unforeseen future development can be spurred by the construction of certain projects that have the effect of creating unique and currently unmet market demands, or by causing economic incentives for future projects by substantially increasing surrounding property values. These types of impacts are most often identified for projects developed in areas that are currently lacking a full-spectrum of economic activity. For example, newly developing office areas may be lacking in a full range of support commercial uses; this support commercial demand can cause increased pressure for rezones or general plan amendments intended to provide adequate land to accommodate businesses seeking to serve the unmet demand.

Implementation of the proposed project would result in the construction of employment-generating uses, including commercial, retail, office, schools, public services, and recreation uses. Approximately 1,894 new jobs would be created within the plan area. Because there are areas adjacent to the plan area that are agricultural land and not currently developed, these areas could be subject to increased development pressure.

While implementation of the proposed project could increase pressure for intensification of land uses adjacent to the plan area, the areas to the north and east are already developed or planned for development within the City of Yuba City. The areas directly south of the plan area are generally developed as rural residential uses. Some areas to the south and to the east of the plan area would remain as agricultural land and would thus be subject to increased development pressure. Those areas would remain within the jurisdiction of unincorporated Sutter County, outside of the Yuba City limits or sphere of influence (SOI). Development of those areas would require the extension of urban utility services, expansion of the Yuba City limits or SOI, and changes in entitlement to allow for higher density development. These obstacles would counteract pressure for intensification but may not be enough to outweigh market forces creating pressure for

intensification of land uses adjacent to the plan area. While present market forces have not placed high pressure on those areas for intensification of land uses, it is feasible that future market forces may be substantially greater and result in the inevitable development of those areas for urban uses.

4.4.3 Environmental Effects of Induced Growth

While economic and employment growth in the plan area is an intended consequence of the proposed project, growth induced directly and indirectly by the proposed project could also have regional effects. Potential effects caused by induced growth in the region could include: increased traffic congestion; increased air pollutant emissions; loss of agricultural land and open space; loss of habitat and associated flora and fauna; increased demand on public utilities and services, such as fire and police protection, water, recycled water, wastewater, solid waste, energy, and natural gas; and increased demand for housing.

Specifically, an increase in housing demand in the region could cause significant environmental effects as new residential development would require governmental services, such as schools, libraries, and parks. Indirect and induced employment and population growth would further contribute to the loss of open space because it would encourage conversion to urban uses for housing, commercial space, and infrastructure.

4.5 Urban Decay

As used in CEQA, the term “urban decay” was introduced by the California Court of Appeal in the case entitled *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184 (*Bakersfield Citizens*). In that decision, the court required the City of Bakersfield to revise and recirculate two EIRs for two proposed Wal-Mart stores because the documents failed to address the possible indirect physical effects flowing from the direct economic effects of the two projects. Though the court did not expressly define “urban decay,” the court seemed to equate the concept with a “chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake.”¹ For the purposes of this assessment and consistent with the above described court decision, “urban decay” is not simply a condition in which buildings become vacant as businesses compete with each other in the normal course of the market-based economy, nor is it a condition where a building may be vacated by one business or use and reused by a different business or for alternative purposes. Rather, under CEQA, “urban decay” is defined as physical deterioration of properties or structures that is so prevalent, substantial, and lasts such a significant period of time that it impairs the proper utilization of the properties and structures, and the health, safety, and welfare of the surrounding community.

Prior court cases addressing urban decay issues have included the following characteristics to document the potential for urban decay or deterioration:

¹ *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184. p. 1204.

- long-term vacancies, including spaces that face difficulty in being re-tenanted beyond normal market cycle conditions;
- deferred maintenance, including neglect of repair and maintenance; and
- disinvestment, including deterioration of buildings, improvements, and facilities.

The following analysis relies on the *Bogue Stewart Master Plan Urban Decay Study* prepared by New Economics & Advisory for the proposed project.² The full report is contained in **Appendix J** of this EIR. The intent of this analysis is to indicate whether approval of the proposed project together with development of proposed retail development sites would result in the physical deterioration of retail sites in other parts of Yuba City or nearby communities.

Existing Retail Market

Because of the proximity to the project site and their interconnected nature, the urban decay analysis evaluated both Yuba City and Marysville as one submarket. The Yuba City/Marysville Submarket contains approximately 44 retail centers and a total of 6.4 million square feet of retail space.

Currently, vacancy rates for retail space are relatively low (8 percent) and have been decreasing in recent years. While some retail is currently under development, relatively little new retail space has been added to the market, and brokers indicate that that substantial new development is not likely to occur without a corresponding increase in residential population. Rents have rebounded since 2012, but local brokers report that they fall far short of the rates needed to justify new retail center construction.

Project Retail and Market Areas

The proposed BSMP includes four commercial sites, three of which are the subject of the urban decay study. The fourth site is anticipated to remain in its existing use as a gasoline station and was removed from further study.

- Site 33 is a proposed Neighborhood Commercial Center. With up to about 83,000 square feet of retail space, Site 33 is expected to draw primarily from surrounding residents.
- Site 16 is a proposed Community Commercial Center located at the corner of Bogue Road and State Route (SR) 99. With up to about 230,000 square feet of retail space, Site 16's strategic location enables it to draw from surrounding residents and commuters.
- Site 10 is a proposed Community Commercial Center located at the corner of Bogue Road and SR 99. Across the street from Site 16, Site 10 would have up to about 161,000 square feet of retail space and is expected to draw from surrounding residents and commuters.

In order to assess the potential affects related to development of the proposed project's retail sites, the urban decay study assigned both primary and secondary market areas for the neighborhood

² New Economics & Advisory. 2018. *Bogue Stewart Master Plan Urban Decay Study*. Prepared for the City of Yuba City. August 17, 2018.

commercial site and community commercial sites. The primary market area for Site 33 (Neighborhood Commercial Center) is a 1-mile radius (Appendix J, Figure 4.5 of the urban decay study) while the secondary market area includes a 3-mile driving distance (Appendix J, Figure 4.6). The Community Commercial Centers (Sites 10 and 16) include a primary market area of approximately 6-miles in driving distance (Appendix J, Figure 4.7) and a secondary market area similar to other regional retail centers which includes Colusa, Nicolaus, Olivehurst, Live Oak, Marysville, and Yuba City (Appendix J, Figure 4.8).

Future Retail Demand

The retail market has been affected by a variety of trends, including e-commerce (online shopping), a shift towards hiring people to do a service rather than acquiring the tools to do it by oneself (e.g., hiring a landscaper rather than buying a lawn mower), and a preference of experiences over things (e.g., giving tickets rather than a physical gift).

A review of industry articles, webinars, and interviews with real estate professionals indicates that the current amount of retail space in the United States continues to exceed the level that can be reasonably supported in the future, given the impacts of e-commerce and other changes in household spending. According to recent numbers, there is currently 45.7 square feet of retail space per capita within the region and 42.6 square feet of retail in the Yuba City/Marysville Submarket (Appendix J, Figure 3.3).

Taking into account existing vacancy rates, there exists a current demand for approximately 39.5 square feet per capita of retail space in the Yuba City/Marysville Submarket. While retail trends make it difficult to predict future demand for retail space, the report anticipates that in 2020 and later, the per capita demand will be approximately 38.1 square feet (Appendix J, Figure 3.5).

Urban Decay Assessment

Neighborhood Commercial

Neighborhood commercial is meant to serve the residents in the immediate vicinity. According to the urban decay study, there would be sufficient demand in both the primary and secondary market areas to accommodate the Neighborhood Commercial Center, even with the development of other retail uses in the area. As shown in **Table 4-1**, in an existing plus project scenario, the demand for neighborhood center retail is anticipated to be close to 1.8 million square feet (38.1 square feet per capita) while the total supply would be 1.6 million square feet. Under a cumulative scenario, the demand for neighborhood center retail is anticipated to be close to 2.2 million square feet while the total supply would be 1.7 million square feet. Because the supply is anticipated to be less than demand for this type of retail, the study does not anticipate potential negative physical effects associated with urban decay as related to the development of neighborhood commercial within the project.

**TABLE 4-1
PROPOSED NEIGHBORHOOD CENTER: PROJECTED DEMAND FOR RETAIL SPACE IN 2045**

	Primary Market Area		Secondary Market Area	
	Existing plus Project	Cumulative	Existing plus Project	Cumulative
Total Population	18,140	18,140	46,980	57,344
Total Retail Demand* (square feet)	690,511	690,511	1,788,316	2,182,815
Total Retail Supply	551,968	551,968	1,676,708	1,706,399
Net Demand	138,543	138,543	111,608	476,417

NOTE:

* Estimated using future retail demand of 38.1 square feet per capita per Appendix J, Figure 3.5.

SOURCE: Appendix J, Figure 5.5, Figure 5.6, and Figure 5.7

Community Commercial

The retail market area for community commercial is extensive enough so that the proposed project's retail could potentially compete with other regional retail within Yuba City, Marysville, and other nearby communities. Besides the retail development planned in the proposed project, there are other nearby locations that also have planned and approved, but currently unbuilt, retail. As shown in **Table 4-2**, within the community commercial primary market area, total anticipated supply is expected to exceed total demand under both the existing plus project and cumulative scenarios. However, this oversupply is misleading, mainly because the existing retail businesses capture sales from consumers who live outside the primary market area. Because many of the retail centers in the primary market area include regional retailers that draw customers from farther areas, the urban decay study found that the secondary market area provides a more accurate reflection of existing and, therefore, future conditions.

**TABLE 4-2
PROPOSED COMMUNITY COMMERCIAL: PROJECTED DEMAND FOR RETAIL SPACE IN 2045**

	Primary Market Area		Secondary Market Area	
	Existing plus Project	Cumulative	Existing plus Project	Cumulative
Total Population	97,242	126,802	162,781	230,581
Total Retail Demand* (square feet)	3,701,556	4,826,757	6,196,320	8,777,141
Total Retail Supply	5,979,512	7,107,736	7,056,755	11,991,451
Net Demand	-2,277,956	-2,280,979	-860,435	-3,214,310
Excess Supply	NA	NA	-240,803	-2,336,596

NOTE:

* Estimated using future retail demand of 38.1 square feet per capita per Appendix J, Figure 3.5.

SOURCE: Appendix J, Figure 6.5, Figure 6.6, Figure 6.7, Figure 6.8, Figure 6.9, Figure 6.10

In an existing plus project scenario, the demand for community commercial retail in the secondary market area is anticipated to be about 6.2 million square feet while the total supply would be about 7 million square feet. Under the existing plus project scenario, the oversupply

(approximately 240,000 square feet) would not be substantial enough to result in physical deterioration.

Under a cumulative scenario, the demand for community commercial retail is anticipated to be close to 8.8 million square feet, and if all planned and approved retail development in the secondary market area is constructed, the total supply would be 12 million square feet. Under this cumulative scenario, there would be an approximately 2.3 million square feet of oversupply that would be substantial.

Whether this potential oversupply would result in urban decay is affected by a number of factors that are known to mitigate such potential oversupply conditions, including:

- **Existing centers resiliency to effects of oversupply:** Despite the effects of the Great Recession and growing pressure from e-commerce, retail centers in Yuba City have maintained high levels of occupancy by attracting non-traditional users and attracting regional tenants. As a result, existing centers are generally not showing signs of deterioration, disinvestment, or deferred maintenance. This pattern suggests that if existing commercial centers experience more vacancy over time, they can continue to evolve their tenant base.
- **Re-use/redevelopment of existing retail centers:** To the extent that oversupply occurs and impacts are concentrated on particular retail centers, there could be opportunities to convert underperforming retail centers entirely. Two recent local examples of this include the former Montgomery Ward building in Marysville that was redeveloped for County use in the late 1990s and a current retail center that is actively being considered for conversion into a government building for Yuba County.
- **Effectiveness of local regulatory controls:** The cities of Yuba City and Marysville and County of Yuba each have a varying level of codes and implementation practices designed to prevent physical deterioration and deferred maintenance of buildings and properties. Code enforcement in each jurisdiction addresses property maintenance issues, including graffiti removal, overgrown weeds, abandoned buildings, or other aspects of visual blight.
- **Increases in residential development:** If there is greater residential development than anticipated by the urban decay study, the amount of retail oversupply would decrease.
- **Likelihood of retail development:** While the urban decay study presumes that all 4.9 million square feet of additional planned and approved retail development is built by the time the proposed project builds out, the timing or scale of new retail that will actually be built is unknown. For example, while the Plumas Lake Specific Plan includes up to 3 million square feet of retail space, only 15,000 square feet has been developed to date, despite significant residential development in the Plumas Lake Specific Plan area.

As described previously, the amount of retail that is currently proposed in the project area, combined with all other proposed retail development, could lead to oversupply if all is built. However, there is no evidence that this potential oversupply would lead to deterioration of the physical environment. The existing retail market is resilient. As developments experience vacancies, they have the opportunity to change their tenant mix or redevelop as a different type of use consistent with market demand. It is reasonable to expect that local jurisdictions will continue

to enforce regulations that keep deferred maintenance from becoming a public nuisance. In addition, it is possible that there will not be such a great oversupply in the future because of either greater residential development or less retail development.

Overall, in light of the findings of the urban decay study, implementation of the proposed project is not anticipated to cause urban decay. The impact would be **less-than-significant**.

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CHAPTER 5

Alternatives

The purpose of the EIR alternatives analysis is to describe a range of reasonable alternatives to the proposed project or location of the project that could feasibly obtain most of the basic objectives of the project and to evaluate the comparative merits of the alternatives (State CEQA Guidelines, section 15126.6[a]). An EIR need not consider every conceivable alternative to a project, nor is it required to consider alternatives that are infeasible. The State CEQA Guidelines require that the discussion be focused on those alternatives that are capable of avoiding or substantially lessening any significant effects of the project, even if they impede the attainment of the project objectives to some degree or would be more-costly than the proposed project (CEQA Guidelines section 15126.6[b]).

The State CEQA Guidelines indicate that several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include: (1) the nature of the significant impacts of the proposed project; (2) the ability of alternatives to avoid or lessen the significant impacts associated with the project; (3) the ability of the alternatives to meet the objectives of the project; and (4) the feasibility of the alternatives. These factors should be unique for each project. According to the State CEQA Guidelines, an EIR need only examine in detail those alternatives that could feasibly meet most of the basic objectives of the project. When addressing feasibility, CEQA states that “among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to alternative sites” (State CEQA Guidelines section 15126.6). The State CEQA Guidelines also specify that the alternatives discussion should not be remote and speculative; however, they need not be presented in the same level of detail as the assessment of the proposed project.

CEQA requires an EIR to identify project alternatives and to indicate the manner in which a project’s significant effects may be mitigated or avoided. However, it does not mandate that the EIR itself contain an analysis of the feasibility of the various project alternatives or mitigation measures that it identifies (Public Resources Code (PRC), sections 21002.1, subd (a): 21100 and subd (b) 4, 2004). As the lead agency, the City of Lincoln bears the responsibility for the decisions that have to be made before the project can go forward. These decisions include, but are not limited to, the determinations of feasibility and whether the benefits of the project outweigh its significant effects on the environment (PRC sections 21002.1, subd (b) and (c); section 21082).

The significant environmental impacts of the proposed project that the alternatives will seek to eliminate or reduce were determined and based upon the findings contained within each technical section evaluated in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, of this Draft EIR.

5.1 Project Objectives

The objectives of the proposed project are used to effectively evaluate the reasonableness and feasibility of each alternative. As presented in Chapter 2, Project Description, the project objectives are as follows:

1. Creation of high-quality balanced neighborhoods that provide a wide range of housing opportunities, along with a mix of community- and neighborhood-commercial, office, and business/technology-oriented uses.
2. Maintain the integrity of surrounding residential neighborhoods by providing connections where necessary and continuing development in a visually compatible manner.
3. Support the long term operation of adjacent agricultural uses, as well as continued interim agricultural production within the BSMP plan area.
4. Provide an interconnected modified grid street system that expands upon the existing and adjacent roadways in the plan area to provide adequate and ample travel options for pedestrians, bicyclists, transit, and vehicles.
5. Foster a positive community image through the incorporation of high-quality architectural details and landscaping features.
6. Coordinate the development of land uses and infrastructure to ensure that the infrastructure can support that development and the development can support the associated costs.
7. Support Sutter County Local Area Formation Commission (LAFCo) approval for the annexation of the plan area into the City of Yuba City.
8. Ensure that appropriate funding mechanisms are established to fully fund planned improvements and services over the 20-year buildout term without creating a negative fiscal impact to the City's General Fund.

5.2 Significant Effects of the Proposed Project

The following significant and unavoidable impacts were identified for the proposed project:

Impact 3.1-1: Development pursuant to the proposed BSMP could result in a substantial adverse effect on a scenic vista.

Impact 3.1-2: Development pursuant to the proposed BSMP could substantially degrade the existing visual character or quality of the site and its surroundings.

Impact 3.1-4: Implementation of the proposed project, in conjunction with development of other projects in the Yuba City Sphere of Influence and within nearby Sutter County, could contribute to cumulative impacts on scenic vistas.

Impact 3.1-5: Implementation of the proposed BSMP, in combination with other projects in the Yuba City Sphere of Influence and within adjacent Sutter County, could contribute to cumulative degradation of visual character and quality.

Impact 3.2-3: Implementation of the proposed project would contribute to cumulative conversion of Important Farmland to non-agricultural use.

Impact 3.3-1: Construction of land uses under the proposed BSMP could generate criteria pollutant emissions that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Impact 3.3-2: Operational activities associated with development under the proposed BSMP would result in emissions of criteria air pollutants at levels that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Impact 3.3-3: The proposed BSMP project would conflict with or obstruct implementation of an applicable air quality plan.

Impact 3.3-7: The proposed BSMP could contribute to cumulative increases in short-term (construction) emissions.

Impact 3.3-8: The proposed BSMP could contribute to cumulative increases in long-term (operational) emissions.

Impact 3.5-1: Development pursuant to the proposed BSMP could cause a substantial adverse change in the significance of an historical architectural resource.

Impact 3.14-9: Implementation of the proposed BSMP, in combination with other cumulative development, would cause cumulatively significant LOS-related impacts at intersections maintained by Caltrans.

Impact 3.14-10: Implementation of the proposed BSMP, in combination with other cumulative development, would cause significant queuing-related impacts at intersections maintained by Caltrans.

5.3 Approach to Alternatives Analysis

In identifying alternatives to the proposed project, primary consideration was given to alternatives that could reduce significant unavoidable impacts resulting from the proposed project. Certain impacts that are identified as being significant and unavoidable under the proposed project (e.g., increase in air pollutants from project construction and operation, conversion of agricultural

lands, increases in traffic) are due primarily to development activity in an area that is currently utilized for large-scale agricultural operations and rural residences. Some alternatives were considered, but dismissed from further analysis because they would not fulfill most of the project objectives, would not eliminate or substantially lessen environmental effects, and/or would otherwise be infeasible as discussed below in Section 5.7.

In accordance with the alternatives analysis requirement of CEQA, two project alternatives and a no project alternative were identified and analyzed. These alternatives represent viable options for development of the site, with varying densities of development. Each alternative was chosen as a way to potentially reduce one or more environmental impacts, while still achieving some or all of the project objectives. The rationale for the selection of these particular alternatives is explained in the following paragraphs.

In accordance with the requirements of the CEQA Guidelines and relevant case law, the presentation and analysis of alternatives is not as detailed as that of the proposed project. The presentation and analysis of alternatives is designed to provide sufficient information to the public and decision-makers to allow for a reasoned, meaningful discussion of the relative merits of the alternatives versus the proposed project.

The following section lists the design characteristics of each alternative and provides explanations of deviations from the original project design. Impacts associated with each alternative, comparisons between alternatives, and a discussion of whether the alternative meets project objectives are also provided.

5.4 Alternatives Considered but Rejected

In developing the proposed project and alternatives, consideration was given to the density of development that could meet project objectives and reduce significant impacts. Many of the anticipated significant impacts would result from the intensity of the development proposed. The analysis of alternatives to the proposed project must also address “whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location.” (CEQA Guidelines, § 15126.6(f)(2)(A).) Only those locations that would avoid or substantially lessen any of the significant effects of the project need be considered. If no feasible alternative locations exist, the agency must disclose the reasons for this conclusion. (Section 15126.6(f)(2)(B).) In this case, alternative sites would entail either the same or new significant environmental effects as the proposed project site. For example, development of the project on any suitable alternative site in or around the County may not avoid or substantially lessen the project’s air quality or GHG impacts, as those impacts would occur no matter where the development is located, and could be worse if located further away from a major transportation corridor or in areas with existing unacceptable traffic levels. Moreover, an alternative site that is not adjacent to already-developed lands would likely result in greater aesthetics and utilities impacts than the proposed project site.

Furthermore, viable alternative locations for the project are limited to those that would feasibly attain most of the project objectives. There are no other appropriately located and sized land areas along a major transportation corridor that would satisfy the project objectives and eliminate or reduce impacts from the proposed project. The proposed project would offer housing, commercial, industrial, public, and recreational uses in proximity to a major transportation corridor. An offsite alternative would not satisfy objectives specific to the project location. Furthermore, the applicants have indicated that they do not own other lands in the area that could feasibly meet these project objectives.

5.5 Project Alternatives

Alternative 1: No Project/No Build Alternative

Alternative 1 is the No Project alternative as required by CEQA Guidelines section 15126.6(e). Under the No Project alternative, no building or development would occur in the plan area. The site is assumed to remain in its existing condition, including the existing agriculture and estate residential uses.

Alternative 2: No Project/Existing Sutter County General Plan

Alternative 2 would develop the plan area under the existing Sutter County General Plan land use and zoning designations, which include the Estate Residential (ER), Low Density Residential (LDR), Industrial (IND), and Agriculture (AG-20).

Estate Residential allows for a density between 0.3 and 2 dwelling units per acre (du/ac). Land within the BSMP site designated as Estate Residential is concentrated to the east of State Route (SR) 99 and west of Riverbend Elementary School. It is anticipated that under Alternative 2, these parcels could be subdivided and built out, however the density of that buildout would be consistent with the ER land use designation and the density would be no higher than 2 du/ac. This would represent a lower development density than would be proposed under the proposed BSMP for those areas.

Low density Residential allows for a density between 2 and 8 du/ac. A small number of parcels along Railroad Avenue, near the intersections of Railroad Avenue and Bogue Road and Railroad Avenue and Stewart Road are designated Low Density Residential.

The western portions of the plan area, including the majority of the Newkom Ranch project site and all areas west of SR 99 are under the AG-20 land use designation, under the Sutter County General Plan. As described in Section 3.10, Land Use and Planning, this designation is applied in locations that have minimal intrusion and conflict from non-agricultural uses, or where such conflicts can be mitigated. Under Alternative 2, it is anticipated that these areas would be subject to continued agricultural uses, and would not be subject to greater development density.

There is an existing gas station located at the southwest corner of SR 99 and Bogue Road that is designated as Industrial. That site would be anticipated to remain as a gas station under Alternative 2.

Consistent with the above land use and zoning, Alternative 2 assumes the plan area would be developed with 600 dwelling units, with 522 units on approximately 1/2-acre lots, 24 units of 20-acre lots, and 54 units on 1/8-acre lots (see **Table 5-1**).

**TABLE 5-1
ASSUMED MAXIMUM DEVELOPMENT POTENTIAL UNDER ALTERNATIVE 2**

Land Use Designation	Land Area (Gross Acres)	Maximum Density (du/ac) ¹	Total Units
Estate Residential (ER)	260.76	2	522
Agriculture (AG-20)	471.96	0.05	24
Low Density Residential (LDR)	6.74	8	54
Industrial (IND)	1.53	-	-
Open Space (OS)	0.27	-	-
Total	741.3		600

NOTES:

¹ Maximum Allowable Density is the highest allowable density for each Sutter County General Plan land use designation. While it is assumed that buildout under the existing Sutter County General Plan would not reach maximum allowable densities, the maximum is used to provide a conservative estimate for potential impacts of Alternative 2. If buildout under the existing general plan were to occur at lower densities, than the intensity of potential environmental impacts would be commensurately reduced.

Relative to the proposed BSMP, which would develop approximately 2,517 residential units, under Alternative 2 the number of residential units would be reduced by 76 percent. The proposed BSMP would also develop approximately 1,288,723 sf of non-residential uses. In contrast, Alternative 2 would be anticipated to retail the existing gas station usage on the parcel designated for industrial use, and would not develop new non-residential uses. Consequently, new construction would be limited to buildout of residential units in the areas under the ER, AG-20, and LDR land use designations

Alternative 3: Reduced Project Alternative

Alternative 3 would develop the plan area with the same land uses proposed in the BSMP, however there would be 25 percent less development within those land uses. **Table 5-2** provides the land use summary for the proposed BSMP, as described in Section 2.0 Project Description. The proposed BSMP would develop approximately 2,517 dwelling units and approximately 1,288,723 sf of non-residential uses. Alternative 3 would reduce the level of development proposed in the BSMP by 25 percent but would maintain the existing plan area boundaries and existing land use designations. **Table 5-3** provides a description of Alternative 3 development for each land use.

**TABLE 5-2
BOGUE STEWART MASTER PLAN LAND USE SUMMARY**

Land Use Designation	Land Area (Gross Acres)	Land Allocation (%)	Average Density (du/acre)	Total Dwelling Units	Assumed Intensity (FAR)	Total Square Feet
Residential						
Low Density Residential	368.9	50	4.25	1,328		
Low Medium Density Residential	62.6	8	9	430		
Medium High Density Residential	32.0	4	24	759		
Non-Residential						
Neighborhood Commercial	7.2	1			0.35	82,328
Community Commercial	36.7	5			0.25	390,951
Office & Office Park	8.6	1			0.30	108,464
Business, Technology & Light Industrial	55.8	8			0.25	574,992
Civic Amenities						
Parks, Recreation & Open Space	84.2	11				
Public Facilities	27.5	4			0.15	131,987
Roads and Circulation	58.0	8				
Total	741.5	100		2,517		1,288,723

NOTE:

There are 71 existing homes in the entire plan area that are anticipated to remain, in addition to the proposed units, for a total of 2,588 total dwelling units.

du = dwelling units; FAR = floor area ratio

**TABLE 5-3
ASSUMED DEVELOPMENT UNDER ALTERNATIVE 3**

Land Use Designation	Land Area (Gross Acres)	Land Allocation (%)	Average Density (d.u./acre)	Total Units	Assumed Intensity (FAR)	Total Square Feet
Residential						
Low Density Residential	368.9	51	2.61	997		
Low Medium Density Residential	62.6	7	6.53	323		
Medium High Density Residential	32.0	4	17.99	569		
Non-Residential						
Neighborhood Commercial	7.2	1			0.35	61,746
Community Commercial	36.7	5			0.25	293,213
Office & Office Park	8.6	1			0.30	81,348
Business, Technology & Light Industrial	55.8	8			0.25	431,244

**TABLE 5-3
ASSUMED DEVELOPMENT UNDER ALTERNATIVE 3**

Land Use Designation	Land Area (Gross Acres)	Land Allocation (%)	Average Density (d.u./acre)	Total Units	Assumed Intensity (FAR)	Total Square Feet
Civic Amenities						
Parks, Recreation & Open Space	84.2	11				
Public Facilities	27.5	4			0.15	98,990
Roads and Circulation	58.0	8				
Total	741.5	100		1,889		966,541

NOTE:

There are 71 existing homes in the entire plan area that are anticipated to remain, in addition to the proposed units.
du = dwelling units; FAR = floor area ratio

As shown in Table 5-3, Alternative 3 would develop approximately 1,889 dwelling units and approximately 966,541 square feet of non-residential uses.

5.6 Comparison of Alternatives

This section provides a comparison of the environmental impacts associated with each of the project alternatives, as well as an evaluation of each project alternative to meet the project objectives.

Alternative 1: No Project/No Build

Under Alternative 1, the project site would remain in its existing condition with no new development. There would be no changes to the existing terrain, and no infrastructure improvements would be made.

Aesthetics

Alternative 1 would not cause any changes to the existing visual character because there would be no development on the project site. Views of the project site from surrounding areas would remain that of an open area dominated by agriculture and rural estates. Under Alternative 1, there would be no new sources of glare or nighttime light on the project site. Therefore, Alternative 1 would have no impact on aesthetics.

Agriculture and Forestry Resources

Under Alternative 1, agricultural land uses within the project site would remain as existing. There are no forestry resources present, and none would be established under Alternative 1. Therefore, Alternative 1 would have no impact on agricultural or forestry resources.

Air Quality

Because there would be no development of the project site, Alternative 1 would not result in any short-term construction emissions or operational emissions associated with vehicle trips or

stationary sources. Without development as planned with the proposed plan, this alternative would not hinder attainment of air quality standards. Because Alternative 1 would not generate any air emissions, this alternative would have no impacts related to air quality.

Biological Resources

Alternative 1 would not include development of the project site or changes in existing land uses within the project site. Therefore, there would be no impact to protected species or their habitat, conflict with an existing habitat conservation plan, or impacts to aquatic species or their habitat under Alternative 1.

Cultural Resources

Because there would be no development of the project site, Alternative 1 would not result in ground disturbing activity that would disturb known or previously undiscovered cultural resources. Therefore, there would be no impact to cultural resources.

Geology, Mineral Resources, and Paleontological Resources

There would be no development of the project site under Alternative 1, so there would be no ground excavation or construction within the project site. Therefore, there would be no impact to geologic resources, mineral resource extraction, or paleontological resources.

Greenhouse Gas Emissions

Alternative 1 would not include any construction or development. Therefore, there would be no new equipment or vehicles to emit greenhouse gases. Because this alternative would not generate any greenhouse gas emission, Alternative 1 would have no impact.

Hazards and Hazardous Materials

Alternative 1 would not include construction, demolition or development. Therefore, there would be no disturbance to

Hydrology and Water Quality

Alternative 1 would not include any development of the project site. Because Alternative 1 would not add any impervious surfaces or otherwise contribute to an increase in flooding or a decrease in water quality, this alternative would have no impact related to hydrology and water quality.

Land Use and Planning

Alternative 1 would produce no changes on the project site. There would be no conversion of undeveloped land to residential development. There would be no potential for incompatibility between the project site and adjacent uses. Because no development would occur under Alternative 1, there would be no land use impacts.

Noise

Alternative 1 would not develop the project site, so there would be no new construction or operational noise as a result of the project. Because there would be no new noise generated and no new sensitive receptors, Alternative 1 would have no noise impacts.

Population and Housing

There would be no development under Alternative 1. Therefore, there would be no new residential units or new uses that would create the demand for residential units developed under Alternative 1.

Public Services and Recreation

There would be no new development under Alternative 1, so there would be no change in demand for public services or recreational facilities. Therefore, there would be no impact from the construction of new public services facilities under Alternative 1.

Transportation and Traffic

Because Alternative 1 would involve no development of the project site, no new traffic would be generated under this alternative. Therefore, Alternative 1 would result in no impacts related to transportation, traffic, and circulation.

Utilities and Service Systems

Alternative 1 would not increase the need for potable water, wastewater conveyance and treatment, or solid waste hauling and disposal because the site would not be developed and no new residential structures would be constructed. As discussed above, Alternative 1 would not construct stormwater drainage infrastructure, so existing flooding would remain around the northwest corner of the project site. Because Alternative 1 would not result in the need for additional utility infrastructure or capacity, there would be no impact.

Project Objectives

Alternative 1 would keep the project site as largely undeveloped land with existing rural estate residences. As such, this alternative would not meet any of the project objectives.

Alternative 2: No Project/Existing General Plan

Under Alternative 2, the project site would be developed under the existing Sutter County General Plan land use designations for the project site, which allow for much lower development densities than would be allowed under the proposed BSMP. As a result, the maximum buildout scenario for Alternative 2 would include approximately 600 dwelling units and would maintain the existing land uses for the areas designated as Industrial and Open Space. Further, no school, commercial, park, or multi-family residential uses would be constructed under Alternative 2. This buildout scenario would require substantially less construction and would preserve much of the existing agricultural operations at the project site.

Aesthetics

Under Alternative 2, the project site could be developed according to existing Sutter County General Plan designations and zoning, which would allow up to a total of 600 residential units. This would result in a level of development that would be much less dense than the development density under the proposed BSMP. While the proposed project would alter the existing visual character by increasing the density of housing units, relative to the existing level of development in the project site, under Alternative 2 the visual character of the project site would change to a more suburban character. Impacts related to scenic vistas and the visual character of the project site would be significant and unavoidable and also significant and unavoidable under Alternative 2.

Alternative 2 would result in development at rural residential and low densities, which would result in small amounts of new nighttime lighting and daytime glare, but the light and glare would be a change in character in comparison to the existing rural and agricultural uses currently within the project site. The effects would be similar to the proposed project, resulting in a similar significant and unavoidable impact for Alternative 2.

Agriculture and Forestry Resources

Alternative 2 would preserve the existing general plan land use designations for the agricultural and rural residential uses within the project site. Under Alternative 2, additional housing units may be developed on properties zoned as AG-20, consistent with the requirements of that land use designation. Development of land under existing agricultural production for residential units would be minimal, resulting in 24 residential units across approximately 472 acres, some of which already exist. Existing agricultural operations would be substantially maintained, under Alternative 2. Therefore, the impacts to important farmland would be less than significant for Alternative 2.

There are no forestry resources within the project site and there would be no forestry resources developed under Alternative 2. Therefore, there would be no impact to forestry resources from implementation of Alternative 2.

Air Quality

Air quality impacts generally result from new vehicle trips associated with development, as well as temporary construction impacts. Under Alternative 2, as many as 600 residences could be constructed in compliance with Sutter County land use designations and zoning. Given the minimum parcel sizes under existing zoning, Alternative 2 would not construct a substantial amount of new residential or agricultural structures that would result in significant air quality impacts during operation. Because of the small amount of construction that would occur at any particular time, construction air quality impacts would be less than significant. Odor impacts that could result from Alternative 2 would consist of odor associated with agricultural and animal-keeping operations that are permitted under the existing Sutter County General Plan. Because the project site is already actively farmed, it is unlikely that Alternative 2 would result in any

significant new odors. Therefore, Alternative 2 would result in less-than-significant impacts related to air quality.

Biological Resources

Alternative 2 would allow up to 600 new residential units within the project site. Land disturbance and construction that could occur under Alternative 2 could result in fill of wetlands or waters of the U.S. Activities under Alternative 2 could result in fill of wetlands or waters of the U.S. Activities under Alternative 2 could also result in the loss of special-status species or their habitat and disturbance to nesting birds. Construction and development would be subject to Sutter County storm water requirements, which would help protect water quality for fish species.

The proposed BSMP would have potentially significant adverse impacts on special status species and their habitat. Alternative 2 could result in new development within the plan area, albeit at a much lower rate than the proposed BSMP. Development under Alternative 2 would be subject to all federal, state, and local regulations aimed at protecting special-status species and their habitat. Relative to the proposed BSMP, the proposed project under Alternative 2 would have substantially less development, however, that development may still have a potentially significant impact on special status species and habitat. Implementation of mitigation measures designed for the protection of sensitive species and their habitat, as described in Section 3.4, Biological Resources, would reduce potential impacts from development under Alternative 2 to less-than-significant levels.

Development of the proposed BSMP would result in impacts to potentially jurisdictional waters. Under Alternative 2, the land uses surrounding Gilsizer Slough, would be retained in their existing state and would be subject to continued agricultural uses. As such, Alternative 2 would have no impact to potentially jurisdictional waters.

As Alternative 2 would develop the project site in accordance with existing Sutter County General Plan, implementation would not be expected to conflict with approved plans that protect biological resources.

Cultural Resources

Development under Alternative 2 would include as many as 600 new dwelling units. New construction would have the potential to impact historical architectural resources, archaeological resources, paleontological resources, and previously unknown human remains. As much of the plan area has not been surveyed, evaluations would need to be done for individual properties to determine whether cultural resources may be present within the site. Mitigation Measure 3.5-1 would apply to Alternative 2, but would not reduce the impact to less-than-significant because exact nature of future development and the eligibility of potentially affected resources is currently unknown. Therefore, impacts to eligible historic architectural resources would be significant and unavoidable.

While historic architectural resources can be surveyed and identified prior to construction, other cultural resources may be subsurface and not discovered until site disturbance. Mitigation Measures 3.5-2(a) and 3.5-2(b) provide guidance for the treatment of archeological resources and potential human remains discovered during site work. Collectively, these measures would reduce impacts of Alternative 2 to unknown resources to a less-than-significant level.

Geology, Mineral Resources, and Paleontological Resources

Development of the plan area under Alternative 2 would allow for construction of residential structures. While there is a low potential for seismic activity in the project site, new structures could be subjected to seismic activity. The County requires that all new buildings must be constructed in accordance with the current (2016) California Building Code (CBC) standards and local building design requirements which include seismic design standards designed to minimize seismic safety hazards. Therefore, Alternative 2 would result in less-than-significant impacts related to seismic activity.

The addition of new structures could also contribute to erosion both within and outside the project site. While implementation of Alternative 2 would result in common construction practices that would disturb surface soils, best management practices (BMPs) that would be included within a Storm Water Pollution Prevention Plan (SWPPP) as required by the National Pollution Discharge Elimination System (NPDES) Construction General Permit, would minimize the erosion impacts from soil disturbance. County and state drainage control requirements would also ensure that management of storm water from introduced impervious surfaces would be managed in a manner that prevents erosion or loss of topsoil. Therefore, implementation of Alternative 2 would result in less-than-significant impacts related to erosion or loss of topsoil.

Development under Alternative 2 would be required to adhere to County building code requirements which include the preparation of a geotechnical investigation by a state licensed geotechnical engineer. The required geotechnical report for any new development would determine the susceptibility of the subject site to landslide, lateral spreading, subsidence (settlement), liquefaction and collapse. Any identified geotechnical hazards or unstable units would be prescribed appropriate engineering techniques for reducing its effects. Therefore, Alternative 2 would result in less than significant effects related to unstable soils.

Furthermore, as a requirement of the CBC, developers would be required to complete a final geotechnical investigation that includes site-specific recommendations for the mitigation of potentially expansive soils. Therefore, implementation of Alternative 2 would result in less-than-significant impacts related to expansive soils.

Greenhouse Gas Emissions

Under Alternative 2, the project site would be developed in accordance with existing Sutter County land use and zoning designations, which would allow up to 600 residences within the BSMP area. As discussed above, Alternative 2 would construct 76 percent fewer residences and no non-residential development as compared to the proposed project. Thus, the overall amount of

development that would occur under Alternative 2 would be substantially less than proposed project's anticipated development. Development of new residential uses would result in new sources of GHG emissions, which could result in impacts related to climate change. Overall, it is anticipated that greenhouse gas emissions would be less than with the proposed project because there would be fewer units than under the proposed project. The impacts would be less than significant for Alternative 2, similar to the proposed project.

Hazards and Hazardous Materials

Under Alternative 2, residential and agricultural structures could be developed in accordance with Sutter County land use designations and zoning. During construction activities, relatively small portions of some construction-related products would contain materials defined as hazardous, such as fuels, solvents, cements and adhesives, paints, cleansers, degreasers, and asphalt mixtures, which are all commonly used in construction. During operation of Alternative 2, land uses would include the transport, use, and disposal of common household and agricultural hazardous materials that could include cleansers, solvents, oils, fuels, pesticides, and herbicides. The overall quantities of these materials within the project site at any one time would not result in large bulk amounts that could represent a potential significant hazard to the public or environment. Thus, Alternative 2 would result in less-than-significant impacts related to the routine transport, use, or disposal of hazardous materials.

While relatively small portions of hazardous materials are anticipated to be used during the construction and operation, the improper management of these materials could lead to an accidental release of hazardous materials, which in turn could expose the site and its occupants to contamination from hazardous materials. While several laws and regulations govern the release of hazardous materials and response to accident conditions, Alternative 2 could result in potentially significant impacts related to unforeseen and accidental conditions that could be mitigated to a less-than-significant level.

There are no schools currently within the plan area, and no schools would be located within the plan area under Alternative 2. Therefore, Alternative 2 would result in no impact related to hazardous materials use within one-quarter mile of an existing or proposed school (see Impact 3.9-3).

As discussed in Section 3.8, Hazards and Hazardous Materials, the BSMP project site includes the former Sumitomo Property (Untemoto Ranch), which is on the Cortese List as having abandoned agricultural chemical and lubricant containers. As described in Section 3.8, hazardous materials may be present in soil or other hazardous materials releases may have occurred that have not been accounted for that could expose people to associated health risks. Alternative 2 would develop this site and surrounding sites with rural housing on a minimum of 20-acre tracts, which may include residential development on the Sumitomo Property. Similar to the proposed BSMP, this impact could be mitigated to a less-than-significant level, with the implementation of Mitigation Measure 3.8-2.

The existing zoning of the project site does not conflict with the CLUP for the Sutter County Airport. Because Alternative 2 would implement existing zoning, it would comply with the CLUP. While implementation of Alternative 2 would put new residences within the Compatibility Zones, development would not conflict with the CLUP and this impact would be less than significant.

Alternative 2 would not be expected to result in road closures or changes to the existing circulation system during construction or operation because development would occur based on existing County General Plan designations. Therefore, Alternative 2 would have a less-than-significant impact related to interference with emergency access.

Hydrology and Water Quality

Alternative 2 would include the construction and use of residential and agricultural structures. Construction and operational activities under Alternative 2 would result in water quality impacts, but would be subject to state and local regulations that seek to protect water quality. Groundwater recharge would still occur under Alternative 2, though in different areas and different volumes than under existing conditions. Development under Alternative 2 would alter existing drainage patterns and contribute runoff, but would do so in a very limited way because of the very low density of development under this alternative. Adherence to state and local regulations regarding water quality would ensure that implementation of Alternative 2 would not result in significant erosion or siltation impacts, or substantially impact storm water drainage facilities. Alternative 2 could result in on-or offsite flooding because structures could be built which impede the drainage pattern of the area, alter the course of a stream, or increase the rate of surface water runoff without installing adequate drainage systems. Alternative 2 would not be expected to place new structures within the 100-year floodplain because of FEMA-imposed regulations on the placement of structures within floodplains. However, upgrades to drainage outfalls may be required and would be subject to state and local regulations. While Alternative 2 would include a limited amount of residential development, adherence to state and local regulations would ensure that Alternative 2 would result in less-than-significant impacts.

Land Use and Planning

Under Alternative 2, development of the project site would occur in compliance with existing land use and zoning designations and would result in a total of as many as 600 homes, including 71 existing homes. Because existing zoning for the entire project site is Agriculture (AG), Estate Residential (ER) and a small amount of Single-Family Residential (R-1) and Commercial-Industrial (CM), buildout under Alternative 2 would not result in any new internal land use conflicts. Under Alternative 2, the project site would not be annexed to the City of Yuba City, but would remain under the jurisdiction of unincorporated Sutter County and no impacts related to conflicts with the City's General Plan or LAFCO's annexation policies would occur. The existing zoning of the project site does not conflict with the Sutter County ALUCP. Because Alternative 2 would implement existing zoning, there would be no impacts related to conflicts with the ALUCP. Alternative 2 would not develop any areas that are currently anticipated for future reserve areas.

Noise

Alternative 2 would allow for the development of the project site in accordance with existing land use and zoning designations for farming and rural residential uses. Construction of new structures permitted in the existing zoning could have temporary impacts to noise levels in the project site and adjacent properties, and noise levels of such activities would be subject to Sutter County's noise ordinance. Because construction impacts would be temporary in nature and would adhere to the allowed construction hours, the potential for a nuisance caused by project construction-related noise increases would be less noticeable over the existing daytime ambient noise levels. Therefore, implementation of Alternative 2 would result in a less-than-significant impact related to construction noise impacts to ambient noise levels.

The construction activities that would be associated with Alternative 2 would not include construction activities known to generate high vibration levels, such as impact pile driving or blasting. Onsite grading and building construction activities would be the highest sources of construction vibration, but since there would be no existing or future sensitive receptors or structures located in close proximity to future construction sites, buildings and residents would not be exposed to vibration levels that could result in either building damage or human annoyance. Therefore, construction vibration from buildout of Alternative 2 would be a less than significant.

Population and Housing

Population and housing impacts are generally related to new residents and employment uses. Alternative 2 would add an estimated 1,413¹ new residents and 529 new homes. The number of jobs that could be generated under this alternative would be small and would be unlikely to alter the regional jobs-to-housing ratio, maintaining an imbalanced jobs/housing ratio in the city. The minimum parcel size required by existing zoning would likely preclude growth inducement in the project site. Finally, because of the amount of open land, this alternative would not displace people or require replacement housing. Therefore, Alternative 2 would have less than significant effects related to population, employment, and housing.

Public Services and Recreation

Alternative 2 would add up to 529 new dwelling units in the project site, which could result in approximately 1,413 new residents. New residents could trigger additional demand for police, fire, schools, parks and recreational facilities, and libraries.

Because the plan area would not be annexed into the City of Yuba City, Sutter County Sheriff's Office (SCSO) would continue to provide police protection under Alternative 2. The Sheriff's Department would continue to patrol the plan area from existing facilities, as it currently does. As such, Alternative 2 would have a less-than-significant impact related to police services.

¹ Based on a population generation rate of 2.67 people per household (see Section 3.12, Population and Housing, Table 3.12-3).

Under Alternative 2, the Yuba City Fire Department (YCFD) would retain primary responsibility for fire protection in the project site. As described in Section 3.13.2 Fire Protection, the proposed BSMP would not require the construction of an additional YCFD fire station or expansion of existing facilities to provide fire protection services to the project site. Development under Alternative 2 would have far fewer new residents than under the propose BSMP and would not add non-residential square footage. Therefore, Alternative 2 would have a less-than-significant impact related to fire protection.

As shown in **Table 5-4**, Alternative 2 could result in approximately 276 new students within the Yuba City Unified School District (YCUSD). As development occurs, school impact fees would be paid to the County for each residential unit constructed. These fees would help fund additional school facilities if needed. Because construction of new dwelling units would include payment of school impact fees, implementation of Alternative 2 would have a less-than-significant impact related to school facilities.

**TABLE 5-4
ALTERNATIVE 2 PROBABLE STUDENT GENERATION**

Type of School	Single Family Units	Single Family Generation Rate (students/ dwelling unit)	Students Generated
Alternative 2			
Elementary (K-5)	529	0.291	154
Middle (6-8)	529	0.076	41
High (9-12)	529	0.152	81
Total	529	0.519	276

SOURCE: Yuba City Unified School District. 2014. *Facilities Master Plan – 2014-2024*. August 12, 2014; ESA, 2017.

As building permit applications are processed for the development under Alternative 2, fees would be assessed on the properties to provide for parks and recreation facilities and libraries. Because new construction would pay fees to provide for these public services, Alternative 2 would result in less-than-significant impacts. A new regional park would not be provided in the plan area, and the dedication of active parkland would not be required, although it's likely that in-lieu fees or passive parkland dedication would be necessary.

Transportation and Traffic

Development of new residences and agricultural buildings that could occur under Alternative 2 could add vehicle trips within the project site and add traffic to area intersections, roadways, and highways. Because of the minimum parcel sizes under existing zoning, Alternative 2 would develop a maximum of 529 new residential dwelling units with a projected population increase of 1,413. With a low number of new residents, the number of trips generated would also be small (although the trips would be much longer given the lack of commercial, office and retail uses in the area). Given the small number of new trips, it is unlikely that development of Alternative 2 would significantly affect traffic levels in the project site and vicinity. Alternative 2 would not

trigger the need for new bicycle, pedestrian or transit facilities as the area would remain largely rural. Alternative 2 would not trigger or include any roadway improvements, so there would not be any road closures or detours associated with Alternative 2 that could affect local traffic or emergency vehicle access.

Utilities and Service Systems

Alternative 2 would develop up to 529 new residential dwelling units in the project site, which could result in approximately 1,413 new residents. New dwelling units and residents would trigger additional demand for potable water, wastewater facilities, storm water facilities, and solid waste disposal.

Implementation of Alternative 2 could require additional water supply entitlements or sources, or new or expanded treatment, storage, and conveyance facilities. Under this alternative, the project site would not be annexed to the City of Yuba City, so development would occur under the existing Sutter County General Plan. Even so, development of the project site in accordance with existing Sutter County designations would have a significant effect related to water supply.

While Implementation of Alternative 2 would result in new dwelling units, it is unlikely that these new units would require new or expanded wastewater facilities. Because the density of development under Alternative 2 would be so low, it is likely that each parcel would require its own on-site wastewater treatment (i.e., septic) as the distance between connections would likely be cost-prohibitive.

Implementation of Alternative 2 would develop the plan area consistent with the Sutter County General Plan. Given the extremely low density of development that could occur under this alternative, it is unlikely that any additional storm water facilities would be required. Therefore, implementation of Alternative 2 would result in a less-than-significant impact related to storm water capacity and infrastructure.

Implementation of Alternative 2 could result in up to 1,413 new residents within the project site, which would result in additional solid waste disposal requirements. Using a per capita disposal rate of 8.5 pounds per resident per day,² Alternative 2 could result in up to 4,496.5 pounds per day of solid waste (or approximately 2.25 tons per day). Solid waste generated under Alternative 2 would be disposed of at the Ostrom Road Landfill, which has a remaining capacity of 39,223,000 cubic yards. This small increase in the amount of waste that would be disposed of at the Ostrom Road Landfill be insignificant compared to existing activity and capacity.

Project Objectives

Alternative 2 would develop the project site with the land uses identified in the Sutter County General Plan. The long term operation of adjacent agricultural uses would be maintained because the project site would be developed for estate residential and agricultural uses (Objective 3). Development under Alternative 2 would be anticipated to coordinate the development of land

² Residential generation rate used for residential development in Section 3.15, Utilities and Service Systems.

uses and the infrastructure to serve those uses, consistent with the existing utilities services to the project site (Objective 6). Alternative 2 would not develop the project site for annexation to the City of Yuba City, so there would be no negative fiscal impact to the City's general fund due to the construction of improvements and services (Objective 8).

Alternative 2 would not develop a mix of housing opportunities or commercial, office, and business/technology uses (Objective 1). Alternative 2 would not maintain the integrity of surrounding residential neighborhoods by providing connections or continuing development (Objective 2). The street grid system would not be expanded or modified under Alternative 3, as much of the existing uses would be anticipated to remain intact (Objective 4). The project would not be anticipated to incorporate high-quality architectural details or landscape features, instead developing for rural/agricultural uses (Objective 5). Development under Alternative 2 would not support the extension of urban services or approval for the annexation of the project site to the City of Yuba City (Objective 7).

Alternative 3: Reduced Density

Alternative 3 would develop the same project site as would be developed under the proposed BSMP at a reduced density, with 25 percent fewer residential units and 25 percent less non-residential square footage.

Aesthetics

Alternative 3 would develop the project site with a mix of residential, commercial, office/business, park and recreational sites, and public facilities, on a 741-acre site that is currently occupied primarily by agricultural and rural residential uses. Alternative 3 would result in the development of buildings, the tallest of which would reach up to four stories at a maximum height of 52 feet. Yuba City Design Guidelines, and the proposed BSMP Development Standards include policies and guidance aimed to reduce obstruction of views, however, development of Alternative 3 would alter or obstruct existing unobstructed views of the Sutter buttes within some areas of the project site. As there is no feasible mitigation to reduce this impact, Alternative 3 impacts to scenic vistas would be considered significant and unavoidable.

Alternative 3 would alter the visual character of the site by developing a variety of residential, commercial, office/business, park and recreational sites, and public facilities on formerly agricultural land. Under Alternative 3, the visual character of the project site and its surroundings would be substantially changed. While the impact to visual character would be less severe under Alternative 3, the substantial change to the project site would constitute a significant impact. Similar to the proposed BSMP there would be no feasible mitigation, therefore, this impact would be significant and unavoidable.

New sources of light and glare would be introduced to the project site as a result of the BSMP. The primary sources of new nighttime lighting in the project site would be exterior building lighting, new street lighting, parking lot lights, and headlights of vehicular traffic. Adherence to Yuba City Code of Ordinances, Title 24 of the California Code of Regulations, and the measures

in the proposed BSMP Development Standards and Guidelines designed to prevent excessive or misdirected nighttime lighting would ensure that impacts related to excessive misdirected light would be less than significant.

As specified in the BSMP Development Standards and Guidelines, residential and commercial development within the project site shall be prohibited from (1) using reflective glass that exceeds 50 percent of any building surface, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, and (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building. It is anticipated that the proposed BSMP Development Standards and Guidelines would be implemented under Alternative 3, which would include a requirement that street lighting constructed would be designed to minimize glare and excess spillage onto neighboring properties. Required compliance with the glare-reduction requirements of the BSMP Development Standards and Guidelines would ensure that the impact would be less than significant.

Agriculture and Forestry Resources

Alternative 3 would develop the project site for residential, commercial, office/business, park and recreational site, and public facilities uses. Similar to the proposed BSMP, Alternative 3 would result in conversion of Prime Farmland and Farmland of Statewide Importance to non-agricultural uses, which would be a significant impact. Available mitigation measures could be anticipated to lessen the severity of impacts to Important Farmland through the establishment of farmland conservation easements or the acquisition of farmland easement credits. However, the availability of such mitigation opportunities is not known at this time. Further, while conservation of important farmland would lessen future conversion of important farmland, it would not mitigate for the loss of important farmland as a result of development under Alternative 3. Therefore, this impact would be significant and unavoidable.

There are no parcels in the project site currently under Williamson Act Contract, so implementation of Alternative 3 would not conflict with an existing Williamson Act Contract. Therefore, this impact would be less than significant for Alternative 3.

Similar to the proposed BSMP, development of the project site under Alternative 3 would not facilitate the indirect loss of additional farmland outside of the project site because city utilities would not be made available to areas outside of the project site and development of those areas would require changes in parcel entitlements that serve as obstacles to development intensification. Therefore, this impact would be less than significant.

Air Quality

Similar to the proposed BSMP, Alternative 3 would result in short-term construction emissions and long-term operational emissions from new residences and non-residential uses. Because Alternative 3 would construct approximately 25 percent fewer residential units and 25 percent less non-residential square footage, Alternative 3 would result in a lower quantity of construction emissions. With a 25 percent reduction in construction emissions, relative to the proposed BSMP,

Alternative 3 would still be anticipated to equal or exceed the FRAQMD significance threshold, as described in Section 3.3 Air Quality, during peak year construction. Implementation of emission reduction mitigation measures would reduce the predicted level of emission for construction of Alternative 3, however construction emissions would still exceed the FRAQMD significance thresholds for ROG and NOx. Therefore, this impact would be significant and unavoidable.

For operational emissions, projected emissions from the proposed BSMP are reflected in Tables 3.3-10 and 3.3-11 of Section 3.3 Air Quality, where FRAQMD thresholds would be 12.6 percent of the anticipated emissions for ROG, 4 percent for NOx, and 39.8 percent for PM10. A 25 percent reduction in operational emissions from Alternative 3 would still exceed FRAQMD thresholds by a substantial margin. Similar to the proposed BSMP, available mitigation would assist in reducing operational emissions, however available mitigation would not be sufficient to reduce the impacts from operational emissions, under Alternative 3, to less than significant levels.

Similar to the BSMP development of the project site under Alternative 3 would include design features that would reduce onsite ozone emissions and particulate matter. Nonetheless, development of the project site was not anticipated in SACOG development models and would not be consistent with the MTP. Development assumptions used in the MTP are relied upon for analysis in the SVAB Triennial Air Quality Attainment Plan (TAQAP). Development intensification at the project site would be greater than what was assumed in the TAQAP. Available mitigation would reduce construction- and operational-emissions, however they would not establish consistency with the TAQAP. Therefore, because Alternative 3 would conflict with implementation of the TAQAP, this impact would be significant and unavoidable.

Alternative 3 would generate 25 percent fewer vehicle trips at project area intersections. Under the proposed BSMP, no intersections in the plan area would be subject to delays that would result in significant CO concentrations. Under Alternative 3, there would be reduced delay plan area intersections, and impacts associated with CO concentrations would be less than significant.

Sources of TAC during the operation of Alternative 3 would be regulated through the FRAQMD permitting process and mobile source TAC emissions would be below CARB's screen criteria. Similar to the proposed BSMP, construction duration would be anticipated to constitute a large percentage of the total 30-year exposure period used for health risk evaluations. Since construction of Alternative 3 would represent 73-percent of the 30-year evaluation period, TACs generated during construction could result in concentrations causing significant health risks. However available mitigation could reduce this impact to less than significant.

Finally, as with the proposed project, the residential and non-residential uses proposed under Alternative 3 are unlikely to result in substantial odors. Thus, Alternative 3 would not have a significant effect related to odors. Overall, Alternative 3 would result in a reduction in air pollutant emissions that would be generally proportionate to the 25 percent reduction in the

number of residential units and non-residential square footage at the project site. Like the proposed BSMP, these air quality impacts would be less than significant.

Biological Resources

Development under Alternative 3 would include 25 percent fewer residential units and 25 percent less non-residential square footage than would occur under the proposed BSMP, but would develop the same project area. Reconnaissance-level surveys of the project site did not reveal the presence of potentially jurisdictional wetlands, however due to the phased nature of project site development, potentially jurisdictional wetlands, may be present within the project site, when specific projects are proposed. As described in Section 3.4 Biological Resources, available avoidance and mitigation measures would reduce the potential impact to less than significant.

Individual projects under Alternative 3 could potentially impact protected species or their habitat, including valley elderberry longhorn beetle (VELB), nesting migratory birds and raptors, and roosting bats including pallid bat. For each species potentially present within the project site, available mitigation, including preconstruction surveys, impact minimization and avoidance, and consultation with regulatory agencies would reduce impacts to less than significant levels.

Construction within the project site under Alternative 3 could also result in the loss of protected trees and street trees. Street trees occur along the perimeter of the project site and several heritage oak trees occur within the non-native annual grassland and within the oak woodland within the BSMP area boundaries. Similar to the proposed BSMP, available mitigation, including preservation and replacement, would reduce impacts to protected trees and street trees to less-than-significant levels.

Development of the project site under Alternative 3 could result in grading grasslands, potentially containing rare plant populations, including dwarf downingia and Ferris' mile-vetch. Avoidance mitigation measures would reduce potential impacts to less than significant levels.

The project site contains non-native annual grasslands which serve as Swainson's hawk foraging habitat. Development under Alternative 3 would result in the loss of this habitat. Similar to the proposed BSMP, application of available mitigation would ensure that the project avoids impacts to Swainson's hawk foraging habitat through the purchase of mitigation credits or establishment of a conservation easement. This impact would be less than significant.

Cultural Resources

Development under Alternative 3 would include 1,889 dwelling units and 966,541 square feet of non-residential uses on 741.5 acres. New construction would have the potential to impact historical architectural resources, archaeological resources, and previously unknown human remains. While the Newkom Ranch and Kells East Ranch have been surveyed and found not to contain historic architectural resources, as part of the cultural resources evaluation for this EIR, further evaluation would be required to identify potential cultural resources within the Alternative 3 project site. The application of available mitigation measure, including survey and protective

measures would apply to Alternative 3, but would not reduce the impact to less-than-significant because exact nature of future development and the eligibility of potentially affected resources is currently unknown. Therefore, impacts to eligible historic architectural resources from Alternative 3 would be significant and unavoidable.

While historic architectural resources can be surveyed and identified prior to construction, other cultural resources may be subsurface and not discovered until site disturbance. Available mitigation measures including archaeological and tribal monitoring and protective measures would provide guidance for the identification and treatment of unique archaeological resources, tribal cultural resources, and human remains discovered during the course of construction. With the application of available mitigation impacts to archaeological resources, tribal cultural resources, and human remains would be less than significant.

Geology, Mineral Resources, and Paleontological Resources

Implementation of Alternative 3 would include construction of residential and non-residential structures, however development intensity would be reduced by 25 percent relative to the proposed BSMP. While there is a low potential for seismic activity in the project site, new structures could be subjected to seismic activity. The City of Yuba City requires that all new buildings must be constructed in accordance with the current (2016) CBC standards and local building design requirements which include seismic design standards designed to minimize seismic safety hazards. Therefore, Alternative 3 would result in less-than-significant impacts related to seismic activity.

The addition of new structures could also contribute to erosion both within and outside the project site. While implementation of Alternative 3 would result in common construction practices that would disturb surface soils, regulatory requirements would include BMPs that would be included within a SWPPP as required by the NPDES Construction General Permit. City and state drainage control requirements would also ensure that management of stormwater from introduced impervious surfaces would be managed in a manner that prevents erosion or loss of topsoil. Because project construction activities would be subject to requirements that would control erosion, construction pursuant to the proposed BSMP would not cause substantial increases in soil erosion. Therefore, through compliance with the Construction General Permit, Alternative 3 would have a less-than-significant impact related to soil erosion.

Development under Alternative 3 would be required to adhere to City building code requirements which include the preparation of a geotechnical investigation by a state licensed geotechnical engineer. The required geotechnical report for any new development would determine the susceptibility of the subject site to landslide, lateral spreading, subsidence (settlement), liquefaction and collapse. Any identified geotechnical hazards or unstable units would be prescribed appropriate engineering techniques for reducing its effects. Therefore, Alternative 3 would result in less than significant effects related to unstable soils.

As discussed in Section 3.6, Geology, Soils, Mineral Resources and Paleontological Resources, the project site has low to moderate ratings for linear extensibility. As a requirement of the CBC, developers would be required to complete a final geotechnical investigation that includes site-specific recommendations for the mitigation of potentially expansive soils. Therefore, implementation of Alternative 3 would result in less-than-significant impacts related to expansive soils.

Alternative 3 would develop the same land area as would be developed under the proposed BSMP. As described in Section 3.6, Geology, Soils, Mineral Resources and Paleontological Resources, the project site is underlain by Quaternary alluvium and is considered to have low potential for exposure of paleontological resources or the presence of unique geological features. The project site is underlain by a soil type which is generally considered to have a low potential for the presence of paleontological resources. For these reasons, Alternative 3 would have a less than specific impact on paleontological resources.

Greenhouse Gas Emissions

As described above, Alternative 3 would result in the construction and operation of fewer residential units and fewer square feet of non-residential uses on the project site, resulting in fewer vehicle trips compared to the proposed BSMP. Because of the 25 percent reduction in the number of units and non-residential square footage constructed and operated, Alternative 3 would result in lower overall levels of GHG emissions compared to the proposed BSMP, and less than significant impacts related to greenhouse gas emissions.

Hazards and Hazardous Materials

Alternative 3 would include the same uses as the proposed project, but 25 percent fewer dwelling units and 25 percent less square feet of non-residential square footage. During construction activities, relatively small portions of some construction-related products would contain materials defined as hazardous, such as fuels, solvents, cements and adhesives, paints, cleansers, degreasers, and asphalt mixtures, which are all commonly used in construction. During operation of Alternative 3, land uses would include the transport, use, and disposal of common household, commercial, and agricultural hazardous materials that could include cleansers, solvents, oils, fuels, pesticides, and herbicides. The overall quantities of these materials within the project site at any one time would not result in large bulk amounts that could represent a potential significant hazard to the public or environment. Thus, Alternative 3 would result in less-than-significant impacts related to the routine transport, use, or disposal of hazardous materials.

Development under Alternative 3 would have the same project site footprint as development under the proposed BSMP, but with 25 percent less development density for residential and non-residential uses. Buildings in the project site may include asbestos-containing material (ACM), lead-based paint (LBP), or other hazardous building materials. Removal or renovation of structures that currently contain hazardous materials could expose workers and the public to hazardous materials. However, as with the proposed BSMP, compliance of Alternative 3 development with all applicable federal, State, and local laws and regulations would prevent the

exposure of individuals and the environment to hazardous materials, and this impact would be less than significant.

Construction activities under Alternative 3 would likely require use of limited quantities of hazardous materials such as fuels, oils, and lubricants; paints and thinners; and solvents and cleaners. These materials would be transported to and from the project site and could pass near schools, or a future site that uses hazardous materials during construction may be located within one-quarter mile of a school. With compliance with the numerous laws and regulations that govern the transportation and management of hazardous materials to reduce the potential hazards, long with the existing Hazardous Materials Response Team, this impact would be less than significant.

As described in Section 3.8 Hazards and Hazardous Materials, the project site includes sites for which hazardous material may be present in soil or other hazardous materials releases may have occurred that have not been accounted for, that could expose people to associated health risks. During construction, there is the potential to encounter previously unknown contaminated soil, and, if dewatering is needed, groundwater. Construction workers, the public, and the environment could be exposed to hazardous materials and the impact could be potentially significant. It would be anticipated that Alternative 3 would implement Mitigation Measure 3.8-2, as described in Section 3.8, Hazards and Hazardous Materials, which would require a Phase 1 study and protocols in place to implement in the event that contamination is discovered during construction. With the implementation of available mitigation this impact would be less than significant.

As described for the proposed BSMP, parcels within the project site would be located within the 2 miles of the Yuba County and Sutter County Airports. The proposed BSMP would be compatible with the Sutter County Airport CLUP and Yuba County Airport Compatibility Plan. Development under Alternative 3 would be within the same project site and would constitute the same types of development, with the exception that development under Alternative 3 would have 25 percent lower development density. Because types of development would have less development density but would be the same as would occur under the proposed BSMP, development under Alternative 3 would also be compliant with the Sutter County Airport CLUP and Yuba County Airport Compatibility Plan. Therefore, this impact would be less than significant.

SR 99 could be used in the event of an emergency or disaster and runs through the project site. Development pursuant to the proposed BSMP or Alternative 3 could interfere with emergency response services or an emergency evacuation if construction activities involve the complete or partial closure of roadways, otherwise restricted access for emergency response vehicles, or restrict access to critical facilities such as hospitals or fire stations. Construction within the project site could result in temporary lane closures on certain roads, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services. Similar to the proposed BSMP, the development and implementation of a traffic control plan, would reduce the impacts to emergency response services to a less-than-significant level.

Hydrology and Water Quality

Similar to the proposed BSMP, construction and operation of development pursuant to Alternative 3 could result in stormwater contaminant and degradation of water quality. Adherence to BMPs as a condition of an NPDES permit would substantially reduce or prevent waterborne pollutants from entering receiving waters per CVRWQCB standards during construction. Compliance with City of Yuba City Stormwater Management and Discharge Control Ordinance and the SWMP requirements would protect water quality during project operation and would prevent water borne pollutants from entering receiving waters per CVRWQCB standards. Therefore, impacts related to violation of water quality standards or waste discharge requirements or otherwise substantially degrading water quality as a result of construction or operation of elements of Alternative 3 are considered less than significant.

Under Alternative 3 construction activities would not include impacts to groundwater or groundwater recharge, such as site dewatering or other forms of groundwater extraction or extensive soil compaction. Similar to the proposed BSMP no impacts to groundwater would be anticipated from construction activities pursuant to Alternative 3. The storm drainage system, under Alternative 3, would be similar to the system for the proposed BSMP, and would include extended detention ponds which would allow for groundwater recharge during project operations. As groundwater recharge would not be impeded, impacts on groundwater recharge during project operation would be less than significant.

Implementation of Alternative 3 would include construction activities which would alter existing drainage patterns within and adjacent to the project site. Development under Alternative 3 would increase the amount of impervious surfaces through the construction of buildings and structures, parking areas, and roadways which would substantially alter the existing drainage pattern of the project site.

Construction of Alternative 3 would employ a site-specific SWPPP for erosion and sediment control to prevent flooding on- or off-site during construction activities in compliance with the NPDES Construction General Permit and Yuba City ordinances. The proposed BSMP would include construction of a stormwater drainage system designed to maintain stormwater flows below current levels during all storms and would not exacerbate on- or off-site drainage or flooding problems. Alternative 3 would be anticipated to have a similar system that would be capable of accommodating runoff from the reduced density development under Alternative 3. Design of the system would be required to meet all City stormwater and flood prevention ordinances prior to approval of the project and building permits. Therefore, impacts as a result of altering the existing drainage pattern of the site or area or a substantial increase in the rate or amount of surface runoff in a manner which could result in flooding on- or off-site would be considered less than significant.

Several portions of the Alternative 3 project site are located within the 100-year flood hazard zone, and some of the development pursuant to Alternative 3 would require 100-year flood protection. Chapter 9 of the Yuba City General Plan requires proposed developments within the

200-year flood hazard zone to demonstrate consistency with ULOP criteria. Therefore, impacts related to housing or structures impeding or redirecting flood flows would be less than significant.

No elements of Alternative 3 would directly affect how dams that could affect the project site are operated, or increase the likelihood of failure of a dam that could result in inundation of the project site or vicinity. Therefore, this impact would be less than significant.

Land Use and Planning

Alternative 3 would result in the construction of 25 percent fewer residential units and 25 percent less non-residential square footage, relative to the proposed BSMP. Similar to the proposed project, Alternative 3 would include urban edge roadways and landscape buffer areas between the project site and adjacent properties. Development of Alternative 3 would require annexation to the City of Yuba City a general plan amendment and rezoning. Alternative 3 would be consistent with the goals and policies of the City's General Plan. For these reasons, Alternative 3 would only have less impacts related to land use as compared to the proposed BSMP, and any impacts related to land use would be less than significant.

Noise

Like the proposed BSMP, construction of Alternative 3 would result in temporary noise impacts from construction equipment, although it is likely that the duration of construction noise would be decreased compared to the proposed project because fewer residential units and square feet of non-residential uses would be constructed.

As with the proposed BSMP, Alternative 3 would add sensitive receptors throughout the project site, as well as potentially expose new residents to noise from nearby agricultural operations. As with the proposed BSMP, high ambient noise levels would require soundwalls and landscape buffers along urban edge roadways, wrapping around to the northwest and southeast corner of the project site to provide noise attenuation for residents living adjacent to agricultural uses.

Impacts from vibration from heavy equipment operation during construction under Alternative 3 would be very similar to the impacts under the proposed BSMP. In both cases, the impact from vibration would be less than significant.

Mitigation developed for the proposed BSMP to address impacts of construction and operational noise would also apply to Alternative 3.

Overall, with the reduction in the number of residential units, and the elimination of the larger park, Alternative 3 would have less noise impacts than the proposed BSMP, and would have less than significant impacts with regards to noise.

Population and Housing

The proposed BSMP would add 2,517 housing units and 1,288,723 square feet of non-residential space would be constructed accommodating 2,132 jobs. The jobs housing ratio for the BSMP would be approximately 0.84:1. Alternative 3 would develop 1,889 housing units and 966,541 square feet of non-residential uses. The number of residential units under Alternative 3 would be anticipated to generate a population increase of approximately 5,044 people.³ **Table 5-5** illustrates anticipated employment generation from non-residential square footage developed pursuant to Alternative 3.

**TABLE 5-5
ALTERNATIVE 3 EMPLOYMENT GENERATION**

Land Use Type	Square Feet	Percent Retail	Percent Non-Retail	SF Per Retail Employee	SF Per Non-Retail Employee	Projected Employee
Neighborhood Commercial	61,746	70	30	500	400	133
Community Commercial	293,213	75	25	500	400	623
Office & Office Park	81,348	5	95	400	300	359
Business, Technology & Light Industrial	431,244	0	100	0	750	575
Total	867,551					1,690

NOTE:

Employee calculations do not include Public Facilities, a land use designation for which the Yuba City General Plan did not assign employment rates.

SOURCE: City of Yuba City. 2004. *Yuba City General Plan*. Adopted April 8, 2004, Resolution #04-049. Pp. 3-8. Table 3-5.

As illustrated in Table 5-5, Alternative 3 would generate approximately 1,690 jobs, which would provide approximately 0.89 jobs for every housing unit within the project site. Thus, Alternative 3 would generate a jobs housing ratio of 0.89:1 and Alternative 3 would be anticipated to bring the overall jobs-housing ratio within Yuba City closer to 1.0, relative to the proposed BSMP. However, as discussed in Section 3.12 Population and Housing, population increases and decreases are not, in and of themselves, considered physical environmental effects. Physical effects that would be a result of population growth within the BSMP area are examined in the appropriate environmental resource discussions for Alternative 3.

Within the project site there are 114 parcels totaling 741 acres under multiple ownership, with several of these parcels containing single-family residences and inhabitants. While Alternative 3 could result in the replacement of some of these residences, individual property owners would not be required to sell and/or relocate their homes. Furthermore, any homes that are demolished would be the result of a voluntary sale of the property by the property owner(s) and there would be new housing within the project site at various price points for such owners to purchase. As a result, Alternative would not displace a substantial number of people or existing housing and

³ Based on a population generation rate of 2.67 people per household (see Section 3.12, Population and Housing, Table 3.12-3).

would not necessitate the construction of replacement housing elsewhere. Therefore, Alternative 3 would have no impact on existing housing or the need for replacement housing.

Public Services and Recreation

Alternative 3 would generate new residents which would require police protection, fire, school, and parks and recreation facilities and services. Using the Yuba City General Plan population generation rate of 2.67 persons per household, the 1,889 new units anticipated under Alternative 3 would add approximately 5,044 residents within the project site. This would necessitate approximately 5 new police officers, 2 to 3 new police vehicles, and 1 new dispatcher and CSO.⁴ While Alternative 3 would require additional police staff and equipment that could require new or expanded facilities to accommodate the addition of staff and equipment to serve the project site, it is unknown where or when the construction of the new facilities would occur. In the event that such facilities were constructed elsewhere in Yuba City, the new or expanded police facilities would require environmental review prior to development. Any potential impacts would be disclosed and mitigated, if feasible, through this process. The identification of any specific impacts that could remain significant and unavoidable would be speculative at this time. Therefore, the increase in demand for additional police protection facilities from Alternative 3 would result in a less-than-significant impact.

The project site would be provided fire protection services by the Yuba City Fire Department (YCFD). The YCFD station closest to the project site is Station 3, located at 795 Lincoln Road and approximately 1.4 miles to the north. It is anticipated that additional calls would occur at this station as a result of development pursuant to Alternative 3 and, as such, additional staff and equipment would be needed to maintain the General Plan response time standard. Despite the increased population and development anticipated under Alternative 3, the YCFD has indicated that implementation of the BSMP would not require a new fire station.⁵ Because YCFD would be able to maintain a 6-minute response time to the project site, and implementation of Alternative 3 would not result in the construction of new or expanded facilities related to the provision of fire protection, this impact would be less than significant.

Development under Alternative 3 would add 5,044 new residents that would increase demand for school services. **Table 5-6** provides anticipate student generation for Alternative 3 residents.

⁴ Based on generation rates of 1 officer per 1,000 residents, 1 new vehicle per 2,000 residents, and 1 dispatcher and CSO per 5,000 residents (see Table 3.13-1 of Section 3.13, Public Services and Recreation).

⁵ Daley, Pete, Interim Fire Chief, Yuba City Fire Department. Personal communication with Matthew Pruter of Environmental Science Associates. July 21, 2017.

**TABLE 5-6
ALTERNATIVE 3 STUDENT GENERATION**

School Type	Proposed Housing Units ³	Generation Rate (Students per Housing Unit)	Projected Student Population
Elementary School	1,889	0.291	550
Middle School	1,889	0.076	144
High School	1,889	0.152	287
TOTAL	1,889		980

SOURCE: Yuba City Unified School District. 2014. *Facilities Master Plan – 2014-2024*. August 12, 2014.

Based on an increase of 1,889 residential units, Alternative 3 would be estimated to result in a total of 980 students, as noted in Table 5-6. Approximately 550 elementary school students, 144 middle school students (or 694 K-8 students),⁶ and 287 high school students are estimated to be generated by Alternative 3. As described in Section 3.13 Public Services and Recreation, Barry and Riverbend elementary schools collectively have the capacity to accommodate 119 of the 694 K-8 students generated under Alternative 3. Development of Lot 1 within the project site as a K-8 school site, as proposed under the BSMP and Alternative 3, could accommodate the additional 575 students that could not be accommodated by existing YCUSD facilities. Development within the project site would be required to pay applicable school fees. Pursuant to Government Code 65997 payment of school development fees is considered, for the purposes of CEQA, to mitigate in full any impacts to school facilities associated with a development project. As such, payment of required YCUSD fees would reduce the impact of Alternative 3 on school facilities to a less-than-significant level.

Residential development under Alternative 3 would generate parkland demand within the project site. Using the parkland demand standard of 5 acres of parkland per 1,000 residents, Alternative 3 would generate demand for a total of 25.22 acres of parklands. Similar to the proposed BSMP the requirement for 25.22 acres of parklands would be satisfied through the provision of 18 acres of neighborhood and community parks, as well as partial credit for dedicated open space commitments along Gilsizer Slough (33.85 acres). Alternative 3 would also contribute to a new CFD established for the project site. Further, continued development of the Feather River Parkway would provide additional active parklands near the project site that serve to benefit the wider region. For these reasons, the impact would be less than significant.

Transportation and Traffic

Alternative 3 would add 1,889 new dwelling units, which represents a 25 percent reduction compared to the proposed BSMP. Also, Alternative 3 would develop 966,541 square feet of non-residential uses, which is a 25 percent reduction compared to the proposed BSMP. As described

⁶ As many of YCUSD's lower grade schools are K-8, this is the additive figure of total K-8 BSMP students who could attend either type of school.

in Section 3.14, Transportation and Traffic, the proposed BSMP would increase delays and cause intersections within the City of Yuba City that are currently operating at acceptable level of service (LOS) to operate at an unacceptable LOS. While Alternative 3 represents an approximately 25 percent overall reduction compared to the proposed BSMP, Alternative 3 may also cause unacceptable LOS conditions at multiple City of Yuba City Intersections. Mitigation Measure 3.14-1 requires construction of improvements designed to achieve acceptable LOS conditions. As an alternative to paying fees, the project applicant could construct intersection and roadway improvements such as intersection signalization, roadway widening and restriping, and intersection reconfiguration, as outlined in Mitigation Measure 3.14-1. Improvements to the following intersections would be required: Bogue Road/Walton Avenue, Railroad Avenue/Lincoln Road, Bogue Road/Phillips Road, Bogue Road/Railroad Avenue, and Gilsizer Ranch Way/Bogue Road. Implementation of Mitigation Measure 3.14-1 would reduce Alternative 3's impact on City of Yuba City intersections, and the impact would be reduced to a less-than-significant level, the same as under the proposed BSMP.

As described in Section 3.14 Transportation and Traffic, the proposed BSMP would not cause significant impacts at Sutter County intersections or roadways. Alternative 3 would add fewer trips to project area roadways and would therefore be less likely to cause significant impact at Sutter County intersections and roadways. For these reasons, this impact would be less than significant.

The proposed BSMP would be anticipated to cause significant impacts to the SR 99/Bogue Road and SR 99/Stewart Road intersections, which are maintained by Caltrans. The traffic study conducted for the proposed BSMP indicates that the proposed BSMP would worsen delays at other locations as well, however those impacts would be less than significant. Available mitigation, including improvements to SR 99 intersections would reduce the impacts from the proposed BSMP on Caltrans-maintained intersections to less than significant levels. Alternative 3 would add fewer trips to SR 99 intersections, relative to the proposed BSMP. Nonetheless, Alternative 3 trips may continue to cause significant impacts to the abovementioned intersections along SR 99. As with the proposed BSMP, implementation of roadway improvements in Mitigation Measure 3.14-3 would reduce Alternative 3 impacts to Caltrans-maintained facilities to less than significant levels.

The proposed BSMP would be anticipated to cause significant queuing-related impacts at the SR 99/Bogue Road intersection. Alternative 3 trips would be reduced by 25 percent, relative to the proposed BSMP, however, while fewer than the proposed BSMP, project trips may continue to cause significant delays at the SR 99/Bogue Road intersection. As with the proposed BSMP implementation of Mitigation Measure 3.14-4(a) or 3.14-4(b) would be adequate to reduce queuing-related impacts at Caltrans-maintained intersections to less than significant levels.

Similar to the proposed BSMP, Alternative 3 would be anticipated to have a comprehensive mobility network, including designated facilities for bicyclists and pedestrians. As with the proposed BSMP, Alternative 3 would not be anticipated to adversely affect an existing bicycle or

pedestrian facility or fail to adequately provide for access by these modes. Therefore, this impact is considered less than significant.

Alternative 3 would be anticipated to include bus stops and turnouts for the support of public transit, similar to the proposed BSMP. Since Alternative 3 would provide access to public transit for its residents and businesses, this impact would be considered less than significant.

Utilities and Service Systems

As described above, Alternative 3 would construct approximately 25 percent fewer residential units and result in proportionately fewer new residents than the proposed project. In addition, Alternative 3 would construct approximately 25 less residential square-footage. As such, the demand for utilities and service systems would be less than that of the proposed project. Water and wastewater conveyance systems would be similar in design and function as described for the proposed project, but would require 25 percent less conveyance capacity. In particular, the same area of the project site would need to be provided wastewater-conveyance. As with the proposed BSMP, the wastewater system for the project site would discharge to the City's WWTF. With 25 percent reduction in wastewater generation, relative to the proposed BSMP, Alternative 3 would be anticipated to require the conveyance and treatment of 0.75 mgd average dry weather flow (ADWF) and 1.67 peak wet weather flow (PWWF). As described in Section 3.15 Utilities and Service Systems, the WWTF has a current excess capacity of 4 mgd ADWF, as permitted. There would be adequate capacity to serve Alternative 3 development for wastewater conveyance in addition to existing commitments and impacts would be less than significant.

Alternative 3 would result in a 25 percent reduction in demand for wastewater conveyance, compared to the proposed BSMP, but the systems to serve the project site would be similar to those that would serve the proposed BSMP. The proposed BSMP would not exceed the capacity of existing wastewater conveyance facilities, thus, the lessened conveyance requirement for Alternative 3 would also not exceed current capacity, and this impact would be less than significant.

Alternative 3 would have 25 percent fewer residential units and 25 percent less non-residential square feet, relative to the proposed BSMP. Construction water was assumed to be 4 afy for the proposed BSMP and would be anticipated to be 3 afy for Alternative 3. Operational water demands for Alternative 3 would be anticipated to be 75 percent of the demand from the proposed BSMP. The 1,889 dwelling units would be anticipated to have a water supply demand of 1,180.5 afy. As described in Section 3.15 Utilities and Service Systems, under normal year conditions, the City of Yuba City has ample supplies to meet projected future demands, including the proposed BSMP. Thus, normal year supply would be adequate to provide service to the project site under Alternative 3. During single and multiple dry years, the City of Yuba City would require the implementation of mitigation, to meet water supply demands through 2040. Implementation of available mitigation, including the establishment of a new groundwater well, would provide adequate supply to meet demands for the City, including Alternative 3 water demands. For these

reasons, with implementation of Mitigation Measure 3.15-1, Alternative 3 impacts to water supply would be less than significant.

The existing water systems would require strategic upgrades to the City's water supply mains to connect to and serve Alternative 3 development. As described in Section 3.15 Utilities and Service Systems, extensions of the existing distribution main system and construction of water storage tanks would provide adequate service to the future development within the BSMP site. In addition, the maximum daily demand for water supply would be less than the available treatment capacity at the WTP and would not require construction of additional treatment facilities. Therefore, the impact related to the capacity of the water supply system would be less than significant for Alternative 3.

Alternative 3 construction would result in the generation of various construction waste, including scrap lumber, scrap finishing materials, various scrap metals, and other recyclable and non-recyclable constructed related wastes. Construction waste would be managed in accordance with ordinances promulgated by the RWMA – in particular, to reduce or divert the solid waste stream to the landfills by approximately 50 percent, in compliance with AB 939. Recyclable construction materials, including concrete, metals, wood, and various other recyclable materials would be diverted to recycling facilities. As described in Solid Waste analysis of Section 3.15 Utilities and Service Systems, landfilled waste from the project site would be delivered to the Ostrom Road Landfill, which has a large volume of available landfill capacity. In consideration of the large volume of available landfill capacity, sufficient landfill capacity would be available to accommodate the construction and operation wastes from the proposed BSMP or the lower capacity demands of Alternative 3 construction and operations.

Project Objectives

Alternative 3 would build out the project site with a wide range of housing opportunities along with a mix of non-residential uses (Objective 1). Development under Alternative 3 would be anticipated to be similar to adjacent residential neighborhoods, providing connectivity in and around the project site (Objective 2). The portions of the project site that would be adjacent to agricultural uses would include design and policy measures to support continuing agricultural operations on those properties (Objective 3). Alternative 3 would be anticipated to provide and expand on the existing grid street system to provide travel options for pedestrians (Objective 4). Alternative 3 would be anticipated to include high-quality architectural details and landscaping features, though development would have 25 percent less density relative to the proposed BSMP (Objective 5). Similar to the proposed BSMP, development under Alternative 3 would be developed in coordination with infrastructure development to serve all areas of the project site and would have fully funded improvements and services (Objectives 6 and 8). Alternative 3 would support LAFCo approval of annexation to the City of Yuba City (Objective 7).

5.7 Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126.6 (e)(2) of the State CEQA Guidelines requires that an environmentally superior alternative be designated and states that if the environmentally superior alternative is the No Project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Based on the summary of information presented in **Table 5-7**, the environmentally superior alternative is Alternative 1: No Project/No Build. Because Alternative 1 would leave the project site essentially unchanged and would not have the operational effects that would be associated with any of the alternatives, this alternative has fewer environmental impacts than the proposed project or any of the other alternatives.

**TABLE 5-7
COMPARISON OF PROPOSED PROJECT WITH ALTERNATIVES**

Environmental Topic	Proposed Project	Alternative 1	Alternative 2	Alternative 3
Aesthetics				
3.1-1: Scenic Vistas	SU	NI	SU	SU
3.1-2: Visual Character	SU	NI	SU	SU
3.1-3: Light and Glare	SU	NI	SU	LTS
3.1-4: Cumulative Scenic Vistas	SU	NI	LTS	SU
3.1-5: Cumulative Visual Character	SU	NI	LTS	SU
3.1-6: Cumulative Light and Glare	LTS	NI	LTS	LTS'
Agriculture and Forestry Resources				
3.2-1: Important Farmland	SU	NI	LTS	SU
3.2-2: Indirect Farmland Conversion	LTS	NI	LTS	LTS
3.2-3: Cumulative Important Farmland	SU	NI	LTS	SU
Air Quality				
3.3-1: Construction Emissions	SU	NI	LTS	SU
3.3-2: Operational Emissions	SU	NI	LTS	SU
3.3-3: Conflict with Air Quality Plan	SU	NI	LTS	SU
3.3-4: CO Concentrations	LTS	NI	LTS	LTS
3.3-5: TAC Emissions	LTS	NI	LTS	LTS
3.3-6: Objectionable Odors	LTS	NI	LTS	LTS
3.3-7: Cumulative Construction Emissions	SU	NI	LTS	SU
3.3-8: Cumulative Operational Emissions	SU	NI	LTS	SU
3.3-9: Cumulative CO Concentrations	LTS	NI	LTS	LTS
3.3-10: Cumulative TAC Emissions	LTS	NI	LTS	LTS

LTS = less than significant; NI = no impact; SU = significant and unavoidable.

**TABLE 5-7
COMPARISON OF PROPOSED PROJECT WITH ALTERNATIVES**

Environmental Topic	Proposed Project	Alternative 1	Alternative 2	Alternative 3
Biological Resources				
3.4-1: Wetlands	LTS	NI	NI	LTS
3.4-2: VELB	SU	NI	LTS	LTS
3.4-3: Nesting Migratory Birds	LTS	NI	LTS	LTS
3.4-4: Roosting Bats	LTS	NI	LTS	LTS
3.4-5: Protected Trees & Street Trees	LTS	NI	LTS	LTS
3.4-6: Rare Plant Populations	LTS	NI	LTS	LTS
3.4-7: Swainson's Hawk Foraging Habitat	LTS	NI	LTS	LTS
3.4-8: Cumulative Special Status Plans, Wildlife, Protected Trees, Wildlife Resources	SU	NI	LTS	LTS
3.4-9: Cumulative Heritage Oaks & Street Trees	LTS	NI	LTS	LTS
Cultural Resources				
3.5-1: Historical Architectural Resource	SU	NI	SU	SU
3.5-2: Prehistoric Archaeological Resources, Tribal Cultural Resources, Human Remains	LTS	NI	LTS	LTS
3.5-3: Cumulative Historic Architectural Resources	LTS	NI	SU	LTS
3.5-4: Cumulative Archaeological Resources, Tribal Cultural Resources, and Human Remains	LTS	NI	LTS	LTS
Geology, Soils, Mineral Resources and Paleontological Resources				
3.6-1: Seismic Ground Shaking, Ground Failure, Liquefaction	LTS	NI	LTS	LTS
3.6-2: Soil Erosion	LTS	NI	LTS	LTS
3.6-3: Landslides, Lateral Spreading, Unstable Geology	LTS	NI	LTS	LTS
3.6-4: Expansive Soils	LTS	NI	LTS	LTS
3.6-5: Paleontological Resources	LTS	NI	LTS	LTS
3.6-6: Cumulative Soil Erosion	LTS	NI	LTS	LTS
3.6-7: Cumulative Paleontological Resources	LTS	NI	LTS	LTS
Greenhouse Gas Emissions & Energy				
3.7-1: Conflict with CAP	LTS	NI	LTS	LTS
3.7-2: Energy Infrastructure	LTS	NI	LTS	LTS
3.7-3: Energy Waste	LTS	NI	LTS	LTS
3.7-4: Cumulative Energy Demand	LTS	NI	LTS	LTS
Hazards and Hazardous Materials				
3.8-1: Routine Transport, Use, Disposal of Hazardous Materials	LTS	NI	LTS	LTS
3.8-2: Unknown Hazardous Materials	LTS	NI	LTS	LTS
3.8-3: ACM, LBP, PCBs or Hazardous Materials Exposure from Demolition	LTS	NI	LTS	LTS
3.8-4: Hazardous Materials Near Schools	LTS	NI	LTS	LTS

LTS = less than significant; NI = no impact; SU = significant and unavoidable.

**TABLE 5-7
COMPARISON OF PROPOSED PROJECT WITH ALTERNATIVES**

Environmental Topic	Proposed Project	Alternative 1	Alternative 2	Alternative 3
3.8-5: Known Hazardous Materials Sites	LTS	NI	LTS	LTS
3.8-6: Airport Hazards	LTS	NI	LTS	LTS
3.8-7: Interference with Emergency Response Plans	LTS	NI	LTS	LTS
3.8-8: Cumulative Routine Transport, Use, Disposal of Hazardous Materials	LTS	NI	LTS	LTS
3.8-9: Cumulative Hazardous Materials Near Schools	LTS	NI	LTS	LTS
3.8-10: Cumulative Airport Hazards	LTS	NI	LTS	LTS
3.8-11: Cumulative Interference with Emergency Response Plans	LTS	NI	LTS	LTS
Hydrology and Water Quality				
3.9-1: Degrade Water Quality	LTS	NI	LTS	LTS
3.9-2: Groundwater Supply	LTS	NI	LTS	LTS
3.9-3: Drainage	LTS	NI	LTS	LTS
3.9-4: Flood Hazard Zones	LTS	NI	LTS	LTS
3.9-5: Dam Failure	LTS	NI	LTS	LTS
3.9-6: Cumulative Water Quality	LTS	NI	LTS	LTS
3.9-7: Cumulative Ground Water	LTS	NI	LTS	LTS
3.9-8: Cumulative Drainage	LTS	NI	LTS	LTS
3.9-9: Cumulative Flood Hazard	LTS	NI	LTS	LTS
3.9-10: Cumulative Dam Failure	LTS	NI	LTS	LTS
Noise and Vibration				
3.11-1: Construction Noise	LTS	NI	LTS	LTS
3.11-2: Operational Exterior Noise	LTS	NI	LTS	LTS
3.11-3: New Sources of Stationary Noise	LTS	NI	LTS	LTS
3.11-4: Construction Vibration	LTS	NI	LTS	LTS
3.11-5: Aircraft Noise	LTS	NI	LTS	LTS
3.11-6: Cumulative Construction Noise	LTS	NI	LTS	LTS
3.11-7: Cumulative Construction Vibration	LTS	NI	LTS	LTS
3.11-8: Cumulative Traffic Noise	LTS	NI	LTS	LTS
3.11-8: Cumulative Stationary Noise	LTS	NI	LTS	LTS
Population and Housing				
3.12-1: Induced Population Growth	SU	NI	LTS	SU
3.12-2: Displaced Housing	NI	NI	LTS	NI
3.12-3: Cumulative Induced Population Growth	SU	NI	LTS	SU

LTS = less than significant; NI = no impact; SU = significant and unavoidable.

**TABLE 5-7
COMPARISON OF PROPOSED PROJECT WITH ALTERNATIVES**

Environmental Topic	Proposed Project	Alternative 1	Alternative 2	Alternative 3
Public Services				
Police Protection				
3.13-1: Police Facilities	LTS	NI	LTS	LTS
3.13-2: Cumulative Police Facilities	LTS	NI	LTS	LTS
Fire Protection				
3.13-3: Fire Facilities	LTS	NI	LTS	LTS
3.13-4: Cumulative Fire Facilities	LTS	NI	LTS	LTS
Schools				
3.13-5: School Facilities	LTS	NI	LTS	LTS
3.13-6: Cumulative Schools	LTS	NI	LTS	LTS
Parks and Recreational Facilities				
3.13-7: Parks	LTS	NI	LTS	LTS
3.13-8: Cumulative Parks	LTS	NI	LTS	LTS
Transportation Traffic and Circulation				
3.14-1: Yuba City Intersections	LTS	NI	LTS	LTS
3.14-2: Sutter County Intersections	LTS	NI	LTS	LTS
3.14-3: Caltrans Intersections LOS	LTS	NI	LTS	LTS
3.14-4: Caltrans Intersections Queuing	LTS	NI	LTS	LTS
3.14-5: Bicycle and Pedestrian Facilities	LTS	NI	LTS	LTS
3.14-6: Transit	LTS	NI	LTS	LTS
3.14-7: Cumulative Yuba City Intersections	LTS	NI	LTS	LTS
3.14-8: Cumulative Sutter County Intersections	LTS	NI	LTS	LTS
3.14-9: Cumulative Caltrans Intersections LOS	SU	NI	LTS	LTS
3.14-10: Cumulative Caltrans Intersections Queuing	SU	NI	LTS	LTS
3.14-11: Cumulative Bicycle and Pedestrian Facilities	LTS	NI	LTS	LTS
3.14-12: Cumulative Transit	LTS	NI	LTS	LTS
Utilities and Service Systems				
3.15-1: Wastewater Treatment Capacity	LTS	NI	LTS	LTS
3.15-2: Wastewater Treatment Facilities	LTS	NI	LTS	LTS
3.15-3: Cumulative Wastewater Treatment Facilities	LTS	NI	LTS	LTS
3.15-4: Water Supply	LTS	NI	LTS	LTS
3.15-5: Water Supply Facilities	LTS	NI	LTS	LTS
3.15-6: Cumulative Water Supply	LTS	NI	LTS	LTS
3.15-7: Cumulative Water Treatment Facilities	LTS	NI	LTS	LTS
3.15-8: Solid Waste Facilities	LTS	NI	LTS	LTS
3.15-9: Cumulative Solid Waste Facilities	LTS	NI	LTS	LTS

LTS = less than significant; NI = no impact; SU = significant and unavoidable.

As discussed above, if the environmentally superior alternative is the No Project alternative, the EIR must also identify an environmentally superior alternative from the other alternatives. Aside from Alternative 1, Alternative 2 would have the least environmental impacts because it would be result in much less development and would maintain much of the existing agricultural and rural attributes of the project site, relative to the proposed BSMP.

CHAPTER 6

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CHAPTER 7

Acronyms and Abbreviations

AB	Assembly Bill
AB 2588	Air Toxics “Hot Spots” Information and Assessment Act
ABAG	Association of Bay Area Governments
ACM	Asbestos Containing Material
ADWF	average dry weather flow
afy	acre feet per year
AG-20	Agriculture
AIA	Airport Influence Area
amsl	above mean sea level
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
ALUC	Airport Land Use Commission
APCO	air pollution control officer
ARB	California Air Resources Board
ARRA	American Recovery and Reinvestment Act
ASAs	Archaeologically Sensitive Areas
ASCE	American Society of Civil Engineers
ATP	Archaeological Testing Plan
BACT	best available control technology
Basin Plan	Sacramento River Basin and San Joaquin River Basin
BAMM	Best Available Mitigation Measures
BFE	Base Flood Elevations
bgs	below ground surface
BMP	best management practice
BOE	Board of Equalization
BP	before present
BSMP	Bogue-Stewart Master Plan
Business 80	Interstate 80 Business Loop

Business Plan Act	California Hazardous Materials Release Response Plan and Inventory Law of 1985
BTLI	Business, Technology and Light Industrial
BWFS	Basin-wide Feasibility Studies
CAFÉ	Corporate Average Fuel Economy
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Buildings Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CalTrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CC	Community Commercial
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCP	concrete cylinder pipe
CDC	Centers for Disease Control and Prevention
CDFW	California Department of Fish and Wildlife
CDHS	California Department of Health Services
CDMG	California Division of Mines and Geology
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFD	community facilities district
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGEU	California Gas and Electric Utilities
CGS	California Geological Survey
CH ₄	methane
CHP	California Highway Patrol
CHRIS	California Historic Resources Information System

CLUP	Comprehensive Land Use Plan
CM	Commercial-Industrial
CNDDDB	California Department of Fish and Wildlife's Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COCs	Constituents of Concern
Cortese List	State Hazardous Water and Substances List
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CSA	county service areas
CSO	Community Service Officer
CSS	Combined Sewer System
CUP	Central Utility Plant
CUPA	Certified Unified Program Agency
CVFMP	Central Valley Flood Management Planning Program
CVFPB	Central Valley Flood Protection Board
CVFPO	Central Valley Flood Planning Office
CVFPP	Central Valley Flood Protection Plan
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	Decibel
dBpeak	Decibel Peak
dBSEL	Decibel Sound Exposure Level
DBH	Diameter at breast height
Delta	Sacramento-San Joaquin Delta
DHA	County Department of Human Assistance
DHS	State Department of Health Services
DIP	ductile-iron pipe
DO	Dissolved Oxygen
DOC	California Department of Conservation

DOE	U.S. Department of Energy
DOF	California Department of Finance
DOGGR	California Division of Oil, Gas, and Geothermal Resources
DOSH	Division of Occupational Health and Safety
DPH	California Department of Public Health
DPM	Diesel Particulate Matter
DPR	Department of Parks and Recreation
DPS	Distinct Population Segments
DSOD	Division of Safety of Dams
DTSC	Department of Toxic Substances Control
du	dwelling unit
DWR	Department of Water Resources
EDC	Economic Development Committee
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EMFAC	Emissions Factors
EMMP	El Margarita Master Plan
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
ER	Estate Residential
ESA	Environmental Site Assessment
ESU	Evolutionarily Significant Unit
F	Fahrenheit
FAA	Federal Aviation Administration
FAR	floor-area ratio
FCAA	Federal Clean Air Act
FCAAA	Federal Clean Air Act Amendments
Fed/OSHA	United States Department of Labor Occupational Safety and Health Administration
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan (Air Quality)
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study

FMMP	Farmland Mapping and Monitoring Program
FR	Federal Register
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FRAQMD	Feather River Air Quality Management District
FRPS	Feather River Parkway Strategic Plan
FY	Fiscal Year
g	gravity
GHG	Greenhouse Gas
GO	General Obligation
gpcd	Gallons per capita per day
gpd	Gallons per day
GSP	Groundwater Sustainability Plan
GVW	Gross Vehicle Weight
GWP	Global Warming Potential
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HAPs	Hazardous Air Pollutants
Hazmat	Hazardous Materials
HCD	California Department of Housing and Community Development
HCP	Habitat Conservation Plan
HCM	Highway Capacity Manual
HFCs	Hydroflouorocarbons
HI	Hazard Index
HM	Habitat Management
HMBP	Hazardous Materials Business Plan
HMP	Hydromodification Management Plan
HQ	Hazards Quotient
HRA	Health Risk Assessment
HVAC	Heating, Ventilation and Air Conditioning
HWC	Hillcrest Water Company
Hz	Hertz
I-5	Interstate 5
I-80	Interstate 80
IBC	International Building Code

IGP	Industrial Storm Water General Permit
IND	Industrial
IPCC	International Panel on Climate Change
ITE	Institute of Transportation Engineers
IS/MND	Initial Study / Mitigated Negative Declaration
JPA	Joint Powers Authority
Ksat	saturated hydraulic conductivity
kV	kilovolt
LAFCo	Local Area Formation Commission
LBP	lead-based paint
LDR	Low Density Residential
LESP	Lincoln East Specific Plan
LID	Low Impact Development
LMDR	Low-Medium Density Residential
LNG	Liquefied Natural Gas
LOS	level of service
Low-E	Low Emission
LSAA	Lake and Streambed Alteration Agreement
LU	Land Use
LUC	Land Use Covenants
LULUCF	Land-Use, Land-Use Change and Forestry
LVW	Loaded Vehicle Weight
M-2	Heavy Industrial
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant levels
MDBM	Mount Diablo Base and Meridian
MDO	Medium Density Overlay
MEI	Maximum Exposed Individual
MEIR	Master Environmental Impact Report
mgd	Million gallons per day
MHDR	Medium-High Density Residential
ML	Richter magnitude
MMI	Modified Mercalli Intensity Scale
MMP	Mitigation Monitoring Plan
MOA	Memorandum of Agreement

MOU	memorandum of understanding
MPD	Marysville Police Department
mph	miles per hour
MPO	Metropolitan Planning Organization
MRDS	Mineral Resources Data System
MRSP	Magnolia Ranch Specific Plan
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MSA	Metropolitan Statistical Area
MSAA	Master Streambed Alteration Agreements
MSL	mean sea level
MTP	Metropolitan Transportation Plan
MUTCD	Manual on Uniform Traffic Control Devices
MW	megawatt
MW	Moment Magnitude
Mwh	megawatt-hours
MXD	Mixed-Use Trip Generation Model
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Committee
NAVD	North American Vertical Datum
NC	Neighborhood Commercial
NCCP	Natural Communities Conservation Plan
NCIC	North Central Information Center
NDS	Natural Drainage Systems
NEHRP	National Earthquake Hazards Reduction Program
NEIC	Northeast Information Center
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutant
NFIP	National Flood Insurance Program
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMC	Nine Minimum Controls
NMFS	National Marine Fisheries Service

NO ₂	Nitrogen Dioxide
NOA	Naturally-occurring Asbestos
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	Nitrogen Oxide
NPC	Nonstructural Performance Category
NPDES	National Pollutant Discharge Elimination System
NPPA	California Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTU	Nephelometric Turbidity Unit
NYWD	North Yuba Water District
O ₃	Ozone
OEHHA	California Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
O/OP	Office and Office Park
OPR	California Office of Planning and Research
ORMU	Office/Residential Mixed-Use
OS	Open Space
OSHA	Occupational Safety and Health Administration
OSHPD	California Office of Statewide Health Planning and Development
PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethylene
PD	Police Department
PDC	Planning and Development Code
PDC	Planning and Development Commission
PDWF	Peak Dry Weather Flow
PFCs	Perfluorocarbons
PFMC	Pacific Fishery Management Council
PG&E	Pacific Gas & Electric
PGA	peak ground acceleration
PM	Particulate Matter
PM ₁₀	Particulate Matter in Size Fractions of 10 Microns or Less in Diameter

PM2.5	Particulate Matter in Size Fractions of 2.5 Microns or Less in Diameter
PMMMP	Purple Martin Mitigation and Monitoring Plan
Porter-Cologne	Porter-Cologne Water Quality Control Act of 1969
POTW	publicly owned treatment works
POUs	Publicly Owned Utilities
ppd	pounds per day
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PRD	permit registration documents
PRMP	Parks and Recreation Master Plan
psi	Pounds Per Square Inch
PUC	Public Utilities Code
PWWF	peak wet weather flow
R-1	Single-Family Residential
RCMU	Residential/Commercial Mixed-Use
RCRA	Resource Conservation and Recovery Act
Regional Water Board	Regional Water Quality Board
REL	reference exposure level
REP	Resource Efficiency Plan
Reporting Rule	California Greenhouse Gas Reporting Rule
RHNA	Regional Housing Needs Assessment
RHNP	Regional Housing Needs Plan
RMS	root mean square
RMU	Residential Mixed-Use
ROG	Reactive Organic Gases
ROW	right of way
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Board
SACOG	Sacramento Area Council of Governments
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCEHD	Sutter County Environmental Health Division
SCFD	Sutter County Fire Department

SCS	Sutter County Soil Conservation Service
SCS	Sustainable Communities Strategy
SCSO	Sutter County Sheriff's Office
SDC	seismic design category
SDWA	Safe Drinking Water Act
SEIR	Subsequent Environmental Impact Report
SEL	Single Event Noise Level
SEL	Sound Exposure Level
SER	Standard Environmental Reference
sf	square foot
SF6	Sulfur Hexafluoride
SGM	Sustainable Groundwater Management
SGMA	2014 Sustainable Groundwater Management Act
SHTAC	Swainson's Hawk Technical Advisory Committee
SIP	State Implementation Plan (Air Quality)
SLM	Sound Level Meter
SMARA	California's Surface Mining and Reclamation Act of 1975
SMGB	State Mining and Geology Board
SMUD	Sacramento Municipal Utility District
SOP	Standard Operating Procedures
SOI	Sphere of Influence
SO2	Sulfur Dioxide
SPA	Specific Plan Area
SP-BSMP	Specific Plan Combining District
SPC	Structural Performance Category
SPCP	Spill Prevention and Control Plan
SPD	Special Planning District
SPFC	State Plan of Flood Control
SPP	Spill Prevention Plan
SQIP	Stormwater Quality Improvement Plan
SR	State Route
SRA	Shaded Riverine Aquatic (Habitat)
SRA	State Responsible Agency
SRFCP	Sacramento River Flood Control Project
SRRE	Source Reduction and Recycling Elements

SSB	Shingle Springs Band of Miwok Indians
SVAB	Sacramento Valley Air Basin
SVOC	Semivolatile Organic Compound
SVP	Society of Vertebrate Paleontology
SWAT	Special Weapons and Tactics
SWMP	Storm Water Management Plan/Program
SWP	State Water Projects
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SYC	South Yuba City
TAC	Toxic Air Contaminant
TAQAP	Triennial Air Quality Attainment Plan
T-BACT	Toxics Best Available Control Technology
TC	Transportation Corridor
TCE	Trichloroethylene
TCO	Traffic Control Officer
TMA	Traffic Management Association
TMDL	Total Maximum Daily Load
TMC	Transportation Management Plan
TOD	Transit-Oriented Development
TPH	Total Petroleum Hydrocarbon
TPZ	Tree Protection Zone
USEPA	United States Environmental Protection Agency
UAIC	United Auburn Indian Community of the Auburn Rancheria
UFC	Uniform Fire Code
UGB	Urban Growth Boundary
ug/m ³	micrograms per cubic meter
ULOP	Urban Level of Flood Protection
Unified Program	Hazardous Materials Management Regulatory Program
USACE	United States Army Corps of Engineers
US Census	United States Census Bureau
USC	United States Codes
USDA	United States Department of Agriculture
USDOE	United States Department of Energy
USDOT	United States Department of Transportation

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USPS	United States Postal Service
UST	Underground Storage Tank
UWMP	Urban Water Management Plan
VCP	vitriified clay pipe
VdB	Vibration Decibels
VELB	Valley Elderberry Longhorn Beetle
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
Warren-Alquist Act	Warren-Alquist Energy Resources Conservation and Development Act
WGCEP	Working Group on California Earthquake Probabilities
WQF	Methodology for Water Quality Flow
WRCC	Western Regional Climate Center
WSA	water supply assessment
WSO	Weather Station Office
WTP	Wastewater Treatment Plant
WWTF	Wastewater Treatment Facility
YCFD	Yuba City Fire Department
YCPD	Yuba City Police Department
YCUSD	Yuba County Unified School District
YCWD	Yuba County Water District
ZNE	zero net energy

CHAPTER 8

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