Draft

GOLDEN STATE WATER COMPANY– SUTTER POINTE CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY PROJECT

Focused Tiered Environmental Impact Report

Prepared for
California Public Utilities Commission

April 2010

ESA

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2600 Capitol Avenue
Suite 200
Sacramento, CA 95816
916.564.4500
www.esassoc.com

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STATE OF CALIFORNIA **ARNOLD SCHWARZENEGGER, Governor**

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

To: **Responsible Agencies and Interested Parties**
Subject: **Notice of Availability, Focused Tiered Draft Environmental Impact Report for the Golden State Water Company – Sutter Pointe Project**
Date: **April 28, 2010**

Project Location: The California Public Utilities Commission (CPUC) has prepared a Focused Tiered Draft Environmental Impact Report (DEIR) under the California Environmental Quality Act (CEQA) for the establishment of a non-contiguous water service area and associated water supply infrastructure located in the southern, unincorporated portion of Sutter County, known as the Sutter Pointe Specific Plan (SPSP) area.

Project Description: Golden State Water Company (GSWC) has submitted Application 08-08-022 to the CPUC for a Certificate of Public Convenience and Necessity (CPCN) to establish a non-contiguous service area within the corporate boundaries of Natomas Central Mutual Water Company (NCMWC). GSWC, through its parent company American States Water Company (ASWC), has an agreement with NCMWC to provide municipal and industrial (M&I) water service to the SPSP area. The water supply infrastructure would be developed in four phases of varying lengths to correspond with buildout of the SPSP over an approximately 20-year period.

Summary of Significant Environmental Effects: Implementation of the proposed project would contribute to significant and unavoidable impacts relating to short-term nitrogen oxide (NO_x) emissions associated with construction activities and the permanent conversion of important farmland to nonagricultural uses. The DEIR found that all other significant impacts would be mitigated to a less than significant level.

Public Comment Period and Availability of Documents: The DEIR was released for public review on April 28, 2010 and the 45 day public review period for this DEIR will extend though June 14, 2010. The DEIR will be available for review at the Sutter County Library Main Branch, 750 Forbes Avenue, Yuba City, CA 95991 and on the project website, as listed below. Copies of the DEIR on CD may be requested by phone or by e-mail. The CPUC also has a limited number of copies of the complete DEIR document available for public review upon request at the CPUC offices at 505 Van Ness Avenue, San Francisco, CA 94102. Written comments on the DEIR must be received by fax or e-mail no later than Monday, June 14, 2010; please be sure to include your name, address, and telephone number. Written comments on the DEIR should be sent to:

Andrew Barnsdale c/o
Environmental Science Associates
2600 Capitol Avenue, Ste. 200
Sacramento California 95816
Attn: Sutter Pointe Project
Phone: (916)-231-1273
Fax: (916) 564-4501
Email: CPUC-GSWC@esassoc.com

Notice of Public Meeting: A public meeting for this project will be held on Wednesday, May 19, 2010 from 4 p.m. to 6 p.m. at the Veterans Memorial Community Building, 1425 Veterans Memorial Circle, Yuba City, CA 95993.

EXECUTIVE SUMMARY

ES.1 Introduction

This Environmental Impact Report (EIR) has been prepared by the California Public Utilities Commission (CPUC) pursuant to the California Environmental Quality Act (CEQA) to analyze the potential environmental impacts of a proposed new water supply project. Golden State Water Company (GSWC) has submitted Application 08-08-022 to the CPUC for a Certificate of Public Convenience and Necessity (CPCN) to establish a non-contiguous service area comprised of the southern, unincorporated portion of Sutter County that falls within the corporate boundaries of Natomas Central Mutual Water Company (NCMWC). This project will be referred to as either the GSWC-Sutter Pointe CPCN or proposed project. GSWC, through its parent company American States Water Company (ASWC), has an agreement with NCMWC to provide municipal and industrial (M&I) water service to a proposed service area in south Sutter County known as the Sutter Pointe Specific Plan (SPSP) Area or Sutter Pointe (Figure ES-1 and Figure ES-2). CPUC is the lead agency for this CEQA process. Inquiries about the project should be directed to:

Andrew Barnsdale c/o
Environmental Science Associates
2600 Capitol Avenue, Ste. 200
Sacramento California 95816
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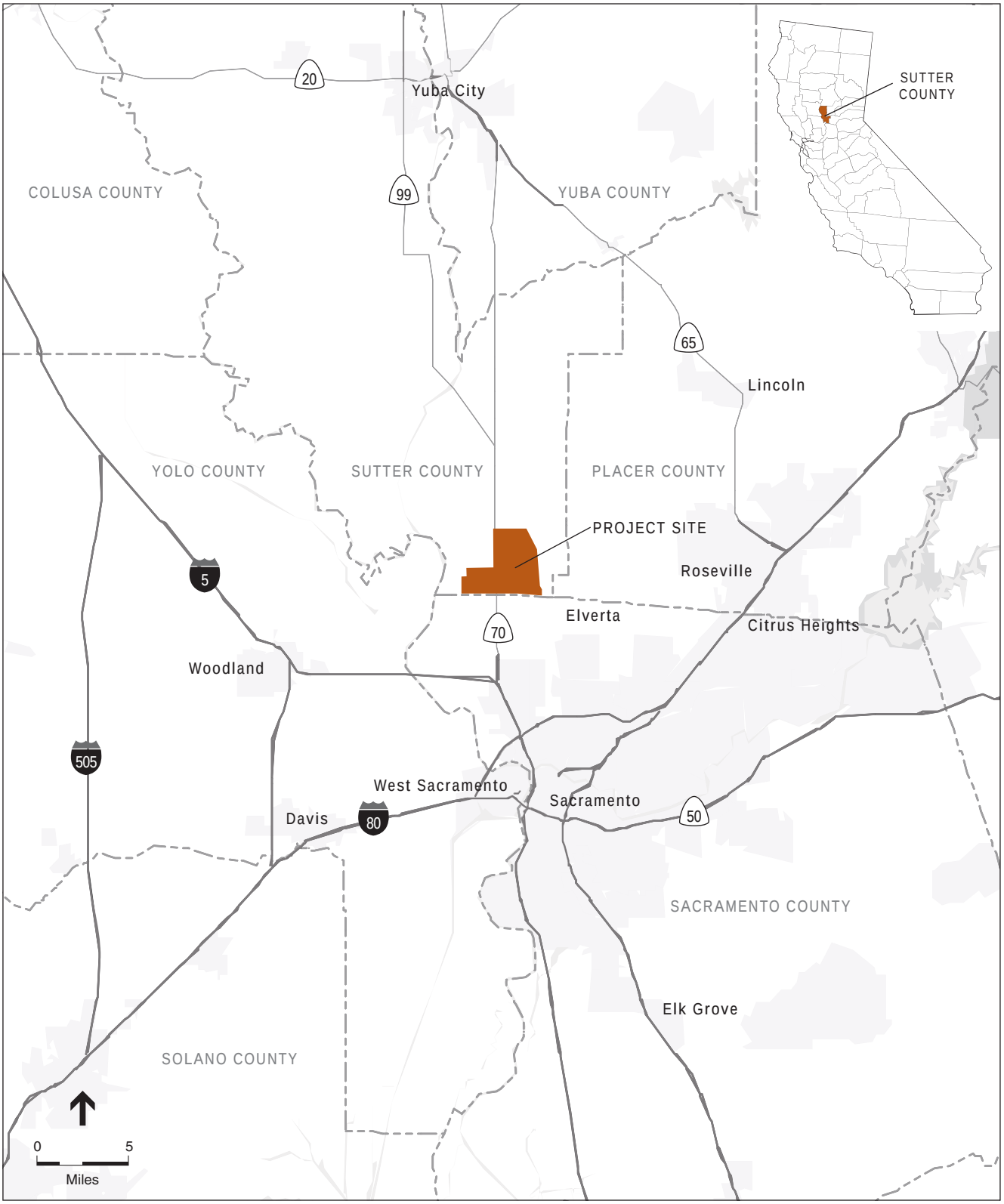
Phone: (916)-231-1273
Fax: (916) 564-4501
Email: CPUC-GSWC@esassoc.com

ES.2 Project Background and Objectives

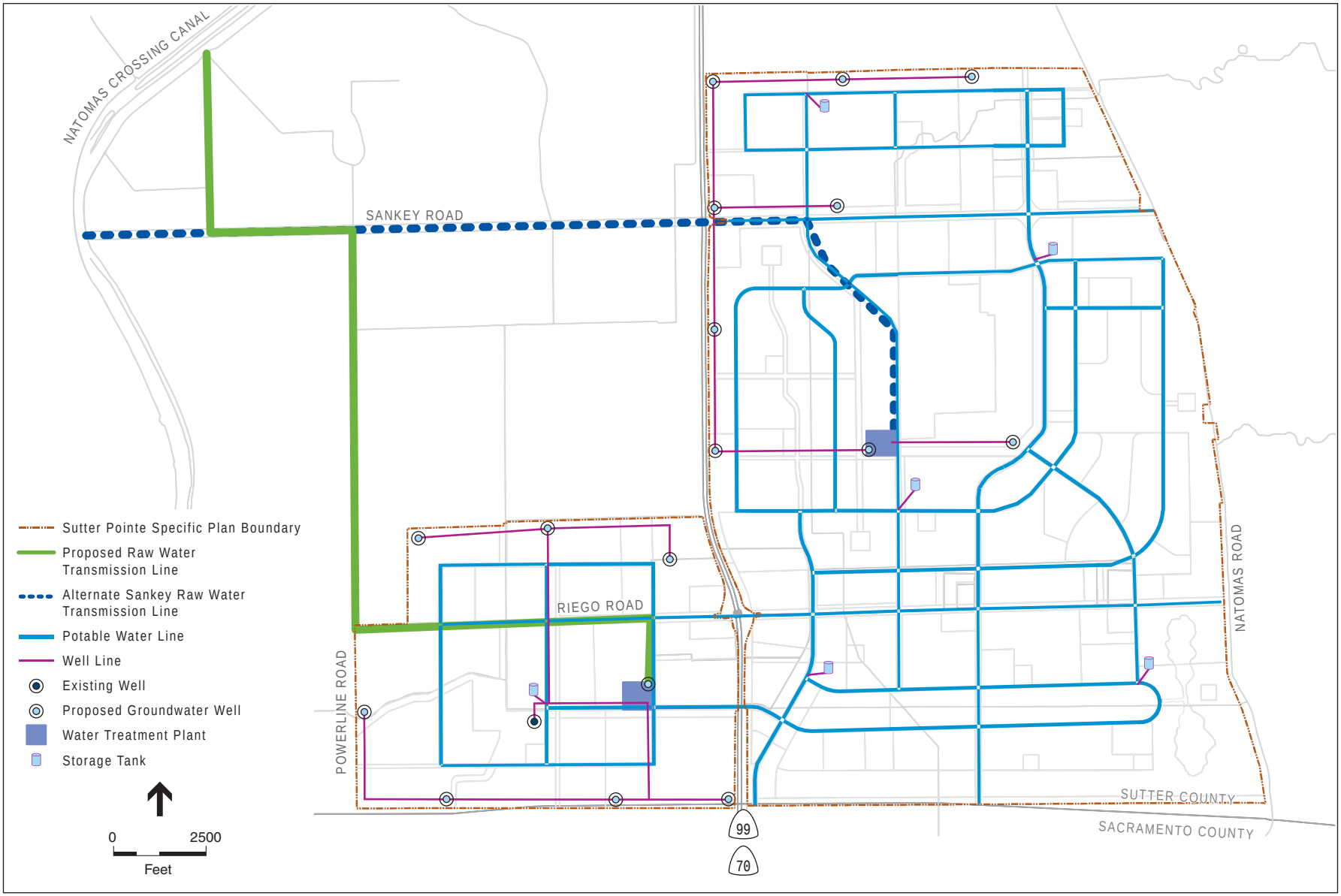
In November of 2004, Sutter County voters approved Measure M, an advisory measure to give the Board of Supervisors direction for the planning of growth on approximately 7,500 acres known as the SPSP Area. Measure M identified the development of a mix of land uses, including industry, commerce, education, housing, recreation, and open space and would be integrated within the Natomas Basin Habitat Conservation Plan (NBHCP). An EIR for the SPSP (SCH # 2007032157) was certified by the Sutter County Board of Supervisors on June 30th, 2009. The SPSP EIR included a programmatic assessment of development of the entire SPSP Area and a project-level analysis for the first phase of development. The SPSP EIR stated that it was the intent of the County and the Sutter County Water Agency (SCWA) to form a community services district or other County-related



SOURCE: DeLorme Street Atlas USA, 2000; and ESA, 2009

GSWC – Sutter Pointe CPCN EIR . 207584

Figure ES-1
Regional Location



SOURCE: MacCay & Somps, 2008; and ESA, 2009

GSWC – Sutter Pointe CPCN EIR . 207584

Figure ES-2
Proposed Facility Layout

entity to provide water utility service for the SPSP Area but also identified the intent of GSWC to provide water service for the SPSP Area. The SPSP EIR analysis of impacts associated with water services assumed that such services could be provided either by a County-related entity or by GSWC, and that, "[r]egardless of the entity that provides the service,…the same sources of water supply would be used, therefore the analysis of the physical water availability would not change …."

The purpose of the proposed project is to construct and operate the infrastructure necessary to provide M&I water supply to planned development consistent with the Sutter County General Plan in south Sutter County. Proposed project objectives include:

- Timely delivery of water infrastructure to support the Sutter Pointe project; and
- Development of an economically and environmentally sustainable water supply for Sutter Pointe.

ES.3 Project Description

The proposed project would include a network of water extraction, transmission, storage, and treatment facilities to convey groundwater and surface water to municipal and industrial development in the SPSP Area. The water supply infrastructure would be developed in four phases of varying lengths to correspond with buildout of the SPSP over an approximately 20 to 30 year period. The first phase would involve the development of groundwater wells, treatment, storage, and distribution infrastructure. Additional groundwater wells, treatment, storage, and distribution infrastructure would be developed under Phases 2, 3 and 4, as well as infrastructure for receipt, conveyance and treatment of surface water. At buildout, the proposed project would include the conjunctive use of groundwater and surface water to provide the 25,000 AFY to serve the SPSP. Specific facilities proposed under Phases 1 through 4 of the proposed project are summarized below. A more detailed description of the proposed project is provided in Chapter 2 Project Description.

Phase 1

Phase 1 of the proposed project includes development and operation of the following infrastructure:

- nine groundwater wells with yields of approximately 1,800 gallons per minute (gpm) each;
- a western groundwater treatment plant capable of treating approximately 12.5 million gallons per day (mgd) at buildout;
- approximately 29 miles of interconnected water transmission and distribution pipelines varying in size from 12- to 36-inch diameter; and
- one 7.5 million gallon storage tank and one five million gallon storage tank, and associated pumps to process and distribute water.
- There will also be a large but undetermined length of in-tract piping.

All facilities constructed during Phase 1 would be developed entirely within the SPSP Area.

Phases 2, 3 and 4

Phases 2, 3 and 4 of the proposed project include development and operation of the following infrastructure:

- a 42-inch raw water transmission pipeline from the Sankey Diversion (or the existing Bennett Pumping Plant if the proposed Sankey Diversion has not been constructed) to either the western or eastern groundwater treatment plant site;
- a phased surface water treatment plant built adjacent to either the western or eastern groundwater treatment plant site capable of treating approximately 30 mgd at buildout;
- seven groundwater wells with yields of approximately 1,800 gpm each;
- an eastern groundwater treatment plant capable of treating approximately 12.5 mgd at buildout;

ES.4 SUMMARY OF ALTERNATIVES

Alternatives evaluated in this Focused Tiered EIR in addition to the proposed project include: (1) No Action Alternative; (2) No Project Alternative; and (3) Groundwater Only Alternative. Table ES-1 presents a comparison of impacts by issue area after mitigation for the proposed project and each of the alternatives. The No Action Alternative would not result in any significant impacts when compared to the proposed project because no infrastructure would be installed; however, it would not achieve any of the proposed project objectives. As shown in Table ES-1 and as discussed in Chapter 4, the Ground Water Only Alternative would be the environmentally superior alternative. This alternative would have similar but less environmental impacts when compared to the proposed project because less construction would take place due to the elimination of the Sankey Diversion raw water pipeline. It would also meet all of the proposed project objectives. However, unlike with implementation of the proposed project, the Groundwater Only Alternative would result in new potentially significant impacts associated with increased prolonged withdrawl of groundwater and may affect the safe groundwater yield within the underlying groundwater basin.

TABLE ES-1
COMPARISON OF SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE ALTERNATIVES TO THE PROPOSED PROJECT

Environmental Issue Area	Proposed Project	No Action	No Project	Groundwater Only Alternative
Aesthetics	LS	NI	LS	LS - Less
Air Quality	SU	NI	SU	SU - Less
Agricultural Resources	SU	NI	SU	SU - Less
Biological Resources	LS	NI	SU	LS - Less
Climate Change	LS	NI	SU	LS - Less

SU = Significant and Unavoidable Impact
S = Significant Impact
LS = Less than Significant Impact
NI = No Impact

ES.5 Potential Areas of Controversy and Concern

The CPUC submitted the Notice of Preparation (NOP) of this Draft EIR to the California Office of Planning and Research on January 14, 2010. The NOP was distributed to responsible and trustee agencies, as well as all other interested parties. The purpose of the NOP was to solicit comments from public agencies on issues germane to that agency that should be considered in the draft EIR. The public review period for the NOP ended 30 days after public distribution of the NOP. Issues raised in the NOP comment letters (Appendix A) have been addressed in the Draft EIR, as appropriate and are summarized below in Table ES-2.

TABLE ES-2
WRITTEN AND ORAL COMMENTS RECEIVED

Organization	Name	Title	Summary Comment
Written Comments			
Governor's Office of Planning and Research	Scott Morgan	Acting Director	Notice of receipt and distribution of project NOP.
Central Valley Flood Protection Board	James Herota	Staff Environmental Scientist	Permit may be required for construction activities within board jurisdiction.
California Department of Public Health	Bridget Binning		Water supply permit required for ground water wells, storage and treatment facilities.
Individual	Donald Kessel	Citizen	Requests copy of all comments received on NOP.
California State Lands Commission	Marina R. Brand	Acting Chief Division of Environmental Planning and Management	Lease from the Commission may be required for project activities on State-owned sovereign lands.
Department of Conservation Division of Oil, Gas and Geothermal Resources	Pam Ceccarelli	Associate Oil and Gas Engineer	Notification may be required prior to construction activities to identify location of on-site abandoned or plugged wells.
Department of Conservation Division of Land Resource Protection	Dan Otis	Program Manager, Williamson Act Program	Draft EIR should include discussion ofagricultural setting, project impacts on agricultural land, agricultural preserves and Williamson Act lands, public improvements and agricultural preserves, public acquisitions of contracted land, and eminent domain.
California Department of Transportation	Sukhvinder (Sue) Takhar	Chief, Office of Transportation Planning - North	Draft EIR should include full evaluation of traffic impacts, discussion of hydrology, and notice that CALTRANS encroachment permits may be required.
City of Roseville	Mark Morse	Environmental Coordinator	Request to be added to project distribution list.
Oral Comments			
Individual	Donald Kessel	Citizen	Draft EIR should include discussion of water quality.

ES.6 Significant Unavoidable Effects

As required by CEQA Guidelines Section 21100(b) (2), Table ES-3 identifies the significant unavoidable impacts identified with implementation of the proposed project.

TABLE ES-3
SIGNIFICANT AND UNAVOIDABLE IMPACTS

Impact
Agricultural Resources
Implementation of the proposed project would result in the permanent conversion of Important Farmland to nonagricultural uses.
Air Quality
The project would generate temporary, short-term construction emissions of criteria pollutants that could exceed FRAQMD-recommended thresholds.
Cumulative Effects
Agricultural Resources: Implementation of the proposed project in combination with other planned projects or projects under construction in the area, could contribute to the conversion of Important Farmland to nonagricultural uses in Sutter County.
Air Quality: Implementation of the proposed project in combination with other planned projects or projects under construction in the area, could contribute to cumulative emissions of NOx that exceed FRAQMD thresholds.

ES.7 Summary of Impacts and Mitigation Measures

Table ES-4 presents a summary of the environmental impacts that would occur with proposed project implementation and recommended mitigation measures. The level of significance for each impact was determined using standards of significance presented in the sections of Chapter 3. Significant impacts are those adverse environmental impacts that would meet or exceed the significance thresholds; less-than-significant impacts would not exceed the thresholds.

Table ES-4 presents: (1) environmental impacts; (2) level of significance prior to mitigation measures; (3) recommended mitigation measures; (4) level of significance after mitigation. Table ES-4 also identifies which phase of the proposed project the impact and mitigation measures apply to.

TABLE ES-4
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Impact Significance before Mitigation		Impact Significance after Mitigation	
		Phase 1	Phase 2,3 and 4	Phase 1	Phase 2,3 and 4
Section 3.2. Aesthetics					
Impact 3.2-1 Construction activities and the installation and operation of proposed facilities could degrade the existing visual character of the project area	**Mitigation Measure 3.2-1a** (All Phases): Implement SPSP EIR Mitigation Measure 3.16-4: Screen Construction Staging Areas. The project applicant(s) for all project phases shall locate staging and material storage areas as far away from sensitive land uses (e.g., residential areas, schools, parks) and/or nearby roadways as feasible. Staging and material storage areas shall be approved by the County before the approval of grading plans and building permits for all project phases and shall be screened from adjacent occupied land uses in earlier development phases to the maximum extent practicable. Screens may include berms or fences. The screen design shall be approved by the County to further reduce visual effects to the extent possible. **Mitigation Measure 3.2-1b** (All Phases): The design of the proposed water storage tanks and water treatment plants, including the choice of color and materials, shall seek to reduce the visual contrast of the facilities. Bright and reflective colors shall be avoided. Additionally, landscaping including revegetation of disturbed areas, plantings of trees, and/or minor topographic enhancements, shall be utilized to minimize textural and aesthetic contrasts with surrounding areas.	S	S	LS	LS
Impact 3.2-2 Construction activities and operation of proposed facilities could create temporary and permanent new sources of light and glare which could adversely affect daytime or nighttime views of the area.	**Mitigation Measure 3.2-2** (All Phases): Implement SPSP EIR Mitigation Measure Mitigation Measure 3.16-5: Establish and Require Conformance to Lighting Standards and Prepare and Implement a Lighting Plan. To reduce impacts associated with light and glare, the project applicant(s) for all project phases shall conform to the following guidelines as appropriate: • Shield or screen lighting fixtures to direct the light downward and prevent light spill on adjacent properties. • Place and direct flood or area lighting needed for construction activities to not disturb adjacent residential areas and passing motorists. • Prohibit the use of harsh mercury vapor, low-pressure sodium, or fluorescent bulbs for public lighting in residential neighborhoods. • Prohibit light fixtures that are of unusually high intensity or brightness or that blink or flash.	S	S	LS	LS
Section 3.3. Agricultural Resources					
Impact 3.3-1 Implementation of the proposed project would result in the permanent conversion of Important Farmland to nonagricultural uses.	No feasible mitigation measures are available.	S	S	SU	SU

TABLE ES-4
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Impact Significance before Mitigation		Impact Significance after Mitigation	
		Phase 1	Phase 2,3 and 4	Phase 1	Phase 2,3 and 4
Section 3.4. Air Quality					
Impact 3.4-1: Proposed project construction activities would generate temporary, short-term emissions of NO_x that could exceed FRAQMD-recommended thresholds.	**Mitigation Measure 3.4-1**: Implement SPSP EIR Mitigation Measure 3.4-1 Specific to Sutter County (Develop and Implement Applicable Air District-Endorsed Air Quality Mitigation for All Phases of Construction) as described in the SPSP EIR. The project applicant(s) of all project phases shall require their construction contractors, at the time construction is performed, to implement those construction mitigation measures that are required by the [FRAQMD] respective air district that has jurisdiction over the area in which construction activity would occur. For all construction activity on the project site, the project applicant(s) shall require construction contractors to implement both FRAQMD's Standard Mitigation Measures and Best Available Mitigation Measures for Construction Activity to reduce emissions to the maximum extent feasible for all construction activity performed in Sutter County. For all construction activity that would occur in another air district (i.e., outside of Sutter County), such as the installation of the sewer force main connection to SRCSD and other off-site improvements, the project applicant(s) shall require construction contractors to comply with the best management practices and construction emission reduction measures required by the respective local air district. No project-related construction activity shall occur until an emissions reduction plan developed by the contractor(s) is reviewed and approved in writing by Sutter County in consultation with the [FRAQMD] respective air district (i.e., FRAQMD, PCAPCD, or SMAQMD) , or, where air district approval is required by law, with the approval of the air district. The following list presents all of the FRAQMD-required measures. (Both PCAPCD and SMAQMD require similar measures.) 1. The applicant shall implement FRAQMD's Fugitive Dust Control Plan with the following mitigation measures: o All grading operations on a project shall be suspended when winds exceed 20 miles per hour (mph) or when winds carry dust beyond the property line despite implementation of all feasible dust control measures. o Construction sites shall be watered as directed by the FRAQMD and as necessary to prevent fugitive dust violations. o 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. o On-site dirt piles or other stockpiled particulate matter shall be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce windblown dust emissions. The use of approved nontoxic soil stabilizers shall be incorporated according to manufacturers' specifications to all inactive construction areas.	S	S	SU	SU

TABLE ES-4
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Impact Significance before Mitigation		Impact Significance after Mitigation	
		Phase 1	Phase 2,3 and 4	Phase 1	Phase 2,3 and 4
	o 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. o 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. o 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. o 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. o 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. o 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. o Ground cover shall be reestablished on the construction site as soon as possible and before final occupancy through seeding and watering. o 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. 2. Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions Limitations (40% 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.				

TABLE ES-4
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Impact Significance before Mitigation		Impact Significance after Mitigation	
		Phase 1	Phase 2,3 and 4	Phase 1	Phase 2,3 and 4
	3. The primary contractor shall be responsible for ensuring that all construction equipment is properly tuned and maintained before and for the duration of on-site operation. 4. 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. 5. Existing power sources (e.g., power poles) or clean-fuel generators shall be used rather than temporary power generators. 6. A traffic plan shall be developed to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Operations that affect traffic shall be scheduled for off-peak hours. Obstruction of through-traffic lanes shall be minimized. A flag person shall be provided to guide traffic properly and ensure safety at construction sites. 7. 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. 8. The project proponent 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 the construction project and 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 projectwide fleet-average 20% NOX reduction and 45% 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% reduction in ROG emissions from heavy-duty diesel equipment. FRAQMD shall be contacted to discuss alternative measures.				

TABLE ES-4
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Impact Significance before Mitigation		Impact Significance after Mitigation	
		Phase 1	Phase 2,3 and 4	Phase 1	Phase 2,3 and 4
Impact 3.4-2: Operation of the proposed project would generate long-term emissions of criteria pollutants that could exceed	No mitigation measures are required.	LS	NA	LS	NA
Section 3.5. Biological Resources					
Impact 3.5-1: Implementation of the proposed project could place fill material into jurisdictional waters of the United States which could result in the potential loss and degradation of wetland habitats protected under federal, state and local regulations.	**Mitigation Measure 3.5-1** (All Phases): Conduct a Wetland Delineation per the USACE Wetland Delineation Manual; Secure Clean Water Act Section 404 and 401 Permits and California Fish and Game Code Streambed Alteration Agreements; Implement All Permit Conditions; and Ensure No Net Loss of Wetlands, Other Waters of the United States, and Associated Functions and Values. For each phase of development, GSWC shall demonstrate the avoidance of any net loss of wetland function and values for direct and indirect impacts to wetlands or other waters subject to federal, state, and/or local jurisdiction by demonstrating that applicable permits and regulatory approvals have been obtained and that all mitigation and permit conditions have been implemented which includes but may not be limited to: • A qualified biologist shall be retained to delineate all wetlands and waters of the U.S. within proposed off-site improvement areas and all on-site areas not included in the ECORP wetland delineation. The findings shall be documented in a detailed report and submitted to USACE for verification as part of the formal Section 404 wetland delineation process. If wetland delineations for a particular phase conclude that wetlands and other waters of the U.S. are not present or would be avoided (no direct or indirect impacts), no further mitigation actions would be needed. • If unavoidable impacts to habitats which fall under USACE jurisdiction would be incurred from project activities, a Section 404 permit shall be applied for and authorization from the USACE shall be secured before any fill is placed in jurisdictional wetlands or other waters of the U.S. • Impacts to wetlands and waters of the U.S. shall be compensated for at a 1:1 ratio. In accordance with federal regulation, compensatory mitigation for wetland impacts would be carried out through acceptable methods including implementing permittee-responsible compensatory mitigation, payment of fees into an USACE-approved mitigation bank, payment of fees into the NBHCP, and payment of in-lieu mitigation fees. The mitigation methods, mechanisms and compensation ratios shall be detailed in a mitigation plan which shall be prepared in accordance with the USACE's Compensatory Mitigation Plan as required per federal regulations (33 CFR 332.4(c)/40 CFR 230.92.4(c)) and approved by the USACE. Proof of mitigation fulfillment shall be submitted to the USACE before the start of any grading activities.	S	S	LS	LS

TABLE ES-4
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Impact Significance before Mitigation		Impact Significance after Mitigation	
		Phase 1	Phase 2,3 and 4	Phase 1	Phase 2,3 and 4
	• Methods for designing and implementing restored, rehabilitated, and replacement wetlands shall be determined by qualified restoration ecologists and geomorphologists to ensure that the desired results are achievable. The design shall include features to maximize the long-term maintenance of functions and values (e.g., fencing) and success criteria. A minimum of five years of monitoring shall be required for all restored, rehabilitated, and replacement wetlands. A monitoring plan shall be developed that includes remedial actions to be taken if the success criteria are not met. Before the mitigation design and monitoring plan are finalized, the project applicant(s) shall obtain the approval of USACE, and other agencies as appropriate, indicating that the planned features are sufficient to replace lost habitat values at equivalent or higher levels. Compensation requirements shall be evaluated in conjunction with any benefits obtained through compliance with the NBHCP. • For temporary impacts such as open trench construction and excavation, GSWC shall demonstrate that the following mitigation measures are implemented: o Implement BMPs as described in SPSP EIR Mitigation Measure 3.7-1: Acquire Appropriate Regulatory Permits and Implement SWPPP and BMPs and SPSP EIR Mitigation Measure 3.7-5: Develop and Implement a BMP and Water Quality Maintenance and Monitoring Plan, incorporated into the Environmental Checklist provided in Appendix B, to reduce direct and indirect impacts to wetlands during open trench construction. o Conduct all trenching and construction activities across drainages and seasonal wetlands during low-flow or dry periods. o Place sediment curtains upstream and downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone. o Locate spoil sites such that they do not drain directly into the drainages and/or seasonal wetlands. o Store equipment and materials away from the drainages and wetland areas. No debris will be deposited within 25 feet of drainages and wetland areas. o Return an impacted wetland to original grade following pipeline installation. Any wetland area left bare following construction will be revegetated using hydroseed and/or plugs of native vegetation matching the species composition of adjacent wetland areas. o A Water Quality Certification, pursuant to Section 401 of the CWA,				

TABLE ES-4
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Impact Significance before Mitigation		Impact Significance after Mitigation	
		Phase 1	Phase 2,3 and 4	Phase 1	Phase 2,3 and 4
	shall be obtained from the Regional Water Quality Control Board as required for the issuance of any USACE permit. Any measures required as part of the issuance of Water Quality Certification, such as adherence to water quality standards, shall be implemented.				
Impact 3.5-2: **:** Implementation of the proposed project could result in the removal of riparian habitat that has the potential to support special-status species in areas within and adjacent to the proposed Sankey Diversion and along the raw water transmission pipeline alignments.	**Mitigation Measure 3.5-2** (All Phases): Implement Avoidance and Minimization Measures for Impacts on Riparian Habitats. GSWC shall implement the following measures are implemented: • Retain a qualified biologist to survey and document all riparian habitats within proposed off-site improvement areas and all on-site areas not included in the ECORP wetland delineation and ICF/Jones and Stokes habitat map. The surveys shall identify riparian habitats that might be directly or indirectly affected by the project. If no riparian habitats are found during focused surveys, the biologist shall document the findings in a letter report to the CDFG and Sutter County, and no further mitigation shall be required. • The project shall, if feasible, avoid vegetation removal within riparian areas. If complete avoidance is not feasible, construction shall not proceed until authorization has been issued by CDFG, and GSWC has abided by the conditions of the authorization, including the conservation and minimization measures intended to be completed before construction begins. • CDFG authorization may require obtaining a Streambed Alteration Agreement to mitigate for any unavoidable impacts to habitats regulated under Section 1602 of the California Fish and Game Code. Impacted habitats shall be mitigated on a no-net-loss basis. Habitat restoration, rehabilitation, and/or replacement shall be at a location and shall be conducted by methods agreeable to CDFG. Minimization and compensation measures adopted through the Section 1602 permitting process shall be implemented. • Implement Mitigation Measure 3.5-1.	S	S	LS	LS
Section 3.6. Climate Change					
Impact 3.6-1: Construction and operation of the project would not result in a cumulatively considerable increase in greenhouse gas emissions and would not either directly or indirectly, have a significant impact on the environment or conflict with any applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing greenhouse gas emissions.	No mitigation measures are required.	LS	LS	LS	LS

TABLE ES-4
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Impact Significance before Mitigation		Impact Significance after Mitigation	
		Phase 1	Phase 2,3 and 4	Phase 1	Phase 2,3 and 4
Section 5.3 Cumulative Impacts					
Impact 5.3-1: Implementation of the proposed project in combination with other planned projects or projects under construction could alter and degrade the existing visual character and introduce new sources of light and glare in southern Sutter County.	**Mitigation Measure 5.3-1**: Implement Mitigation Measures 3.2-1 and 3.2-2.	S	S	LS	LS
Impact 5.3-2: Implementation of the proposed project in combination with other planned projects or projects under construction in the area, could contribute to the conversion of Important Farmland to nonagricultural uses in Sutter County.	No feasible mitigation measures are available.	S	S	SU	SU
Impact 5.3-3: Implementation of the proposed project in combination with other planned projects or projects under construction in the area, could contribute to cumulative emissions of NOx that exceed FRAQMD thresholds.	**Mitigation Measure 5.3-3**: Implement Mitigation Measure 3.4-1.	S	S	SU	SU
Impact 5.3-4: Implementation of the proposed project in combination with other planned projects or projects under construction in the area, could contribute to cumulative loss and degradation of wetland habitats protected under federal, state and local regulations and loss of riparian habitat in Sutter County and the Natomas Basin.	**Mitigation Measures 5.3-4**: Implement Mitigation Measures 3.5-1 and 3.5-2.	S	S	LS	LS

S = Significant
SU = Significant and Unavoidable
LS = Less than Significant
NA = Not Applicable

ES.7.1 SPSP EIR Mitigation Measures

An Environmental Checklist was prepared for the proposed project that is included in Appendix B. The Environmental Checklist includes a discussion of potential environmental effects of the proposed project, identifies which issues were adequately addressed in the SPSP EIR, and which applicable SPSP EIR mitigation measures are relevant to the proposed project. Applicable SPSP EIR (SCH #2007032157) mitigation measures adopted by the Sutter County Board of Supervisors on June 30, 2009 that would mitigation proposed project impacts, not included in Chapter 3 and summarized in Table ES-4, are presented in Table ES-5. SPSP EIR mitigation measures incorporated into the proposed project would be implemented, enforced, and monitored as defined in the Mitigation Monitoring and Reporting Program (MMRP) for the SPSP EIR. The CPUC would ensure that construction and operation of the proposed project would be implemented consistent with the mitigation, monitoring and enforcement requirements of the SPSP EIR MMRP.

TABLE ES-5
SUMMARY OF SPSP EIR MITIGATION MEASURES INCORPORATED INTO THE PROPOSED PROJECT

Biological Resources	
3.13-1a	**Implement NBHCP ITP Giant Garter Snake Mitigation Measures.** The project applicants(s) of all Authorized Development shall adhere to the relevant giant garter snake take, avoidance, and minimization measures contained in the NBHCP (Sections V.A.1 and VI.E.1i) and summarized below: • Reduce direct impacts on giant garter snake by restricting construction in giant garter snake habitat to the active period for giant garter snake (between May 1 and September 30). • Completely dewater all irrigation ditches, canals, or other aquatic habitat, with no puddled water remaining, for at least 15 consecutive days before the excavation or filling in of the dewatered habitat to remove giant garter snake prey. Dewatering shall occur between April 15 and September 30. • Survey the project area for giant garter snake no more than 24 hours before the start of construction activities (site preparation and/or grading). If construction activities stop on the project site for 2 weeks or more, a new snake survey shall be completed no more than 24 hours before the restart of construction activities. • Confine clearing to the minimal area necessary to facilitate construction activities. Giant garter snake habitat within or adjacent to the project site shall be flagged as an “Environmentally Sensitive Area” and designated as avoided. • Provide USFWS-approved environmental awareness training for all construction personnel completing site preparation and grading operations. Construction personnel shall be trained on how to identify giant garter snakes and their habitats and on handling protocol if a giant garter snake is encountered during construction activities. An on-site biological monitor shall be available during the training. • Immediately notify USFWS and the project biological monitor if a live snake is found during construction activities. The snake shall be monitored by the biological monitor and allowed to leave the area on its own. • Remove any temporary fill and/or construction debris used by the snake as an overwintering site from the site upon completion of construction. • When working within 200 feet of snake aquatic or rice habitat, avoid plastic, monofilament, jute, or similar erosion control matting that could entangle snakes. • Construct fences within the project site along the shared boundary of urban development and the North Drainage Canal and the East Drainage Canal. The fences shall be subject to the following guidelines: a. Provide a minimum of 100 feet from fence to fence. b. Limit access to the canals by constructing gates. c. Place a snake deterrent along the fences on the North Drainage Canal and the East

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SUMMARY OF SPSP EIR MITIGATION MEASURES INCORPORATED INTO THE PROPOSED PROJECT

	Drainage Canal. The design of the deterrent shall be subject to approval by a qualified biologist. d. Immediately install the fence/barrier after site grading is completed.
3.13-1b	**Implement Measures to Mitigate Impacts on the Giant Garter Snake That Are Not Covered by the NBHCP.** The project applicant(s) of all off-site elements not covered by the NBHCP shall implement the following measures to avoid, minimize, and compensate for potential project impacts on giant garter snake: • Consult with a qualified biologist to ensure that the alignments for all off-site improvement areas avoid giant garter snake to the extent feasible. All aquatic and upland habitats that can be avoided shall be protected by temporary fencing during construction. Additional measures consistent with the goals and objectives of the NBHCP shall be implemented to minimize the potential direct injury or mortality of individual giant garter snakes during construction. Such measures shall be finalized in consultation with DFG and USFWS and are likely to include conducting worker awareness training, timing initial ground disturbance to correspond with the snake's active season (as feasible in combination with minimizing disturbance of nesting Swainson's hawks), dewatering aquatic habitat before fill, conducting preconstruction surveys, and conducting biological monitoring during construction. • Develop and implement a giant garter snake conservation strategy that is consistent with the NBHCP's strategy for establishing an interconnected reserve system composed of marshland, uplands, and rice fields in the Natomas Basin. The conservation strategy shall include on- and off-site habitat preservation, restoration, and creation as needed to meet the performance standard of no net loss in function and value of giant garter snake habitat. The conservation strategy shall establish specific success for habitat creation, specify remedial measures to be undertaken if success criteria are not met (e.g., adaptive management, physical adjustments to created habitat, additional monitoring), and describe short- and long-term maintenance and management of the features. Long-term protection of the created features and funding for their management shall be provided through appropriate mechanism to be determined by the project applicant(s), DFG, and USFWS before project implementation. Authorization for take of giant garter snake shall be obtained as necessary to comply with the ESA and CESA. All measures subsequently adopted through the permitting process shall be implemented.
3.13-2	**Secure Clean Water Act Section 404 and 401 Permits and Streambed Alteration Agreements; Implement All Permit Conditions; and Ensure No Net Loss of Wetlands, Other Waters of the United States, and Associated Functions and Values.** The project applicant(s) of all project phases shall retain a qualified biologist to delineate all wetlands and waters of the United States within proposed off-site improvement areas and all on-site areas not included in the ECORP wetland delineation. The findings shall be documented in detailed reports and submitted to USACE for verification as part of the formal Section 404 wetland delineation process. If wetland delineations for a particular phase conclude that wetlands are not present or would be avoided (no direct or indirect impacts), no further mitigation actions would be needed. For each phase of development, including off-site improvements, the County shall ensure the avoidance of any net loss of wetland function and values for direct and indirect impacts to wetlands subject to federal, state, and/or local jurisdiction, and the project applicant(s) shall secure applicable permits and regulatory approvals described below and shall implement all permit conditions: • If there would be unavoidable impacts on habitats under USACE jurisdiction for direct and indirect impacts requiring a Section 404 permit, the Section 404 permitting process shall be completed and authorization shall be secured before any fill is placed in jurisdictional wetlands or other waters of the United States. The acreage of jurisdictional wetlands affected shall be replaced so as to ensure no net loss of functions and values, in accordance with USACE regulations. The range of compensation for fill of jurisdictional waters could be less than 1:1 or more than 1:1, depending on the timing, functions, and values of the jurisdictional waters created for compensation. The final compensatory range shall be negotiated with the resources agencies and specified in regulatory permits issued for that particular phase of the project. • Habitat restoration, rehabilitation, and/or replacement shall be at a location and shall be conducted by feasible methods agreeable to USACE, the County, or other applicable agencies (depending on which agency has permitting authority). Agreement by the applicable agencies shall be obtained before the start of any grading activities that could affect wetland features. Methods for designing and implementing restored, rehabilitated, and replacement wetlands shall be determined by qualified restoration ecologists and geomorphologists to ensure that the desired results are achievable. The design shall include features to maximize the long-term maintenance of functions and values (e.g., fencing) and success criteria. A minimum of 5 years of monitoring shall be required for all restored, rehabilitated, and replacement wetlands. A

TABLE ES-5
SUMMARY OF SPSP EIR MITIGATION MEASURES INCORPORATED INTO THE PROPOSED PROJECT

	monitoring plan shall be developed that includes remedial actions to be taken if the success criteria are not met. Before the mitigation design and monitoring plan are finalized, the project applicant(s) shall obtain the approval of USACE, RWQCB, and DFG, as appropriate, indicating that the planned features are sufficient to replace lost habitat values at equivalent or higher levels. Compensation requirements shall be evaluated in conjunction with any benefits obtained through compliance with the NBHCP. • A streambed alteration agreement shall be obtained for any unavoidable impacts on habitats regulated under Section 1602 of the California Fish and Game Code, and affected habitats shall be mitigated on a no-net-loss basis. Habitat restoration, rehabilitation, and/or replacement shall be at a location and shall be conducted by methods agreeable to DFG. Minimization and compensation measures adopted through the Section 1602 permitting process shall be implemented. • Water quality certification pursuant to Section 401 of the CWA shall be obtained as required for any USACE permit. Any measures required as part of the issuance of water quality certification shall be implemented. • A report of waste discharge shall be filed for any waters of the state with the Regional Water Quality Control Board.
3.13-3a	**Implement NBHCP ITP Swainson's Hawk Avoidance and Minimization Measures.** The project applicants(s) of all Authorized Development shall adhere to the relevant Swainson's hawk take avoidance and minimization measures described in the NBHCP (Sections V.A.1 and VI.E.1i) and summarized below: • Conduct a preconstruction survey by a qualified biologist before the commencement of activities at any construction site to determine (1) whether any hawk nest trees will be removed on-site or (2) whether any active hawk nest sites occur on or within 0.5 mile of the development site. These surveys shall be conducted by an experienced Swainson's hawk biologist and according to the Swainson's Hawk Technical Advisory Committee's methodology or updated methodologies, as approved by USFWS and DFG. • Avoid construction if breeding hawks are identified. No new disturbances shall occur within 0.5 mile of the active nest between March 15 and September 15 or until a qualified biologist, with concurrence by DFG, has determined that the young have fledged, that the nest is no longer occupied, or that construction will not affect nest success. If the active nest site is located within 0.25 mile of existing urban development, the no-new-disturbance zone can be limited to 0.25 mile. • Temporarily avoid (i.e., defer construction activities until after the nesting season) construction where disturbance of a Swainson's hawk nest cannot be avoided. If permanently unavoidable, the nest tree may be destroyed during the nonnesting season. For purposes of this provision, the Swainson's hawk nesting season is defined as March 15 to September 15. If a nest tree must be removed, tree removal shall only occur between September 14 and February 1. • Avoid removal of a Swainson's hawk nest tree if fledglings are present. The tree shall not be removed until September 15 or until DFG has determined that the young have fledged and are no longer dependent upon the nest tree. • The raptor nesting season shall be avoided when scheduling construction near nests in accordance with applicable guidelines published by DFG or through consultation with DFG. • Provide funding for purchase, planting, maintenance, and monitoring of trees in accordance with the NBHCP. • Provide sufficient funding for monitoring survival success of existing Swainson's hawk nest tree trees for a period of 5 years. Provide for replacement trees in accordance with the NBHCP. Ensure that a 100% success rate is achieved.
3.13-3b	**Implement Measures to Mitigate Impacts on Swainson's Hawk Not Covered by the NBHCP**. Before commencement of elements of the proposed project development not covered by the NBHCP ITP, the project applicant(s) of all project phases shall implement the following measures to reduce potential impacts on Swainson's hawk: • Retain a qualified biologist to conduct preconstruction surveys to identify active nests (i.e., occupied nests) within 0.5 mile of construction areas, in accordance with DFG guidelines. If an active nest is found, no new disturbance shall occur within 0.5 mile of the nest until the nest is no longer active or appropriate avoidance measures are developed, approved by DFG, and implemented to ensure that the nest is adequately protected. • Restore off-site temporary disturbance to grassland and agriculture habitat to provide equal or greater foraging value for Swainson's hawk. The project applicant(s) shall develop and implement a restoration plan for each off-site improvement that could result in impacts on

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SUMMARY OF SPSP EIR MITIGATION MEASURES INCORPORATED INTO THE PROPOSED PROJECT

		Swainson's hawk foraging habitat to ensure that the performance standard of no net loss of Swainson's hawk foraging habitat is met. The restoration plans shall establish specific success criteria for habitat restoration, specify remedial measures to be undertaken if success criteria are not met (e.g., supplementary planting and additional monitoring), and describe short- and long-term maintenance and management actions. • If there is any permanent loss of habitat, the project applicant(s) shall mitigate for that loss at 1:1 with lands of equivalent value.
3.13-4a	**Implement NBHCP ITP Avoidance and Minimization Measures for Valley Elderberry Longhorn Beetle, White- Faced Ibis, Loggerhead Shrike, Burrowing Owl, Northwestern Pond Turtle, California Tiger Salamander, Western Spadefoot Toad, and Vernal Pool Invertebrates.** The project applicants(s) of all Authorized Development shall adhere to the relevant take, avoidance, and minimization measures described in the NBHCP (Sections V.A.1 and VI.E.1i) and summarized below. In case of conflict, the NBHCP controls. *Valley Elderberry Longhorn Beetle* The project applicant(s) of all Authorized Development shall implement the following measures: • Comply with USFWS Compensation Guidelines for Valley Elderberry Longhorn Beetle (USFWS 1999). • Avoid impacts on habitat for the valley elderberry longhorn beetle whenever possible. • Transplant during the dormant season (November 1 to February 15) all elderberry plants that cannot be avoided to an area protected in perpetuity and approved by USFWS. • Provide replacement seedling plants at a ratio of 2:1 to 5:1 depending on the extent of beetle, utilizing the plants moved or lost. • Monitor annually valley elderberry longhorn beetle habitat in planted mitigation sites for a 10-year period. • Meet a 60% survival rate by the end of the year and a 60% survival rate for the term of the applicable permit for all replacement elderberry shrubs. *Tricolored Blackbird* The project applicant(s) of all Authorized Development shall implement the following measures: • Conduct a preconstruction survey of potential breeding and nesting habitat for presence of tricolored blackbird before approval of an urban development permit. • If surveys determine this species to be present, install brightly colored construction fencing to establish a boundary 500 feet from the active nest site. Avoid disturbance within 500 feet of active (occupied) nests during the nesting season of May 15 through July 1 or until a qualified biologist, with concurrence of USFWS, has determined that young have fledged or that the nest is no longer occupied. *White-Faced Ibis* The project applicant(s) of all Authorized Development shall implement the following measures: • Conduct a preconstruction survey of potential nesting habitat for presence of white-faced ibis before approval of an urban development permit. • Avoid disturbance within 0.25 mile of active (occupied) nesting colonies during the nesting season of May 15 through August 31 or until a qualified biologist, with concurrence of DFG and USFWS, has determined that young have fledged or that the nest is no longer occupied if surveys determine this species to be present. *Loggerhead Shrike* The project applicant(s) of all Authorized Development shall implement the following measures: • Conduct a preconstruction survey to determine the presence of the loggerhead shrike. • Install brightly colored construction fencing that establishes a boundary 100 feet from any active loggerhead shrike nests identified during preconstruction surveys. No disturbance associated with authorized development shall occur within the 100-foot fenced area during the nesting season of March 1 through July 31. A qualified biologist, with the concurrence of USFWS, must determine that young have fledged or that the nest is no longer occupied before disturbance of the nest site can occur. *Burrowing Owl* The project applicant(s) of all Authorized Development shall implement the following measures: • Retain a DFG-approved qualified biologist to conduct a preconstruction survey of all construction site(s) to determine whether any burrowing owls are using the site for foraging or nesting before the initiation of grading or earth-disturbing activities. Submit the pre-construction survey to the County prior to commencement of construction activities.

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SUMMARY OF SPSP EIR MITIGATION MEASURES INCORPORATED INTO THE PROPOSED PROJECT

- Avoid disturbance of occupied burrows during the nesting season (February 1 through August 31) unless a qualified biologist approved by DFG verifies through noninvasive measures either that the birds have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. If on-site avoidance is required, then the location of the buffer zone shall be determined by a qualified biologist. Mark the limit of the buffer zone with yellow caution tape, stakes, or temporary fencing. Maintain the buffer during the construction period.
- Contact USFWS and DFG if nest site(s) are found. The agencies shall be contacted regarding suitable mitigation measures, which may include establishing a 300-foot buffer around the nest site during the breeding season (February 1 through August 31) or relocating the burrowing owls if the birds have not begun egg laying and incubation or the juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- Retain a qualified biologist to prepare a plan for relocating the owls to a suitable site if relocation of the owls is approved by USFWS and DFG. The relocation plan must include the content specified by the NBHCP.
- Offset disturbance and/or destruction of burrows through development of suitable habitat on NBC upland reserves where on-site avoidance is not possible. Such habitat shall include creation of new burrows with adequate foraging area (a minimum of 6.5 acres) or 300-foot radii around the newly created burrows.

Northwestern Pond Turtle
The project applicant(s) of all Authorized Development shall implement the following measure:

- Minimize the take of the northwestern pond turtle as a result of habitat destruction during construction activities, including construction related to the removal of irrigation ditches and drains and ditch and drain maintenance (e.g., relocate turtles to suitable habitat away from the construction area).
- The dewatering requirements described in the NBHCP take avoidance, minimization, and mitigation measures for giant garter snake shall be implemented.

California Tiger Salamander
The project applicant(s) of all Authorized Development shall implement the following measure:

- Conduct a preconstruction survey for California tiger salamander before approval of an urban development permit. If the survey determines the presence of California tiger salamander, the project applicant(s) shall consult with USFWS and DFG to determine appropriate measures to avoid and minimize take of individuals, which may include but are not limited to, modifying the project design to avoid occupied habitat; limiting access and construction activities in the vicinity of the occupied habitat using fencing or other means; relocating adult salamanders to suitable habitat outside of the construction area; and implementing compensatory mitigation, including preservation of off-site habitat.

Western Spadefoot Toad
The project applicant(s) of all Authorized Development shall implement the following measure:

- Conduct a preconstruction survey of western spadefoot toad before approval of an urban development permit. If the survey determines that western spadefoot toad is present, the project applicant(s) shall consult with DFG to determine appropriate measures to avoid and minimize take of individuals, which include but are not limited to, modifying the project design to avoid occupied habitat; limiting access and construction activities in the vicinity of the occupied habitat using fencing or other means; relocating adult toads to suitable habitat outside of the construction area; and implementing compensatory mitigation, including preservation of off-site habitat.

Special-Status Vernal Pool Invertebrates
The project applicant(s) of all Authorized Development shall implement the following measure:

- Conduct a preconstruction survey for special-status vernal pool invertebrates. If the survey determines that vernal pool fairy shrimp, vernal pool tadpole, and midvalley fairy shrimp are present, the project applicant(s) shall consult with USFWS to determine appropriate measures to avoid and minimize take of individuals, which include but are not limited to, modifying the project design to avoid occupied habitat; limiting access and construction activities in the vicinity of the occupied habitat using fencing or other means; relocating vernal pool invertebrates to suitable habitat outside of the construction area; and implementing compensatory mitigation, including preservation of off-site habitat.
- Comply with Measures to Minimize Take of Vernal Pool Species in NBHCP V.A.4.

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SUMMARY OF SPSP EIR MITIGATION MEASURES INCORPORATED INTO THE PROPOSED PROJECT

3.13-4b	**Implement Measures to Mitigate Impacts on Special-Status Wildlife Species Not Covered by the NBHCP.** Before commencement of construction activities outside the NBHCP ITP area, the project applicant(s) of all project elements not covered by the NBHCP shall implement the following measures to reduce potential effects on special-status wildlife species. *Valley Elderberry Longhorn Beetle* The project applicant(s) of all project phases, including off-site elements, shall implement the following measures: • Comply with USFWS Compensation Guidelines for Valley Elderberry Longhorn Beetle (USFWS 1999), which requires that impacts on elderberry shrubs be avoided whenever possible. If elderberry shrubs cannot be avoided, they must be transplanted in accordance with methods outlined in the guidelines, replaced by planting shrubs in a conservation area at a ratio ranging from 1:1 to 8:1, or mitigated by purchasing credits in an approved mitigation bank as agreed upon through consultation with USFWS. • Retain a qualified biologist to conduct preconstruction surveys for elderberry shrubs before initiation of earth-moving activities for all proposed project phases not covered by the NBHCP ITP, including the proposed off-site infrastructure elements. If the survey determines that elderberry shrubs are present and that they could be adversely affected by the project, the project applicant(s) shall develop and implement a management plan for each off-site improvement the implementation of which could result in impacts on valley elderberry longhorn beetle. Implementation of the plan shall ensure that the performance standard of no net loss of valley elderberry longhorn beetle habitat is met. The restoration plans shall establish specific success criteria for habitat restoration, specify remedial measures to be undertaken if success criteria are not met (e.g., supplementary planting and additional monitoring), and describe short- and long-term maintenance and management actions. Long-term protection of restored areas and funding for their management shall be provided through appropriate mechanism to be determined by the project applicant(s) and the applicable county in consultation with USFWS. Authorization for take of valley elderberry longhorn beetle shall be obtained as necessary to comply with the ESA. All measures subsequently adopted through the permitting process shall be implemented. *Tricolored Blackbird* The project applicant(s) of all project phases, including off-site elements, shall implement the following measures: • Retain a qualified biologist to conduct preconstruction surveys for tricolored blackbird before initiation of earth-moving activities for all proposed project phases not covered by the NBHCP ITP, including the proposed off-site infrastructure elements. • Avoid disturbance to active (occupied) nesting colonies during the nesting season if the surveys determine that tricolored blackbirds are present. If they are present, a boundary shall be marked by brightly colored construction fencing that establishes a boundary 500 feet from the active nest site. No disturbance associated with project development shall occur within the 500-foot fenced area during the nesting season or while birds are present. Construction shall not commence until a qualified biologist, with the concurrence of DFG, has determined that the young have fledged and that the nest sites are no longer active. *Black-Crowned Night-Heron and White-Faced Ibis* The project applicant(s) of all project phases, including off-site elements, shall implement the following measures: • Retain a qualified biologist to conduct preconstruction surveys for black-crowned night-heron and white-faced ibis before initiation of earth-moving activities for all project phases not covered by the NBHCP ITP, including the proposed off-site infrastructure elements. The preconstruction surveys shall be conducted within 0.25 mile of the applicable project site(s). • Avoid construction activities within 0.25 mile of any nests found during the nesting season (May 15 through August 31) until a qualified biologist, in consultation with DFG, has determined that the young have fledged or that the nest is no longer occupied. *Loggerhead Shrike* The project applicant(s) of all project phases, including off-site elements, shall implement the following measures: • Retain a qualified biologist to conduct preconstruction surveys for loggerhead shrike before initiation of earth-moving activities of all proposed project phases not covered by the NBHCP ITP, including the proposed off-site infrastructure elements. The preconstruction surveys shall be conducted within 100 feet of the applicable project site(s). • Install a buffer with brightly colored construction fencing that establishes a boundary 100 feet

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from the active nest if surveys identify an active loggerhead shrike nest that would be adversely affected by project development. No disturbance associated with authorized development shall occur within the 100-foot fenced area during the nesting season (March 1 through July 31). A qualified biologist, with concurrence of DFG, must determine that the young have fledged or that the nest is no longer occupied before disturbance of the nest site can occur.

Burrowing Owl
The project applicant(s) of all project phases, including off-site elements, shall implement the following measures:

- Retain a qualified biologist to conduct preconstruction surveys before initiation of earth-moving activities for all project phases not afforded coverage by the NBHCP ITP. The preconstruction surveys shall occur during the breeding season (February through August) to identify active burrows within 500 feet of the project site.
- Establish a buffer to protect any burrowing owl nest within 500 feet of the project site. No project activity shall commence within the buffer area until a qualified biologist confirms that the young have fledged and the nest is no longer active. DFG guidelines recommend implementation of a 0.25- or 0.5-mile buffer, but the size of the buffer may be adjusted if a qualified biologist and the applicable county, in consultation with DFG, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after construction activities shall be required if the activity has potential to adversely affect the nest.
- Conduct a survey for active owl burrows before the approval of grading and/or improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction for all proposed project phases, including proposed off-site infrastructure elements. If burrowing owls are detected, the project applicant(s) shall notify DFG. If no active burrows are found, no further mitigation is required. If active burrows are found, the project applicant(s) shall prepare a mitigation plan. The plan shall be submitted to the applicable county for review and approval before initiation of any grounddisturbing activities. The plan may consist of installing one-way doors on all burrows during the nonbreeding season to allow owls to exit but not reenter and constructing artificial burrows within the project vicinity, as needed. If active burrows contain eggs and/or young, no construction shall occur within 165 feet of the burrow until the young have fledged or no longer rely on the burrow. After it is confirmed that there are no owls inside burrows, these burrows may be collapsed.

Northwestern Pond Turtle
The project applicant(s) of all project phases, including off-site elements, shall implement the following measure:

- Retain a qualified biologist to conduct preconstruction surveys before initiation of earth-moving activities for all project phase(s) not covered by the NBHCP ITP. The surveys shall include all aquatic habitats to be dewatered and/or filled during project construction. Surveys shall be conducted immediately after any dewatering and before any fill of aquatic habitat. If pond turtles are found, the biologist shall capture them and move them to the nearby areas of suitable habitat that would not be disturbed by project construction.

California Tiger Salamander
The project applicant(s) of all project phases, including off-site elements, shall implement the following measure:

- Retain a qualified biologist to conduct preconstruction surveys during the appropriate survey period as determined through consultation with USFWS and DFG, and before initiation of earth-moving activities for all project phases not afforded coverage by the NBHCP ITP. If a future survey determines the presence of California tiger salamander, the project applicant(s) shall develop and implement a management plan for each off-site improvement the implementation of which could result in impacts on California tiger salamander. If feasible, the management plan shall describe measures to avoid and minimize impacts to California tiger salamander habitat. If complete avoidance is not feasible, the plan shall include compensatory mitigation. Implementation of the plan shall ensure that the performance standard of no net loss of California tiger salamander habitat is met. The management plan shall establish specific success criteria for habitat creation/preservation, specify remedial measures to be undertaken if success criteria are not met, and describe short- and long-term maintenance and management actions. Long-term protection of created and preserved areas and funding for their management shall be provided through an appropriate mechanism to be determined by the project applicant(s) and the applicable county in consultation with USFWS. Authorization for take of California tiger salamander shall be obtained if necessary to comply with the ESA. All measures subsequently adopted through the permitting process shall be implemented.

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Western Spadefoot Toad
The project applicant(s) of all project phases, including off-site elements, shall implement the following measures:

- Retain a qualified biologist to conduct a survey for western spadefoot toad during the appropriate survey period as determined during consultation with USFWS and DFG, before initiation of earth-moving activities for all project phases not afforded coverage by the NBHCP ITP.
- Develop and implement a management plan for each off-site improvement, the implementation of which could result in impacts on western spadefoot toad, if the preconstruction survey determines the presence of the toad. Implementation of the plan shall ensure that the performance standard of no net loss of western spadefoot toad habitat is met. The management plan shall establish specific success criteria for habitat creation/preservation, specify remedial measures to be undertaken if success criteria are not met, and describe short- and long-term maintenance and management actions. Long-term protection of created and preserved areas and funding for their management shall be provided through an appropriate mechanism to be determined by the project applicant(s) and the applicable county in consultation with DFG.

Vernal Pool Invertebrates
The project applicant(s) of all project phases, including off-site elements, shall implement the following measures:

- Retain a qualified biologist to conduct preconstruction surveys to identify potential habitat for vernal pool species during the appropriate season (as established by USFWS). The surveys shall identify vernal pools, seasonal swales, and other suitable habitats that might be directly or indirectly affected by the project. The project shall, if feasible, avoid causing take of any federally listed vernal pool invertebrates. Standards for the survey shall be in accordance with the USFWS Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the ESA for the Listed Vernal Pool Branchiopods (April 19, 1996) or the most recent approved USFWS survey guidelines for vernal pool species. Conservation and minimization measures are likely to include preparation of supporting documentation describing methods to protect existing vernal pools during and after project construction, a detailed monitoring plan, and reporting requirements.
- If complete avoidance is not feasible, construction shall not proceed until a take authorization has been issued by USFWS and the project applicant(s) have abided by the conditions of the authorization, including the conservation and minimization measures intended to be completed before construction begins.
- Identify mitigation for direct and indirect impacts on vernal pools and other seasonal wetland habitats that support or potentially support federally listed vernal pool invertebrates that shall ensure no net loss of habitat (acreage and function) for these species (e.g., through habitat creation, rehabilitation, and/or preservation). The project applicant(s) shall complete and implement a habitat mitigation and monitoring plan that compensates for the loss of acreage, function, and value of affected vernal pool habitat. The habitat mitigation and monitoring plan shall be consistent with guidance provided in Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans withinthe Jurisdiction of the Sacramento Field Office, California (USFWS 1996) or shall provide an alternative approach that accomplishes no net loss of habitat.
- If the project discharges dredge or fill material into wetlands or other waters of the United States, the project applicant(s) shall secure a USACE Section 404 CWA permit and achieve no net loss of wetlands.
- Provide sufficient upland habitat within the proposed mitigation areas for creation and restoration of vernal pools and vernal pool complexes to provide ecosystem health. The land used to satisfy this mitigation measure shall be protected through a conservation easement or deed restriction.

Special-Status Fish
The project applicant(s) of all project phases, including off-site elements, shall implement, or ensure the implementation of, the following measures:

- If the American Basin Fish Screen and Habitat Improvement Project is fully implemented, it is assumed that the potential for entrainment and associated injury or mortality would be substantially reduced from baseline conditions and that no additional analysis or mitigation would be necessary to reduce this impact or to comply with the ESA. However, if NMFS determines that take of listed salmonids would occur, authorization for take shall be obtained to comply with ESA. All measures subsequently adopted through the permitting process shall be implemented.
- If water supply Alternative B is selected and it requires long-term modification of the timing of water diversion from the Sacramento River, this would be considered a change in the proposed

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	project and a separate CEQA analysis shall be prepared to determine whether additional mitigation would be required to ensure that impacts to special-status fish species from changes in river hydrology and associated physical habitat would remain less than significant. Additional mitigation may include, for example, improved fish screens, limits on diversions when juvenile salmonids may be present in the river system, and other avoidance and minimization measures developed in consultation with NOAA Fisheries under Section 7 of the ESA.
3.13-5a	**Implement NBHCP ITP Avoidance and Minimization Measures for Impacts on Special-Status Plant Species**. The project applicants(s) of all Authorized Development shall adhere to the relevant take, avoidance, and minimization measures described in the NBHCP and summarized below. In case of conflict, the NBHCP controls. *Delta Tule Pea* The project applicant(s) of all Authorized Development shall implement the following measure: • Conduct preconstruction survey of Delta tule pea. If Delta tule pea plants are identified through the preconstruction survey, USFWS and DFG shall be immediately notified. Under such circumstances, the project applicant(s) shall provide for transplantation of the identified plants before site disturbance. *Sanford's Arrrowhead* The project applicant(s) of all Authorized Development shall implement the following measure: • Conduct a preconstruction survey of Sanford's arrowhead. If Sanford's arrowhead plants are identified through the preconstruction survey, USFWS and DFG shall be notified immediately. Under such circumstances, the project applicant(s) shall provide for the transplantation of the identified plants before site disturbance. *Boggs Lake Hedge-Hyssop, Sacramento Orcutt Grass, Slender Orcutt Grass, Colusa Grass, and Legenere* The project applicant(s) of all Authorized Development shall implement the following measure: • Conduct a preconstruction survey of Boggs Lake hedge-hyssop, Sacramento Orcutt grass, slender Orcutt grass, Colusa grass, and legenere. If the survey determines that Boggs Lake hedge-hyssop, Sacramento Orcutt grass, slender Orcutt grass, Colusa grass, or legenere are present, the project applicant(s) shall consult with USFWS and DFG to determine appropriate measures to avoid and minimize loss of individuals, which may include but is not limited to, fencing of the population before construction and exclusion of project activities from the fenced-off areas, and construction monitoring by a qualified botanist to keep construction crews away from the population. Indirect impacts (i.e., changes in hydrology) shall be minimized by placing culverts away from any plant populations, if necessary. Other potential actions include the collection of seeds from the existing populations and inoculation of the collected seeds into a new area.
3.13-5b	**Implement Measures to Mitigate Impacts on Special-Status Plants Not Covered by the NBHCP.** The project applicant(s) of all proposed project phases not covered by the NBHCP, including the proposed off-site infrastructure elements, shall: • Retain a qualified biologist to conduct preconstruction surveys to identify potential habitat for special-status plant species during the appropriate season (as established by USFWS). The surveys shall identify vernal pools, seasonal swales, and other suitable habitats that might be directly or indirectly affected by the project. If no special-status plants are found during focused surveys, the botanist shall document the findings in a letter report to USFWS, DFG, and the applicable county, and no further mitigation shall be required. The project shall, if feasible, avoid causing take of special-status plant species. If complete avoidance is not feasible, construction shall not proceed until take authorization has been issued by USFWS or DFG, and the project applicant(s) have abided by the conditions of the authorization, including the conservation and minimization measures intended to be completed before construction begins
Cultural Resources	
3.15-2	**Educate Construction Workers regarding Buried Cultural Resources, Suspend Ground-Disturbing Activities if Resources are Encountered, and Employ an Archaeologist to Assess the Find**. To reduce impacts on potentially undiscovered cultural resources, the project applicant(s) of all project phases shall do the following: • Before the start of construction activities, the project applicant(s) of all project phases shall retain a qualified archaeologist to conduct training for construction workers, to educate them about the possibility of encountering buried cultural resources and inform them of the proper procedures should resources be encountered. • The project applicant(s) of all project phases, including off-site elements, shall retain a qualified

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	archaeologist who is trained in the identification of buried deposits to be present for all ground-disturbing activities within 1,000 feet of Curry Creek, which is located within Phase D and Phase 4 of project development. • The project applicant(s) of all project phases shall temporarily suspend all ground-disturbing activity if previously undocumented archaeological materials (e.g., remains of historic buildings or structures; deposits or scatters of historic artifacts; or prehistoric artifacts such as stone tool flaking debris, mortars, pestles, shell, or bone) are encountered during project construction,. At that time, the project applicant(s) shall retain a qualified archaeologist. Construction activities shall be suspended within a 100-foot radius of the find or a distance determined by a qualified archaeologist to be appropriate based on the potential for disturbance of additional resource-bearing soils. The archaeologist shall conduct a field investigation of the specific site and recommend specific treatment measures deemed necessary to protect or recover any cultural resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA. Specific treatment measures include but are not limited to avoiding the resource or conducting data recovery and recordation. The applicant(s) shall implement all of the archaeologist's feasible recommendations to the satisfaction of the County before construction resumes in the area where cultural materials were discovered.
3.15-3	**Suspend Ground-Disturbing Activities if Undocumented Human Remains are Encountered and follow California Health and Safety Code Procedures.** In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, including those associated with off-site improvements, the project applicant(s) shall immediately halt potentially damaging excavation in the area of the burial and notify the County coroner and a professional archaeologist to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or public lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). After the coroner's findings are complete, the project applicant(s), an archaeologist, and the NAHC-designated Most Likely Descendant (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting on notification of a discovery of Native American human remains are identified in Section 5097.9 of the California Public Resources Code. Upon the discovery of Native American remains, the procedures above regarding involvement of the County coroner, notification of the NAHC, and identification of an MLD shall be followed. The applicant(s) shall ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards and practices) is not damaged or disturbed by further development activity until consultation with the MLD has taken place. The MLD shall have at least 48 hours after being granted access to the site to inspect the site and make recommendations. A range of possible treatments for the remains may be discussed: nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment. As suggested by Assembly Bill (AB) 2641 (Chapter 863, Statutes of 2006), the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. AB 2641(e) includes a list of site protection measures and states that the applicant(s) shall comply with one or more of the following requirements: • Record the site with the NAHC or the appropriate Information Center. • Utilize an open-space or conservation zoning designation or easement. • Record a document with the county in which the property is located. The applicant(s) or its authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance if the NAHC is unable to identify an MLD or if the MLD fails to make a recommendation within 48 hours after being granted access to the site. The applicant(s) or its authorized representative may also reinter the remains in a location not subject to further disturbance if it rejects the recommendation of the MLD and mediation by the NAHC fails to provide measures acceptable to the landowner. Ground disturbance in the zone of suspended activity shall not recommence without authorization from the archaeologist.
3.6-6	**Conduct Construction Worker Personnel Training, Stop Work if Paleontological Resources Are Encountered, and Implement Paleontological Resources Recovery Plan.** To minimize potential adverse impacts on unique, scientifically important paleontological resources, the project applicant(s) of all project phases and off-site elements shall do the following: • Before the start of grading or excavation activities within the Modesto, Riverbank, or Turlock

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	Lake Formations as shown in Exhibit 3.6-1, the project applicant(s) shall retain a qualified paleontologist or archaeologist to train all construction personnel (including the site superintendent) involved with earthmoving activities, regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. • If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work in the vicinity of the find and notify the applicable County Public Works Department. The project applicant(s) shall retain a qualified paleontologist to evaluate the resource and prepare a proposed recovery plan in accordance with Society of Vertebrate Paleontology guidelines (1996). The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations determined by the county to be necessary and feasible shall be implemented before construction or demolition activities can resume at the site where the paleontological resources were discovered.
Geology, Soils and Seismicity	
3.6-1	**Prepare and Implement a Grading and Erosion Control Plan.** A grading and erosion control plan shall be prepared by a California Registered Civil Engineer retained by the project applicant(s) for all project phases. The grading and erosion control plan shall be submitted to the applicable County Public Works Department(s) before issuance of grading permits for all new development on the project site and all supporting elements. The plan shall be consistent with the state's NPDES permit requirements and shall include the site specific grading associated with development for all project phases. The plan shall include the location, implementation schedule, and maintenance schedule of all erosion and sediment control measures, a description of measures designed to control dust and stabilize the construction site road and entrance, and a description of the location and methods of storage and disposal of construction materials. Erosion and sediment control measures could include the use of detention basins, berms, swales, wattles, and silt fencing; and covering or watering of stockpiled soils to reduce wind erosion. Stabilization of construction entrances to minimize trackout (control dust) is commonly achieved by installing filter fabric and crushed rock to a depth of approximately 1 foot. The project applicant(s) of all project phases shall ensure that the construction contractor is responsible for securing a source of transportation and deposition of excavated materials. Implementation of [SPSP EIR] Mitigation Measure 3.7-1 also would help to reduce erosion-related impacts. Significance after Mitigation: less than significant.
3.6-2a	**Prepare a Final Geotechnical Report, and Implement All Applicable Recommendations.** Before construction begins for all project phases and all off-site elements, a final geotechnical subsurface investigation report shall be prepared by the project applicant(s) for the proposed development and shall be submitted to the applicable County Public Works Department(s). The final geotechnical engineering report shall be prepared according to the standards adopted in the 2007 or subsequently adopted CBC, and shall address and make recommendations on the following that shall be implemented by the project applicant(s) for all project phases: • seismic design; • site preparation; • appropriate sources and types of fill; • potential need for soil amendments; • road, pavement, and parking areas; • structural foundations, including retaining wall design; • grading practices; • erosion/winterization; • shallow surface water table; • expansive soils/lateral spreading/subsidence; • unstable soils; and • liquefaction. In addition to the recommendations for the conditions listed above, the geotechnical investigation shall include subsurface testing of soil and groundwater conditions for both on-site and off-site project elements and shall determine appropriate foundation designs that are consistent with the 2007 or subsequently adopted CBC. All recommendations contained in the final geotechnical engineering report shall be implemented by the project applicant(s) of all project phases. Special recommendations contained in the geotechnical engineering report shall be noted on the

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	grading plans and implemented as appropriate before on- and offsite construction begins. Design and construction of all new development in all phases of the project shall be in accordance with the 2007 or subsequently adopted CBC. It is the responsibility of the project applicant(s) to provide for engineering inspection and certification that earthwork has been performed in conformity with recommendations contained in the geotechnical report.
3.6-2b	**Monitor On- and Off-Site Earthwork.** All earthwork shall be monitored by a licensed geotechnical or soils engineer retained by the project applicant(s) for all project phases and all off-site elements. The geotechnical or soils engineer shall provide oversight during all excavation, placement of fill, and disposal of materials removed from and deposited on the subject site and other sites.
Greenhouse Gas Emissions	
3.17-1	**Implement Additional Measures to Reduce GHG Emissions.** For each increment of new development within the project site requiring a discretionary approval (e.g., proposed tentative subdivision map, conditional use permit), the County shall impose mitigation measures that reduce GHG emissions to the extent feasible and to the extent appropriate with respect to the state's progress at the time toward meeting GHG emissions reductions required by the California Global Warming Solutions Act of 2006 (AB 32). The County shall require feasible reduction measures that, in combination with existing and future regulatory measures developed under AB 32, will reduce GHG emissions associated with the operation of developments and supporting infrastructure that are part of the proposed project by 30% from business-as-usual emissions levels projected for 2020, if it is feasible to do so. For each increment of new development, the County shall submit to the developer a list of potentially feasible GHG reduction measures to be considered in the development design. The County's list of potentially feasible GHG reduction measures shall reflect the current state of the regulatory environment, which will continuously evolve under the mandate of AB 32. The developer shall then submit to the County a mitigation report that contains an analysis demonstrating which GHG reduction measures are feasible and the associated reduction in GHG emissions. The report shall also demonstrate why measures not selected are considered infeasible. The County must review and approve the mitigation report for the applicable increment of development to receive its discretionary approval. In determining what sorts of measures should appropriately be imposed by a local government under the circumstances, the County shall consider the following factors: • the extent to which rates of GHG emissions generated by motor vehicles traveling to, from, and within the project site are projected to decrease over time as a result of regulations, policies, and/or plans that have already been adopted or may be adopted in the future by ARB or other public agency pursuant to AB 32, or by EPA; • the extent to which mobile-source GHG emissions, which at the time of writing this EIR comprise a substantial portion of the state's GHG inventory, can also be reduced through design measures that result in trip reductions and reductions in trip length; • the extent to which GHG emissions emitted by the mix of power generation operated by PG&E, the electrical utility that will serve the project site, are projected to decrease pursuant to the Renewables Portfolio Standard required by SB 1078 and SB 107, as well as any future regulations, policies, and/or plans adopted by the federal and state governments that reduce GHG emissions from power generation; • the extent to which replacement of CCR Title 24 with the California Green Building Standards Code or other similar requirements will result in new buildings being more energy efficient and consequently more GHG efficient; • the extent to which any stationary sources of GHG emissions that would be operated on a proposed land use (e.g., industrial) are already subject to regulations, policies, and/or plans that reduce GHG emissions, particularly any future regulations that will be developed as part of ARB's implementation of AB 32, or other pertinent regulations on stationary sources that have the indirect effect of reducing GHG emissions; • the extent to which the feasibility of existing GHG reduction technologies may change in the future, and to which innovation in GHG reduction technologies will continue, effecting cost-benefit analyses that determine economic feasibility; and • whether the total costs of proposed mitigation for GHG emissions, together with other mitigation measures required for the proposed development, are so great that a reasonably prudent property owner would not proceed with the project in the face of such costs. In considering how much, and what kind of, mitigation is necessary in light of these factors, the County shall consider the following list of options, though the list is not intended to be exhaustive, as GHG reduction strategies and their respective feasibility are likely to evolve over time. These measures are derived from multiple sources including the Mitigation Measure Summary in

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Appendix B of the California Air Pollution Control Officer's Association (CAPCOA) white paper, CEQA & Climate Change (CAPCOA 2008), and the California Attorney General's Office (2008).

Energy Efficiency

- Include clean alternative energy features to promote energy self-sufficiency (e.g., photovoltaic cells, solar thermal electricity systems, small wind turbines).
- Design buildings to meet CEC Tier II requirements (e.g., exceeding the requirements of the Title 24 (as of 2007) by 35%).
- Site buildings to take advantage of shade and prevailing winds and design landscaping and sun screens to reduce energy use.
- Install efficient lighting in all buildings (including residential). Also install lighting control systems, where practical. Use daylight as an integral part of lighting systems in all buildings.
- Install light-colored "cool" pavements, and strategically located shade trees along all bicycle and pedestrian routes.

Water Conservation and Efficiency

- With the exception of ornamental shade trees, use water-efficient landscapes with native, drought-resistant species in all public area and commercial landscaping. Use water-efficient turf in parks and other turf-dependant spaces.
- Install the infrastructure to use reclaimed water for landscape irrigation and/or washing cars.
- Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.
- Design buildings and lots to be water-efficient. Only install water-efficient fixtures and appliances.
- Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff. Prohibit businesses from using pressure washers for cleaning driveways, parking lots, sidewalks, and street surfaces. These restrictions should be included in the Covenants, Conditions, and Restrictions of the community.
- Provide education about water conservation and available programs and incentives.
- In order to reduce stormwater runoff, which typically bogs down wastewater treatment systems and increases their energy consumption, construct driveways to single family detached residences and parking lots and driveways of multi-family residential uses with pervious surfaces. Possible designs include Hollywood drives (two concrete strips with vegetation or aggregate in between) and/or the use of porous concrete, porous asphalt, turf blocks, or pervious pavers. Solid Waste Measures
- Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
- Provide interior and exterior storage areas for recyclables and green waste at all buildings.
- Provide adequate recycling containers in public areas, including parks, school grounds, golf courses, and pedestrian zones in areas of mixed-use development.
- Provide education and publicity about reducing waste and available recycling services.

Transportation and Motor Vehicles

- Promote ride sharing programs and employment centers (e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading zones and waiting areas for ride share vehicles, and providing a web site or message board for coordinating ride sharing).
- Provide the necessary facilities and infrastructure in all land use types to encourage the use of low or zeroemission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations).
- At industrial and commercial land uses, all forklifts, "yard trucks," or vehicles that are predominately used on-site at non-residential land uses shall be electric-powered or powered by biofuels (such as biodiesel [B100]) that are produced from waste products, or shall use other technologies that do not rely on direct fossil fuel consumption.

Golf Course Design and Operations

- Incorporate best management practices into the design and operation of any golf courses developed under the proposed project. Such practices include but are not limited to the use of low-maintenance grass, electric landscaping equipment and golf carts, electric-powered golf carts, bicycle rentals for patrons, use of drought tolerant native plants, water-efficient irrigation systems and devices such as soil moisture-based irrigation controls, biodegradable golf tees, and development of a water conservation plan. Attain the review and approval of the full design

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	and golf course operations plan from the Environmental Institute for Golf or a like organization to be selected by the Sutter County Community Services Department.
Hazards and Hazardous Materials	
3.12-2	**Retain a Licensed Professional to Investigate the Extent to Which Soil and/or Groundwater May Have Been Contaminated, Including in Areas Not Covered by the Phase I ESAs, and Implement Required Measures, as Necessary.** To reduce health hazards associated with potential exposure to hazardous substances, the project applicant(s) for all project phases shall implement the following measures before the start of ground-disturbing or demolition activities within each phase of project development: • Prepare a Phase II ESA investigation of Area G based on the recommendation of the WKA (2005c) Phase I ESA. • Prepare a Phase I ESA covering all areas before development. If recommended by the Phase I(s), a Phase II ESA investigation is also required. These investigations shall follow Phase I and/or II ESA and/or other appropriate testing guidelines and shall include, as necessary, analysis of soil and/or groundwater samples taken at or near the potential contamination sites. Recommendations in the Phase I and/or II ESA(s) to address any contamination that is found shall be implemented before ground-disturbing activities are initiated in these areas. • A new Phase I ESA or ESAs covering sites that are proposed for use by schools shall be submitted to DTSC for review and approval before CDE will approve purchase of the site. If toxic or hazardous substances, including pesticides, naturally occurring asbestos, or other regulated hazardous materials, are found to be present, subsequent studies (i.e., a Phase II Preliminary Endangerment Assessment, Phase III remedial action) shall be performed as required by DTSC and CDE. • If Phase I and/or Phase II ESAs indicate the presence of soil and/or groundwater contamination, a site remediation plan shall be prepared pursuant to Section 25401.05(a)(1) that identifies any necessary remediation activities appropriate for proposed land uses, including excavation and removal of on-site contaminated soils, redistribution of clean fill material on the project site, and remediation of contaminated groundwater (e.g., installation of groundwater extraction and treatment [GET] facilities). The plan shall include measures that ensure the safe transport, use, and disposal of contaminated soil and building debris removed from the site (e.g., compliance with Division of Traffic Operations (DTO)and Caltrans transport regulations, and disposal at facilities permitted by EPA and/or DTSC to accept hazardous wastes). If contaminated groundwater is encountered during site excavation activities, the contractor shall report the contamination to the County, DTSC, and other appropriate regulatory agencies as required (e.g., the Central Valley RWQCB), and shall follow • required actions specified by the regulatory agencies (e.g., dewater the excavated area, properly dispose of contaminated groundwater, or set up GET facilities as required). The contractors of all project phases shall be required to comply with the site remediation plan, which shall outline measures for specific handling and reporting procedures for hazardous materials, and disposal of hazardous materials removed from the site at an appropriately permitted off-site disposal facility. • Retain a licensed contractor to remove all USTs, leaking USTs, and ASTs within the project site. Additionally, any stained soils associated with the debris piles, USTs, and/or ASTs shall also be removed by the licensed contractor, in accordance with Sutter County Environmental Management Department and RWQCB regulations, including Division 7 of the California Water Code (Porter Cologne Water Quality Control Act) and the State Water Resources Control Board regulations (Underground Tank Regulations, CCR 23 Division 3, Chapter 16). • Retain a licensed contractor to remove and dispose of all transite pipe found within the project site in accordance with Section 39658(b)(1) of the Health and Safety Code and EPA's NESHAP for Asbestos. • Retain a licensed contractor to remove all septic systems in accordance with applicable local, state, and federal regulations. • Retain a licensed professional to conduct groundwater sampling from existing water supply wells on the Hintz parcel of Area G to evaluate the potential for nitrate and/or particulate contamination of groundwater as recommended by Geocon. If groundwater contamination is identified, prepare a site remediation plan pursuant to Section 25401.05(a)(1), as described above, in consultation with the appropriate regulatory agencies (e.g., EPA, DTSC, RWQCB). • Retain a Cal-OSHA-certified Asbestos Consultant and Lead Based Paint Inspector/Assessor before demolition of any on-site buildings to investigate whether any asbestos-containing materials or lead-based paints are present. If any materials containing asbestos or lead are

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	found, they shall be removed by an accredited contractor in accordance CCR 17 Section 36000 and 36100 (lead based paint) and Section 39658(b)(1) of the Health and Safety Code (asbestos). In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal-OSHA asbestos and lead worker construction standards. The materials containing asbestos and lead shall be disposed of properly at an appropriately permitted off-site disposal facility. • Obtain an assessment conducted by PG&E pertaining to the contents of the existing pole-mounted transformers located on the project site. The assessment shall determine whether existing on-site electrical transformers contain PCBs and whether there are any records of spills from such equipment. If equipment containing PCB is identified, the maintenance and/or disposal of the transformer shall be subject to the regulations of the Toxic Substances Control Act under the authority of the Sutter County Environmental Health Division. • Refrain from developing existing on-site agriculture or domestic water wells for further use. Such wells shall be closed in accordance with local and state guidelines. Consistent with DOG guidelines, project-related structures shall not be constructed atop abandoned wells. • Obtain an inspection of abandoned boring sites by DOG and hire a licensed environmental professional to determine whether reabandonment of the two "dry hole" gas borings is required to meet current standards. Implementation of this mitigation measure for later project phases may have indirect impacts that could affect residents of earlier project phases, as the required activities have the potential to generate dust, noise, traffic, and transportation of hazardous materials. Hazardous materials transportation is governed by existing regulations as described in the "Environmental Setting" section above and the discussion of Impact 3.12-1. Other indirect impacts, including noise, traffic, and air quality emissions, are analyzed throughout this DEIR in Sections 3.1 through 3.17.
3.12-3	**Retain Licensed Professional to Investigate the Environmental Status of the Contaminated Groundwater Plume, Contaminated Soils, and Any Remediation Activities at the Holt Tractor and Farm Air Service Sites, and Implement All Remedial Measures, as Necessary.** Before excavation or construction activities begin on the project site in the vicinity of the Farm Air Service and Holt Tractor parcels, the project applicant(s) of all affected project phases shall retain a licensed professional to investigate the environmental status of the contaminated groundwater plume, contaminated soils, and any remediation activities at the Holt Tractor and Farm Air Service sites. This investigation may include a review of Cal-EPA or DTSC files and shall include identification of the specific location of the Farm Air Service site, which was not defined in the available Phase I ESAs. Prior to the start of development activities adjacent to the Holt Tractor parcel, additional intrusive investigation shall be conducted by a licensed professional to delineate the extent of the contaminated groundwater plume (which could have changed after preparation of this EIR) and recommend potential treatment options. Project development shall not occur in any area of contaminated soil or groundwater until the following activities take place: • Remove all contaminated soil, dispose of contaminated soils at a properly licensed facility, and replace contaminated soil with clean fill dirt. • Consult with appropriate regulatory agencies, such as DTSC, RWQCB, and Sutter County Department of Environmental Health, and implement all actions required by the regulatory agencies (e.g., dewatering, installation of groundwater monitoring wells, installation of GET facilities) during the consultation process in areas of contaminated groundwater.
Hydrology and Water Quality	
3.7-1	**Acquire Appropriate Regulatory Permits and Implement SWPPP and BMPs.** Prior to the approval of grading permits and improvement plans, the project applicant(s) of all project phases shall prepare a SWPPP consistent with the existing statewide NPDES stormwater permit for general construction activity. The project applicant(s) shall also prepare and submit the appropriate NOI's and any other necessary engineering plans and specifications for pollution prevention and control to the County and the RWQCB. The SWPPP and other appropriate plans shall identify and specify: • the use of erosion and sediment-control BMPs, including construction techniques, that shall reduce the potential for runoff as well as other measures to be implemented during construction. These may include but would not be limited to sedimentation ponds, inlet protection, perforated riser pipes, check dams, and silt fences; • the implementation of approved local plans, non-stormwater-management controls, permanent post-construction BMPs, and inspection and maintenance responsibilities; • the pollutants that are likely to be used during construction that could be present in stormwater drainage and non-stormwater discharges, including fuels, lubricants, and other types of materials

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	used for equipment operation; • spill prevention and contingency measures, including measures to prevent or clean up spills of hazardous waste and of hazardous materials used for equipment operation, and emergency procedures for responding to spills; • personnel training requirements and procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP; and • the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP. Where applicable, BMPs identified in the SWPPP shall be in place throughout all site work and construction/demolition activities and shall be used in all subsequent site development activities. BMPs may include such measures as the following: • Implementing temporary erosion-control measures in disturbed areas to minimize discharge of sediment into nearby drainage conveyances. These measures may include silt fences, staked straw bales or wattles, sediment/silt basins and traps, geofabric, sandbag dikes, and temporary vegetation. • Establishing permanent vegetative cover to reduce erosion in areas disturbed by construction by slowing runoff velocities, trapping sediment, and enhancing filtration and transpiration. • Using drainage swales, ditches, and earth dikes to control erosion and runoff by conveying surface runoff down sloping land, intercepting and diverting runoff to a watercourse or channel, preventing sheet flow over sloped surfaces, preventing runoff accumulation at the base of a grade, and avoiding flood damage along roadways and facility infrastructure. All construction contractors shall retain a copy of the approved SWPPP on the construction site. Significance after Mitigation: less than significant.
3.7-2a	**Prepare and Submit Final Drainage Plans to the County and Implement Requirements Contained in Those Plans.** a. For each increment of new development on the project site requiring a discretionary approval, the County shall confirm that the area to be developed either already has or shall have prior to issuance of building permits the minimum level of flood protection required at the time of the development approval by state or federal law, whichever is more stringent. The requirement for such a showing shall be made a condition of any small lot tentative map approval (i.e., prior to final approval) associated with the new development and satisfaction of the condition shall be verified by the County prior to recordation any final map associated with the new development. Where no small lot tentative map and final map is required for a non-residential discretionary development approval, the requirement for such confirmation, to be demonstrated no later than the time of occupancy, shall be made a condition of approval of project-level discretionary approvals analogous to issuance of small-lot tentative maps. After the County general plan amendments and zoning changes made in response to the Central Valley Flood Protection Plan as mandated by Government Code Sections 65302.9 and 65860.1 have become effective (expected in 2015), the County shall not approve a development agreement, tentative map, parcel map, or any other discretionary permit or other discretionary entitlement, or any ministerial permit that would result in the construction of a new residence, for a project located within a flood hazard zone unless the County finds, based on substantial evidence, one of the following: • flood management facilities shall provide the area to be developed with a level of protection necessary to withstand a 200-year flood event; the County has imposed conditions on the development agreement or other entitlement that shall provide the area to be developed with a level of protection necessary to withstand 200-year flood event; or • local flood management agencies have made adequate progress towards construction of a flood protection system intended to provide the area to be developed with a level of protection necessary to withstand a 200-year flood event to justify the expectation that the area to be developed shall have that level of protection by 2025. b. Before the approval of grading plans and building permits, the project applicant(s) of all project phases shall submit final drainage plans to the County demonstrating that off-site upstream runoff would be appropriately conveyed through the project site, and that project-related on-site runoff would be appropriately contained in detention basins to reduce flooding impacts, such that the flood control requirements in (a) are met. At the time of the Sankey Gap storage detailed design, capacity shall be based on 100-year flood protection unless the requirements of SB 5 dictate 200-year protection. If it is determined that more capacity is needed than the 3,740 acre-

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	feet of storage calculations based on Wood Rodgers (2008), then a combination of the above three drainage alternatives shall be implemented, giving up to three times the 3,740 acre-feet amount and appropriately conveying the 5,800 acre-feet volume as estimated by Sutter County (2008). c. The 408 acres on the project site designated "E1 Interim Flood Zone" shall remain available for on-site detention, and thus shall not be developed with uses inconsistent with detention, until such time as the entire project site has a level of protection necessary to withstand a 200-year flood event.
3.7-4a	**Incorporate Flood Control Measures to Provide Protection from 200-Year Sankey Gap Flood Flows. On-Site and Off-Site Elements.** In the event that, as of 2015, the County concludes that it is not reasonably foreseeable that SAFCA will provide 200-year protection with respect to the Sankey Gap 200-year overflow by 2025, the County, in granting discretionary development approvals, shall require the applicant to develop and implement a program to engineer the project site to be protected by the 200-year storm event as required by SB 5 by no later than 2025. That program could include, but is not limited to, the following components: • Enlarge/deepen the proposed on-site detention basins to accommodate flows between the 100-year and 200-year events. • Develop off-site detention basins located east of the Sankey Gap (as noted in Alternative 2 described above and in detail in the SPSP Drainage Master Plan [Wood Rodgers 2008]). • Develop off-site detention basins located west of the project site (as noted in Alternative 3 described above and in detail in the SPSP Drainage Master Plan [Wood Rodgers 2008]). • Allow greater overland flows during the 100- to 200-year events onto adjoining agricultural fields located west and northwest of the site (as noted in Exhibit 3.7-13). • Raise building pad elevations to higher elevations to protect against higher run-off events. • Allow more residual flooding in non-structural areas during high-flood events (e.g., parking lots, parks, and streets). • Improve flood flow conveyance capacity west of the site under State Highway 99/70 by improving/increasing culvert capacity under the highway. • Increase flood storage in the RD 1000 North Drainage Canal and other applicable drainage canals that could potentially accommodate increases in flood storage volumes. • As part of this program, the applicants shall conduct hydrologic engineering studies to support the above options that would include the following components: • One-dimensional and two-dimensional unsteady state modeling (i.e., the ability to account for flows and flood stages that change quickly over time) shall be developed as needed to calculate flow paths and flood depths to the accuracy required by local, state, and federal requirements for protection of property. • On-site (Alternative One) storage volume expansion and conveyance capacity shall be considered and evaluated via this modeling in order to ensure that basin freeboard and street culvert capacity have the hydraulic capacity to offset estimated 200-year flood increases through or around the project site. • Modeling efforts for major off-site flood storage infrastructure (Alternatives Two and Three) shall identify the most efficient ways available to direct and detain flooding. This modeling shall include evaluations of potential groundwater basin effects, and rainfall/river elevation (hydrologic) coincidence between the Natomas Cross Canal and Sacramento River watersheds as they affect the magnitude of spilling and storage into the project site during 200-year storm conditions.
3.7-5	**Develop and Implement a BMP and Water Quality Maintenance and Monitoring Plan.** Before approval of the final small-lot subdivision map for all project phases, detailed hydrology plans, and a water quality study, shall be prepared by a qualified engineer retained by the project applicant(s). Drafts of these plans shall be submitted to the County for review and approval concurrently with development of tentative subdivision maps for all project phases. These plans shall finalize the water quality improvements and further detail the structural and nonstructural BMPs proposed for the project. The plans shall include the following: • a quantitative analysis of proposed conditions incorporating the proposed drainage design features. • pre-development and post-development calculations demonstrating that the proposed water quality BMPs meet or exceed requirements established by the Central Valley RWQCB and including details regarding the size, geometry, and functional timing of storage and release.

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	• source control programs to control water quality pollutants on the project site, which may include but are limited to recycling, street sweeping, storm drain cleaning, household hazardous waste collection, waste minimization, prevention of spills and illegal dumping, and effective management of public trash collection areas. • a lake management plan for the proposed basins that shall include management and maintenance requirements for the design features and BMPs, and responsible parties for maintenance and funding.
Noise	
3.5-5a	**Construction activities taking place in Sutter County shall be restricted to 7:00 a.m. to 7:00 p.m. Monday through Friday, and 8:00 a.m. to 5:00 p.m. on Saturdays, Sundays, and Federal Holidays.** This measure is consistent with many jurisdictions code requirements pertaining to permissible construction. The intent of this measure is to prevent construction activities during the more sensitive nighttime period.
3.5-7a	**Require acoustical analyses for new on-site commercial, industrial, recreation, school, utilities, and public facility uses constructed within Sutter County determined to have the potential to exceed applicable noise standards.** Sutter County shall make a determination upon review of applications for new noise producing land uses as to whether the proposed use would potentially impact existing or proposed noise-sensitive land uses in the vicinity of the proposed use. Where the County estimates that a project may generate significant levels of noise (i.e. above standards set by the Sutter County General Plan), a noise analysis shall be required. The noise analysis shall include a detailed mitigation plan based on project level designs and may include, but is not limited to, the construction of noise barriers, modifications to site design, building façade upgrades, or any other means necessary to reduce noise levels that achieve compliance with the County noise standards. The mitigation from the noise analysis shall then be incorporated into the final construction plans before County approval and then built to the specifications designated by the noise analysis. Such mitigation is routinely included in the construction of new school and commercial developments and has been demonstrated to be feasible in mitigating noise impacts. Noise generated by new industry within the project site is typically considerably more variable and complicated, thereby triggering the requirement for a project-specific noise analysis.
Public Services	
3.8-1	**Prepare and Implement Construction Traffic Control Plans.** The project applicant(s) and/or project contractor(s) of all project phases shall prepare and implement construction traffic control plans for construction activities that may affect road rights-of-way. The traffic control plans must follow any applicable standards of the agency responsible for the affected roadway and must be signed by a professional engineer. Measures typically identified in traffic control plans include advertising planned lane closures, posting warning signage, using a flagperson to direct traffic flows when needed, and implementing methods to ensure continued access by emergency vehicles. During project construction, access to existing land uses shall be maintained at all times, with detours used as necessary during road closures. The traffic control plans shall be submitted to the applicable county public works department or Caltrans (for SR 99/70), depending on jurisdiction, for review and approval before the approval of all project plans or permits for all project phases, including off-site elements, where implementation may cause impacts on existing traffic flow.