

# Mitigation Monitoring and Reporting Program for the Connector Project

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## Introduction

Section 21081.6 of the California Public Resources Code and Section 15091(d) and 15097 of the State CEQA Guidelines require public agencies “to adopt a reporting or monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment.” A Mitigation Monitoring and Reporting Program (MMRP) is required for the proposed project because the EIR for the project identified potentially significant adverse impacts related to construction and implementation activities. .

## Implementation of the Program

### Responsibilities

Full compliance with the provisions of this program is the responsibility of those agencies identified in the attached MMRP Summary Table. The Implementing Party will work closely with contracted engineering firms, regulatory agencies, and local jurisdictions to ensure implementation of all identified mitigation measures.

### Monitoring and Reporting

Monitoring is the follow-up effort by a public agency to ensure that mitigation measures are implemented. In some instances, the monitoring work can be accomplished by staff as they review project plans. In other instances, field inspection may be necessary. In some instances, additional work will be required to coordinate design aspects of the mitigation between various agencies.

Written documentation of the monitoring effort is a necessary and important part of the mitigation program. It also provides an opportunity to review the success of the conditions applied to the project so that the JPA can refine the conditions as necessary to achieve the desired mitigation.

The MMRP Summary Table lists the mitigation measures described for the proposed project, identifies who is responsible for implementing each mitigation measure (“Implementing Party”), when that mitigation should be implemented, and what monitoring actions will be taken to ensure that each mitigation measure is implemented.

At this time, it is unknown whether the Implementing Party for project-level activities will be the Capital SouthEast Connector JPA (“JPA”), El Dorado or Sacramento County, or the city of Elk Grove, Folsom, or Rancho Cordova, or some combination of these entities. The “Implementing Party” shall be the Project Proponent at the project-level.

Progress toward completion of the required mitigation program, or violations thereof, shall be reported at regular intervals by the Implementing Party. These reports shall be prepared by the Implementing Party using an acceptable format and provided to the Implementing Party’s governing

body, the JPA (if the JPA is not the Implementing Party), and the general public to provide the status of each mitigation measure. All reports shall be filed with the JPA and the Implementing Party (if the JPA is not the Implementing Party), and will be available for public review. All costs to administer and implement the monitoring program shall be considered costs of the project.

If the JPA is not the Project Proponent, the Project Proponent will prepare a report documenting the status of compliance with the MMRP and submit it to the JPA prior to the release of the Draft Project-level environmental document. The Project Proponent will include in their Project-level MMRP a summary of the status of compliance with this Program-level MMRP, including identification of project-level mitigation measures that implement the mitigation commitments set forth in this Program-level MMRP

## MMRP Summary Table

The attached MMRP Summary Table should guide the JPA in its evaluation and records of the implementation of mitigation measures. The column categories identified in the MMRP Summary Table are described below:

- ▶ **Timing for Implementation**– lists the time frame in which the mitigation will take place.
- ▶ **Mitigation Measure** – lists the mitigation measures by number identified in the EIR and describes the mitigation measures to be implemented.
- ▶ **Implementing Party** – identifies the entity responsible for complying with the requirements of the mitigation measure.
- ▶ **Monitoring Action** – describes the type of action taken to verify implementation of the mitigation.

## Summary of Capital SouthEast Connector Project Mitigation Measures

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
Prior to construction; during construction	<p><u>Mitigation Measure AES-1: Prepare and Implement a Construction Lighting Plan</u> During the design of the project improvements, the JPA or individual jurisdictions will prepare and implement a plan for construction lighting that minimizes the release of light and glare either upward or toward properties and residences adjoining the construction site. At a minimum, the plan will contain the following elements:</p> <ul style="list-style-type: none"> <li>• To minimize trespass lighting to the skies, use full cutoff luminaires. Full cutoff luminaires are designed to not emit any light above 90 degrees, thereby reducing sky glow.</li> <li>• Use internal or external shields when necessary to minimize light trespass onto neighboring properties.</li> </ul>	JPA/Project Proponent Project Engineer; construction contractor	Review measures during construction plan check and verify periodically during construction
Prior to construction; During construction	<p><u>Mitigation Measure AES-2: Conform to Lighting Design Standards</u> Operational lighting of the project will be designed for safety and will include features that minimize the release of light and glare either upward or toward properties and residences adjoining the project corridor. The lighting design will conform to all applicable County, State, Federal, and public safety standards, as appropriate. Features could include shielding lighting elements, using lower-voltage lighting, incorporating downward-casting lighting, using lighting fixtures that conform to the visual character of the area, and similar design measures, as listed below:</p> <ul style="list-style-type: none"> <li>• Consider the least intrusive lighting when improvements are made at an intersection, when lighting is needed for safety reasons, or when a new intersection is constructed.</li> <li>• Minimize continuous roadway lighting.</li> <li>• Calculate the optimum location, height, and spacing for alternative lighting solutions at each intersection using computer software.</li> <li>• Do not permit the use of high-pressure sodium lamps. Metal halide is preferred because of the more natural color rendition and pure white light.</li> <li>• Minimize trespass lighting to the skies by using full cutoff luminaires. Full cutoff luminaires are designed to not emit any light above 90 degrees, thereby reducing sky glow.</li> <li>• Reduce the amount of light required for an intersection by using Caltrans' and Sacramento County Department of Transportation minimum requirements, as appropriate.</li> <li>• Use internal or external shields when necessary to minimize light</li> </ul>	JPA/Project Proponent Project Engineer; construction contractor	Verify prior to issuing permits

<sup>1</sup> The "Implementing Party" shall be the JPA or the Project Proponent at the project-level. If the JPA is not the Project Proponent, the Project Proponent will be the Implementing Party.

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
<p>Prior to construction; During construction</p>	<p>trespass onto neighboring properties.</p> <p><u>Mitigation Measure AQ-1: Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust</u></p> <p>The JPA or local jurisdiction will require, as a standard or specification of their contract, the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust. Although the following measures are outlined in the SMAQMD's CEQA guidelines, they are required for the entirety of the construction area, including the segment within the EDCAPCD. The JPA or local jurisdiction will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p> <ul style="list-style-type: none"> <li>● Water all exposed surfaces two times daily. Exposed surfaces include (but are not limited to) soil piles, graded areas, unpaved parking areas, staging areas, and access roads.</li> <li>● Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.</li> <li>● Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.</li> <li>● Limit vehicle speeds on unpaved roads to 15 miles per hour.</li> <li>● All roadway, driveway, sidewalk, and parking lot paving should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.</li> </ul> <p>Enhanced Control Measures – Disturbance Areas</p> <ul style="list-style-type: none"> <li>● Water exposed soil with adequate frequency for continued moist soil. However, do not overwater to the extent that sediment flows off the site.</li> <li>● Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 mph.</li> <li>● Install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of construction areas.</li> <li>● Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible. Water appropriately until vegetation is established.</li> </ul> <p>Enhanced Control Measures – Unpaved Roads (Entrained Road Dust)</p> <ul style="list-style-type: none"> <li>● Install wheel washers for all exiting trucks, or wash off all trucks and</li> </ul>	<p>JPA/Project proponent</p>	<p>Review measures during construction plan check and verify periodically during construction</p>

Mitigation Monitoring Program, Continued

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>equipment leaving the site.</p> <ul style="list-style-type: none"> <li>• Treat site accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads.</li> <li>• Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the District shall also be visible to ensure compliance.</li> </ul> <p>Additional Control Measures – Off-Site Mitigation Fees Payable to the SMAQMD</p> <ul style="list-style-type: none"> <li>• In the event that the SMAQMD basic and enhanced construction mitigation measures are not sufficient to reduce NO<sub>x</sub> emissions below the SMAQMD's construction NO<sub>x</sub> threshold, the remaining NO<sub>x</sub> emissions in excess of the SMAQMD's threshold would be offset by the JPA through a fee paid to the SMAQMD who will fund cost-effective projects that reduce NO<sub>x</sub>, in the project area, to the extent possible, and otherwise within the Sacramento air basin. The fee will be calculated using the SMAQMD's current rate of NO<sub>x</sub> per ton at the time of construction in addition to SMAQMD administration fees. Currently, the SMAQMD's off-site mitigation fee is \$16,400 per ton of NO<sub>x</sub>, in addition to a 5% administration fee.</li> </ul>		
During construction	<p><u>Mitigation Measure AQ-2: Limit Maximum Daily Disturbed Area to 15 Acres</u>                      The JPA or local jurisdiction will require, as a standard or specification of their contract, that the construction contractor(s) limit the maximum daily disturbed area to 15 acres or 1,800 centerline-feet (based on an assumed width of 360 feet) per day. Although this measure is outlined in the SMAQMD's CEQA guidelines, it is required for the entirety of the construction area, including the segment within the EDCAPCD. The JPA or local jurisdiction will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p>	JPA/Project proponent	Review measures and verify periodically during construction
Prior to construction; During construction	<p><u>Mitigation Measure AQ-3: Implement SMAQMD Basic Construction Emission Control Practices to Reduce NO<sub>x</sub> Emissions</u>                      The JPA or local jurisdiction will require, as a standard or specification of their contract, that the construction contractor(s) implement basic control measures to reduce NO<sub>x</sub> emissions from diesel-powered construction equipment. Although the following measures are outlined in SMAQMD's CEQA guidelines, they will be required by the SMAQMD and EDCAPCD for the entirety of the construction area. The JPA or local jurisdiction will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p> <ul style="list-style-type: none"> <li>• Minimize idling time either by shutting equipment off when not in use or</li> </ul>	JPA/Project proponent	Review measures during construction plan check and verify periodically during construction

Mitigation Monitoring Program, Continued

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>limiting the time of idling to 3 minutes (5 minutes required by 13 CCR 2449[d][3], 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.</p> <ul style="list-style-type: none"> <li>• Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated. The JPA or local jurisdiction will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</li> </ul>		
	<p><u>Mitigation Measure AQ-4: Implement SMAQMD Enhanced Construction Emission Control Practices to Reduce NO<sub>x</sub> Emissions</u></p> <p>The JPA or local jurisdiction will require, as a standard or specification of their contract, that the construction contractor(s) implement enhanced control measures to reduce NO<sub>x</sub> emissions from diesel-powered construction equipment. The following measures are outlined in SMAQMD's CEQA guidelines and are required for the entirety of the construction area, including the segment within the EDCAPCD. The JPA or local jurisdiction will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p> <ul style="list-style-type: none"> <li>• Provide a plan for approval by the SMAQMD demonstrating that the heavy-duty (50-horsepower or more) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet-average 20% NO<sub>x</sub> reduction and 45% PM exhaust reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, alternative fuels, engine-retrofit technology, after-treatment products, or other options as they become available.</li> <li>• Ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40% opacity for more than 3 minutes in any 1 hour. Any equipment found to exceed 40% opacity (or Ringelmann 2.0<sup>3</sup>) will be repaired immediately. Non-compliant equipment will be documented and a summary provided periodically to the lead agency and air district. A visual survey of all in-operation equipment will be made at least periodically by the proponent agency(s), and a periodic summary of the visual survey results will be submitted throughout the duration of the proposed project, except that the summary will not be required for any 30-day period in which no construction activity occurs. The summary will include the quantity and type of vehicles surveyed, as well as the dates of each survey. The air districts or other officials may conduct periodic site inspections to determine compliance. Nothing in this measure will supersede other air district or state rules or regulations.</li> </ul>		

Mitigation Monitoring Program, Continued

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>The JPA or local jurisdiction will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p>		
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure AQ-5: Implement Additional Exposure Reduction Strategies to Further Minimize Potential Health Risks</u> The JPA or local jurisdiction will implement strategies to reduce the potential for sensitive receptors along the project corridor to be exposed to DPM. Potential strategies include (but are not limited to) creating a buffer zone of at least 50 feet between the roadway and sensitive land uses (e.g., residences, parks, churches, and medical facilities), as well as planting additional vegetation along the project corridor (A laboratory study indicates that all forms of vegetation are effective in removing PM10, although the greatest removal rates are achieved with redwood and deodar cedar –[Sacramento Metropolitan Air Quality Management District 2010]). These strategies should be focused in areas where sensitive receptors are directly adjacent to the roadway. Selection of these species should be maximized to the extent feasible.</p>	<p>JPA/Project proponent</p>	<p>Review measures during construction plan check and verify periodically during construction</p>
<p>Prior to construction</p>	<p><u>Mitigation Measure AQ-6: Conduct a Geological Investigation for Naturally Occurring Asbestos and Implement an Asbestos Dust Mitigation Plan if Naturally Occurring Asbestos Is Found in the Project Area</u> The JPA or local jurisdiction will conduct a site-specific geological investigation for all construction areas with known potential to contain NOA. According to the CGS, this includes all portions of the construction area east of Folsom (California Geological Survey 2006). If NOA is identified in the project area, the JPA or local jurisdiction will submit an asbestos dust mitigation plan to the SMAQMD and/or EDCAPCD pursuant to the State of California’s Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. This plan shall be prepared prior to ground breaking by the JPA, local jurisdiction, or appointed consultant.</p>	<p>JPA/Project proponent</p>	<p>Review measures during construction plan check</p>
<p>Prior to operation; during construction</p>	<p><u>Mitigation Measure AQ-7: Implement SMAQMD Best Management Practices for Reducing Construction-Related Greenhouse Gas Emissions</u> The JPA or local jurisdiction will implement through construction contract terms and specifications that the contractor adheres to the mitigation measure and implements, all applicable SMAQMD best management practices for reducing construction-related GHG emissions. Documentation will be provided to the JPA or local jurisdiction on a weekly basis. The contract provisions and specifications will authorize the JPA or local jurisdiction to sanction contractors for non-compliance. The JPA or local jurisdiction will consult with SMAQMD prior to construction about the most current recommended construction best management practices and will adopt those practices. Practices include the following:</p> <ul style="list-style-type: none"> <li>• Improve fuel efficiency from construction equipment:</li> </ul>	<p>JPA/Project proponent; construction contractor</p>	<p>Prior to operation; during construction</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<ul style="list-style-type: none"> <li>○ Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 3 minutes (a 5-minute limit is required by the state airborne toxics control measure—13 CCR 2449[d][3], 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.</li> <li>○ Maintain all construction equipment in proper working condition according to manufacturer’s specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.</li> <li>○ Train equipment operators in proper use of equipment, including limiting idling time, minimizing warm-up time, performing routine maintenance, and optimizing equipment use.</li> <li>○ Avoid using equipment that is larger than the job requires.</li> <li>○ Use equipment with new technologies (e.g., repowered engines, electric drivetrains).</li> <li>● Perform on-site material hauling with trucks equipped with on-road engines (if the air districts or ARB determine them to emit less than the off-road engines).</li> <li>● Use alternative fuels for generators at construction sites, rather than gasoline or diesel (e.g., propane or solar), or use electrical power.</li> <li>● Use an ARB-approved low-carbon fuel for construction equipment. (NOx emissions from the use of low-carbon fuel must be reviewed and increases mitigated.)</li> <li>● Encourage and provide carpools, shuttle vans, and transit passes for construction worker commutes.</li> <li>● Reduce electricity use in the construction office by using compact fluorescent bulbs, powering off computers every day, and using the most efficient heating and cooling units available.</li> <li>● Recycle or salvage non-hazardous construction and demolition debris (goal of at least 75% by weight) to avoid landfill disposal.</li> </ul>		
<p>Prior to construction</p>	<p><u>Mitigation Measure AQ-8: Conduct a Carbon Sequestration Feasibility Study and Cost-Benefit Analysis for Tree Planting as Greenhouse Gas Mitigation to Mitigate Greenhouse Gas Emissions to Net Zero</u></p> <p>The JPA or local jurisdiction, in consultation with the SMAQMD and EDCAPCD, will conduct a carbon sequestration feasibility study and cost-benefit analysis for the proposed project for tree planting. The objective of the study and analysis is to identify optimal species and numbers of trees to mitigate GHG emissions to the maximum extent feasible, and down to net zero, if practicable, through tree planting. A preliminary feasibility study for carbon offsets from tree planting in northern California was conducted for the Connector (ICF International 2011). This analysis indicated that the theoretical carbon offset potential ranges from 0.4 metric ton of carbon per acre per year (C/ac/year) to 2.0 metric tons C/ac/yr. Of the tree types broadly found in this region, the Douglas fir and hemlock-Sitka-spruce</p>	<p>JPA/Project proponent; SMAQMD and/or ESCAPCD, as required</p>	<p>Prior to construction</p>

Mitigation Monitoring Program, Continued

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>offer the largest sequestration potential. If future carbon sequestration studies conclude tree planting is appropriate mitigation from both cost and GHG reduction standpoints, the JPA or local jurisdiction will adopt and implement a sequestration plan committing the JPA or local jurisdiction to the planting and maintenance of selected evergreen species such as Douglas fir and hemlock/Sitka-spruce for off-site plantings and hardwood maple or soft maple for on-site plantings, to sequester project-generated GHG emissions to the maximum extent feasible, and down to net zero, if practicable. The sequestration plan would identify the location (both on-site and off-site) and timing of plantings, funding mechanisms, maintenance plans, and other key aspects of the offset potential, including water resources, costs, future climate change impacts, and forest management practices and monitoring needs.</p>		
Prior to construction	<p><u>Mitigation Measure AQ-9: Encourage Future Project-level Analysis of Impacts on Ability of the Region to Comply with SB 375</u>                      Future project-level environmental analyses of any portion of Connector Project will consider the impact of the project on the ability of the region to meet the California Air Resources Board's current emissions reduction targets for the region. SACOG is currently underway with an update of their Metropolitan Transportation Plan for 2035 (MTP 2035), which will include the Sustainable Communities Strategy (SCS). The SCS combines transportation and land use elements, serving as a plan for achieving the emissions reduction target established for the region. However, nothing in an adopted SCS shall be interpreted as superseding the exercise of the land use authority of a local jurisdiction.</p>	JPA/Project proponent	Prior to construction
Prior to construction	<p><u>Mitigation Measure AQ-10: Encourage Local Jurisdictions to Develop Climate Action Plans for Reducing GHG Emissions</u>                      The JPA will encourage each of its member jurisdictions to adopt a Climate Action Plan, consistent with CEQA Guidelines Section 15183.5 (b), to reduce existing transportation emissions, including greenhouse gases.</p>	JPA/Project proponent	Prior to construction
Prior to construction	<p><u>Mitigation Measure AQ-11: Encourage Local Jurisdictions to Develop Efficiency Metrics for Reducing GHG Emissions</u>                      The JPA will encourage each of its member jurisdictions to adopt efficiency metrics to address future transportation emissions, including greenhouse gases. These metrics will include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Vehicle idling restrictions</li> <li>• Per capita vehicle miles traveled goals</li> <li>• Public transit ridership goals</li> <li>• Traffic signal synchronization</li> <li>• Land use/Transportation integrated planning goals</li> <li>• Bicycle and Pedestrian Improvements</li> </ul>	JPA/Project proponent	Prior to construction
Prior to construction	<p><u>Mitigation Measure BIO-1: Conduct an Environmental Awareness Training Program for Construction Crews</u></p>	JPA/Project proponent/Lead	Verify prior to construction

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>Before any work occurs in the project area, a qualified biologist will conduct a mandatory environmental awareness training program for all construction personnel working on the project. The training program will notify construction personnel of the sensitive biological resources occurring within the project area, their legal status, and penalties for not complying with the conditions of any permits issued for the project.</p> <p>The education program will emphasize the need to protect water quality, wetlands, and habitat for special-status species. A biological monitor approved by the resource agencies will ensure that construction personnel adhere to the guidelines and restrictions of all approved environmental documents, permits, and other agreements.</p>	Agency	
Prior to construction; during construction	<p><u>Mitigation Measure BIO-2a: Avoid or Minimize Impacts on Special-Status Plant Populations</u></p> <p>As part of the environmental review process for individual projects, the JPA or implementing agency will retain a qualified botanist to document the presence or absence of special-status plants before project implementation. The following steps will be implemented on a project-by-project basis to document special-status plants:</p> <ul style="list-style-type: none"> <li>• <b>Review Existing Information.</b> The botanist will review existing information to develop a list of special-status plants that could grow in the specific project area. Sources of information consulted will include DFG’s CNDDDB, previously prepared environmental documents, city and county general plans, HCPs and natural communities conservation plans (NCCPs), and the CNPS electronic inventory.</li> <li>• <b>Coordinate with Agencies.</b> The botanist will coordinate with the appropriate agencies (DFG, USFWS) to discuss botanical resource issues and determine the appropriate level of surveys necessary to document special-status plants.</li> <li>• <b>Conduct Field Studies.</b> The botanist will evaluate existing habitat conditions for each project and determine what level of botanical surveys may be required. The type of botanical survey will depend on species richness, habitat type and quality, and the probability of special-status species occurring in a particular habitat type. Depending on these factors and the proposed construction activity, one or more of the following levels of survey may be required: <ul style="list-style-type: none"> <li>○ <b>Habitat Assessment.</b> A habitat assessment will be conducted to determine whether suitable habitat is present. This type of assessment can be conducted at any time of year and is used to assess and characterize habitat conditions and determine whether return surveys are necessary. If no suitable habitat is present, no additional surveys will be required.</li> <li>○ <b>Floristic Protocol-Level Surveys.</b> Floristic surveys that follow</li> </ul> </li> </ul>	JPA/Project proponent	Verify prior to issuing grading or building permits and verify periodically during construction

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (California Department of Fish and Game 2009) will be conducted in areas that possess natural vegetation, have known occurrences of special-status plants, or that have habitat potentially supporting special-status plants. These survey protocols require that all species be identified to the level necessary to determine whether they qualify as special-status plants or are plant species with unusual or significant range extensions. The protocols also require that field surveys be conducted when special-status plants that could occur in the area are evident and identifiable. To account for different special-status plant identification periods, one or more series of field surveys may be required in spring and summer months.</p> <ul style="list-style-type: none"> <li>• <b>Implement Avoidance and Minimization Measures.</b> Special-status plant populations identified during the field surveys will be mapped and documented, and the following measures implemented to avoid and minimize impacts on special-status plants: <ul style="list-style-type: none"> <li>○ Redesign or modify the project to avoid or minimize direct and indirect impacts on special-status plants.</li> <li>○ Avoid or minimize construction impacts on special-status plants near the project site by installing environmentally sensitive area fencing (orange construction barrier fencing) around special-status plant populations at least 20 feet from the edge of the population. Wider buffer zone widths set by site-specific conditions and permit requirements, such as those for seasonal wetlands and vernal pools that are considered special-status shrimp habitat, will take precedence over this requirement. The location of the fencing will be marked in the field with stakes and flagging and shown on construction drawings. Construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.</li> </ul> </li> </ul>		
Immediately after construction	<p><u>Mitigation Measure BIO-2b: Compensate for Impacts on Special-Status Plant Species</u>  If impacts on pincushion navarretia, dwarf downingia, Boggs Lake hedge hyssop, legenera, and Sanford's arrowhead cannot be avoided (Ahart's dwarf rush, Sacramento Orcutt grass, and slender Orcutt grass must be avoided), the JPA or implementing agency will compensate for the loss of plants and their habitat by contributing to the conservation and recovery of the affected species. For each special-status plant occurrence impacted, one occurrence of the same species of a similar or greater size will be preserved (to compensate for temporal habitat loss). For each project with impacts on special-status plants, a mitigation and monitoring</p>	JPA/Project proponent	Require measure as part of issuing grading/building permits. Verify compensation after construction

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>plan will be prepared that describes how the loss of special-status plant species will be compensated for. The mitigation and monitoring plan will be reviewed and approved by DFG and USFWS. The plan shall contain, but is not limited to, the following performance standards:</p> <ul style="list-style-type: none"> <li>• Habitat restoration or establishment, where appropriate and feasible, will be used in conjunction with translocating the affected population.</li> <li>• As directed by Policy CO-60 in the Sacramento County General Plan (2011), for segments of the Connector in Sacramento County, mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan or areas specifically identified in the SSHCP, when adopted.</li> <li>• Habitat will be restored or newly established (on or off site) at a minimum ratio of 1:1 (1 acre restored for each acre impacted). Within the Mather Core Recovery Area, habitat will be preserved at a minimum ratio of 2:1 from lands within the Core Recovery Area.</li> <li>• The mitigation site will be monitored the first year after the mitigation is implemented and every 5 years thereafter, until the mitigation is considered to be successful. Mitigation will be considered successful if the translocated population is determined to be stable and contains at least 60% of the number of plants present in the original occurrence. If the population falls below 60% of the original number of plants, then remediation measures will be initiated.</li> </ul> <p>Because this mitigation measure would be experimental and the outcome unpredictable, the impact cannot be reduced to a less-than-significant level.</p> <p>Because special-status species in the project area are state or federally listed or occur in wetlands, each project would have to comply with state and federal laws and regulations governing these resources, and obtain the applicable take or fill permits. These permits may include specific requirements, including compensation measures and ratios, which will take precedence over the measures and ratios specified in the previous paragraph.</p>		
<p>Before construction; during construction</p>	<p><u>Mitigation Measure BIO-3: Avoid and Minimize the Introduction and Spread of Invasive Plant Species</u></p> <p>As part of project-level environmental review, the implementing agency will retain a qualified botanist to address invasive plant species impacts. The botanist will determine whether invasive plant introduction or spread are for a potential impact of the project and whether they could displace native plants and natural habitats or affect the quality of forage on rangelands or cropland productivity. If the botanist determines that invasive plants are a potential impact, the project proponent will review the County Agricultural Commission's noxious weed list, California Department of Food and Agriculture's A, B, and C lists of noxious weeds, and California Invasive Plant Council's list of pest plants of ecological concern including the most current "watch list." These lists will be used to identify invasive plants that</p>	<p>JPA/Project proponent</p>	<p>Verify prior to issuing grading or building permits; periodically check during construction</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>will be targeted during field surveys by the botanist. One or more field surveys will be undertaken by qualified botanists to examine the project area. Surveys will focus on target weed species that are considered locally important for documentation and control purposes.</p> <p>If invasive plant infestations are located during the field surveys, they will be mapped and documented in the CEQA and NEPA documentation, as applicable, and the implementing agency will implement the following measures into their project plans and specifications:</p> <ul style="list-style-type: none"> <li>• Use certified, weed-free, imported erosion-control materials (or rice straw in upland areas).</li> <li>• Coordinate with the applicable County Agricultural Commissioner and land management agencies to ensure that the appropriate best management practices (BMPs) are implemented.</li> <li>• Educate construction supervisors and managers on weed identification and the importance of controlling and preventing the spread of noxious weeds.</li> <li>• Clean equipment at designated wash stations after leaving noxious weed infestation areas.</li> </ul>		
<p>Prior to construction</p>	<p><u>Mitigation Measure BIO-4a: Avoid and Minimize Potential Impacts on Riparian Woodlands</u></p> <p>The implementing agency will retain a qualified biologist to document the location and type of riparian communities that occur in the site-specific project area and could be affected by their project. This information will be mapped and documented as part of CEQA and NEPA documentation, as applicable. Where the Connector runs through Sacramento County, Where the Connector runs through Sacramento County, the implementation agency will insure that projects are consistent with County General Plan Policies C0-87 through C0-92 and associated implementation measures, which address the need to protect, enhance, and restore riparian habitat in the County. The implementing agency will avoid or minimize impacts on riparian communities by implementing the following measures:</p> <ul style="list-style-type: none"> <li>• Redesign or modify the project to avoid direct and indirect impacts on riparian communities, if feasible.</li> <li>• Protect riparian communities near the project site by installing environmentally sensitive area fencing at least 20 feet from the edge of the riparian vegetation. Depending on site-specific conditions, this buffer may be narrower or wider than 20 feet (e.g., where adjacent structures or resources prohibit staking out 20 feet or where certain resources warrant wider buffers, as determined by a biologist). The location of the fencing will be marked in the field with stakes and flagging and shown on construction drawings. Construction specifications will contain clear</li> </ul>	<p>JPA/Project proponent</p>	<p>Verify prior to issuing grading or building permits; periodically check during construction</p>

Mitigation Monitoring Program, Continued

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.</p> <ul style="list-style-type: none"> <li>Minimize the potential for long-term loss of riparian vegetation by trimming vegetation rather than removing the entire shrub. Shrub vegetation will be cut at least 1 foot above ground level to leave the root systems intact and allow for more rapid regeneration of the species. Cutting will be limited to a minimum area necessary within the construction zone. This type of removal will be allowed only for shrub species (all trees will be avoided) in areas that do not provide habitat for sensitive species. To protect migratory birds, no woody riparian vegetation will be removed between January 1 and August 31.</li> </ul>		
	<p><u>Mitigation Measure BIO-4b: Compensate for the Loss of Riparian Community</u>                      If riparian vegetation is removed as part of a specific project, the responsible implementing agency will compensate for the loss of riparian vegetation. Compensation will be provided at a minimum 1:1 ratio for restoration and 2:1 preservation, and may be a combination of onsite restoration/creation, offsite restoration, or mitigation credits. If mitigation is completed on or off site by the JPA or implementing agency, they will develop a restoration and monitoring plan that describes how riparian habitat will be enhanced or recreated and monitored. At a minimum, the restoration and monitoring plan will include clear goals and objectives, success criteria, specifics on restoration/creation (plant palette, soils, irrigation, etc.), specific monitoring periods and reporting guidelines, and a maintenance plan. In general, any riparian restoration or creation will be monitored for a minimum of 5 years and will be considered successful when at least 75% of all plantings have become successfully established. For areas of the Connector that run through Sacramento County, restoration and preservation actions will be consistent with General Plan Policy CO-58, which states that there will be net loss of riparian woodland in the County, and Policy CO-60, which states that mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan.</p>	<p>JPA/Project proponent</p>	<p>Verify prior to issuing grading or building permits and verify periodically during construction</p>
<p>Prior to construction</p>	<p><u>Mitigation Measure BIO-5a: Avoid and Minimize Disturbance of Waters of the United States and Waters of the State</u>                      The implementing agency for a specific project in the project area will retain a qualified wetlands biologist to identify areas that could qualify as waters of the United States and waters of the state, including jurisdictional and isolated wetlands. USACE jurisdictional wetlands will be delineated using the methods outlined in the USACE 1987 Wetlands Delineation Manual and the Arid West Manual, or succeeding guidance. This information will be mapped and documented as part of future CEQA documentation, as applicable, and in wetland delineation reports and permitting.</p> <p>Implementing agencies will avoid and minimize impacts on wetlands and other</p>	<p>JPA/Project proponent</p>	<p>Verify prior to issuing grading or building permits; periodically check during construction</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>waters by implementing the following measures:</p> <ul style="list-style-type: none"> <li>• Redesign or modify the project to avoid direct and indirect impacts on wetland habitats, including water quality run-off, if feasible.</li> <li>• Protect wetland habitats that occur near the project site by installing environmentally sensitive area fencing at least 20 feet from the edge of the wetland. Depending on site-specific conditions and permit requirements, this buffer may be wider than 20 feet (e.g., 250 feet for seasonal wetlands and vernal pools that are considered special-status shrimp habitat). The location of the fencing will be marked in the field with stakes and flagging and shown on construction drawings. Construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.</li> <li>• Avoid installation activities in saturated or ponded wetlands during the wet season (spring and winter) to the maximum extent possible. Where such activities are unavoidable, protective practices, such as use of padding or vehicles with balloon tires, will be used.</li> <li>• Where determined necessary by resource specialists, use geotextile cushions and other materials (e.g., timber pads, prefabricated equipment pads, or geotextile fabric) in saturated conditions to minimize damage to the substrate and vegetation.</li> <li>• Stabilize exposed slopes and streambanks immediately on completion of installation activities. Other waters of the United States and waters of the state will be restored in a manner that encourages vegetation to reestablish to its pre-project condition and reduces the effects of erosion on the drainage system.</li> <li>• In highly erodible stream systems, stabilize banks using a nonvegetative material that will bind the soil initially and break down within a few years. If the project engineers determine that more aggressive erosion control treatments are needed, use geotextile mats, excelsior blankets, or other soil stabilization products.</li> <li>• During construction, remove trees, shrubs, debris, or soils that are inadvertently deposited below the ordinary high-water mark of drainages in a manner that minimizes disturbance of the drainage bed and bank.</li> </ul> <p>These measures will be incorporated into contract specifications and implemented by the construction contractor. In addition, the implementing agency will ensure that the contractor incorporates all state and federal permit conditions into construction specifications.</p>		
<p>Prior to construction; after construction</p>	<p><u>Mitigation Measure BIO-5b: Compensate for the Loss of Wetlands and Waters</u> If wetlands and waters are filled or disturbed as part a specific project, the</p>	<p>JPA/Project proponent</p>	<p>Require measure as part of issuing</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>implementing agency will compensate for the loss of wetland and waters to ensure there is no net loss of habitat functions and values. The compensation will be at a minimum 1:1 restoration ratio and a 1:1 preservation ratio with the mitigation being met by purchasing credits at a USACE-approved mitigation bank or other USACE-approved mitigation site. For those segments of the project within the Mather Core Recovery Area, the conservation/preservation ratio for direct impacts to waters of the U.S. will be a minimum of 2:1, with additional compensation for indirect impacts at a minimum ratio of 1:1. The implementing agency will prepare a comprehensive mitigation plan containing the following components: specifications for the conservation/preservation lands; the locations of the compensation lands, provisions for the management and maintenance of those lands in perpetuity by either the implementing agency or other entity, and the instruments by which long-term management and maintenance will be assured. As directed by Policy CO-60 in the Sacramento County General Plan (2011), for segments of the Connector in Sacramento County, mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan.</p>		<p>grading/building permits. Verify compensation after construction</p>
<p>Prior to construction; during construction</p>	<p><u>Mitigation Measure BIO-6a: Avoid and Minimize Impacts on Special-Status Wildlife Species</u></p> <p>As part of project-level environmental review, implementing agencies will retain a qualified wildlife biologist to document the presence or absence of suitable habitat for special-status wildlife in the specific project area and vicinity. The following steps will be implemented to document special-status wildlife and their habitats for each project:</p> <ul style="list-style-type: none"> <li>• Review Existing Information. The wildlife biologist will review existing information to develop a list of special-status wildlife species that could occur in the project area. The following information will be reviewed as part of this process: the USFWS special-status species list for the project region, a review of records in the CNDDDB, previously prepared environmental documents, city and county general plans, HCPs and NCCPs (if there are any), and USFWS issued biological opinions for previous projects.</li> <li>• Coordinate with State and Federal Agencies. The wildlife biologist will coordinate with the appropriate agencies (DFG and USFWS) to discuss wildlife resource issues in the project area and determine the appropriate level of surveys necessary to document special-status wildlife and their habitats.</li> <li>• Conduct Field Studies. The wildlife biologist will evaluate existing habitat conditions and determine what level of biological surveys may be required. The type of survey required will depend on habitat type and quality and the probability of special-status species occurring in a particular habitat type. Depending on the existing conditions in the project area and the proposed construction activity, one or more of the following</li> </ul>	<p>JPA/Project proponent</p>	<p>Verify prior to issuing grading or building permits; periodically check during construction</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>levels of survey may be required:</p> <ul style="list-style-type: none"> <li>○ Habitat Assessment. A habitat assessment determines whether suitable habitat is present. This type of assessment can be conducted at any time of year and is used to assess and characterize habitat conditions and to determine whether return surveys are necessary. If no suitable habitat is present, no additional surveys will be required.</li> <li>○ Species-Focused Surveys. Species-focused surveys (or target species surveys) will be conducted if suitable habitat is present for special-status wildlife and if they are necessary to determine the presence or absence of a species in the project area. The surveys will focus on special-status wildlife species that have the potential to occur in the region. The surveys will be conducted during a period when the target species are present or active.</li> <li>○ Protocol-Level Wildlife Surveys. The project proponent will comply with protocols and guidelines issued by responsible agencies for certain special-status species. USFWS and DFG have issued survey protocols and guidelines for several special-status wildlife species that could occur in the project region, including (but not limited to) the valley elderberry longhorn beetle, vernal pool branchiopods, giant garter snake, western burrowing owl, Swainson's hawk, and nesting birds. The protocols and guidelines may require that surveys be conducted during a particular time of year or time of day when the species is present and active. Many survey protocols require that only a USFWS- or DFG-approved biologist perform the surveys. The project proponent will coordinate with the appropriate state or federal agency biologist before the initiation of protocol-level surveys to ensure that the survey results will be valid. Because some species can be difficult to detect or observe, multiple field techniques may be used during a survey period and additional surveys may be required in subsequent seasons or years as outlined in the protocol or guidelines for each species.</li> </ul> <p>Special-status wildlife or suitable habitat identified during the field surveys will be mapped and documented as part of the CEQA and NEPA documentation, as applicable. The implementing agencies will implement a combination of the following mitigation measures to avoid and minimize significant impacts on special-status wildlife and their habitats:</p> <ul style="list-style-type: none"> <li>• Redesign or modify the project to avoid direct and indirect impacts on special-status wildlife or their habitats, including interruption of migration corridors, if feasible.</li> <li>• Protect special-status wildlife and their habitat near the project site by</li> </ul>		

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>installing environmentally sensitive area fencing around habitat features, such as vernal pools, seasonal wetlands, burrows, and nest trees. The environmentally sensitive area fencing or staking will be installed at a minimum distance from the edge of the resource as determined through coordination with state and federal agency biologists (USFWS and DFG). The location of the fencing will be marked in the field with stakes and flagging and shown on construction drawings. Construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.</p> <ul style="list-style-type: none"> <li>• When feasible restrict construction-related activities near sensitive resources to the nonbreeding season or other periods of activity for special-status wildlife species that could occur in the project area. Typical timing restrictions include, but are not limited to: <ul style="list-style-type: none"> <li>○ Valley elderberry long horn beetle – February 15 to November 1 (time period where shrub transplanting can't occur).</li> <li>○ Giant garter snake inactive period – October 1 to May 1</li> <li>○ Western spadefoot toad reproductive period – generally January 1 to May 1</li> <li>○ Swainson's hawk nesting season – generally February 1 to August 31</li> <li>○ Burrowing owl nesting – generally February 1 to August 31</li> <li>○ Other nesting migratory birds and raptors – generally January 1 to August 31</li> </ul> </li> <li>• Conduct biological construction monitoring of project areas where work occurs in proximity to sensitive wildlife or their habitat. The JPA or implementing agency will hire a qualified wildlife biologist approved by USFWS and DFG to monitor construction activities to ensure that no wildlife is harmed during construction and no wildlife habitat outside of the project area is unintentionally affected by project construction.</li> </ul>		
<p>Prior to construction; immediately after construction</p>	<p><u>Mitigation Measure BIO-6b: Compensate for Impacts on Special-Status Wildlife Species</u></p> <p>If all or portions of Mitigation Measure BIO-6a are not feasible and site-specific construction activities would result in significant impacts on special-status wildlife species, compensation for the loss of habitat will be implemented to reduce the impact to a less-than-significant level. Impacted habitat will be mitigated off site at an agency approved mitigation bank. The minimum replacement ratios and typical mitigation for wildlife habitat that could be impacted by the proposed project are presented in Table 5-5. As directed by Policy CO-60 in the Sacramento County General Plan (2011), for segments of the Connector in Sacramento County, mitigation will be directed to lands identified on the Open Space Vision Diagram and associated component maps identified in the Open Space Element of the Plan. If the SSHCP has been implemented and the Capital SouthEast Connector Project is a covered project, the JPA or member jurisdictions would comply with</p>	<p>JPA/Project proponent</p>	<p>Require measure as part of issuing grading/building permits. Verify compensation after construction</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action																		
	<p>the requirements of the plan to address this impact.</p> <p><b>Table 5-5. Minimum Replacement Ratios and Typical Mitigation for Wildlife Habitat</b></p> <table border="1" data-bbox="537 431 1381 1133"> <thead> <tr> <th data-bbox="537 431 848 472">Species</th> <th data-bbox="848 431 1163 472">Preservation</th> <th data-bbox="1163 431 1381 472">Creation/Restoration</th> </tr> </thead> <tbody> <tr> <td data-bbox="537 472 848 602">Vernal pool fairy shrimp and vernal pool tadpole (would mitigate for other vernal pool species)</td> <td data-bbox="848 472 1163 602">Minimum of 2:1 (1:1 for indirect impacts)</td> <td data-bbox="1163 472 1381 602">1:1</td> </tr> <tr> <td data-bbox="537 602 848 813">Valley elderberry longhorn beetle</td> <td data-bbox="848 602 1163 813">Transplant directly affected shrubs</td> <td data-bbox="1163 602 1381 813">Plant seedlings and associated riparian stem placement ratio from 1:1 to 8:1, depending on stem size and shrub location</td> </tr> <tr> <td data-bbox="537 813 848 911">Giant garter snake</td> <td data-bbox="848 813 1163 911">Preserve replacement habitat</td> <td data-bbox="1163 813 1381 911">From 1:1 to 3:1 depending on nature of impact</td> </tr> <tr> <td data-bbox="537 911 848 1057">Burrowing owl</td> <td data-bbox="848 911 1163 1057">6.5 acres of foraging habitat for each pair relocated on site; 9.75 to 19.5 acres per pair for offsite relocation</td> <td data-bbox="1163 911 1381 1057">Create artificial burrows if necessary</td> </tr> <tr> <td data-bbox="537 1057 848 1133">Swainson's hawk</td> <td data-bbox="848 1057 1163 1133">Preserve foraging habitat from 0.5:1 to 1.5:1</td> <td data-bbox="1163 1057 1381 1133">NA</td> </tr> </tbody> </table>	Species	Preservation	Creation/Restoration	Vernal pool fairy shrimp and vernal pool tadpole (would mitigate for other vernal pool species)	Minimum of 2:1 (1:1 for indirect impacts)	1:1	Valley elderberry longhorn beetle	Transplant directly affected shrubs	Plant seedlings and associated riparian stem placement ratio from 1:1 to 8:1, depending on stem size and shrub location	Giant garter snake	Preserve replacement habitat	From 1:1 to 3:1 depending on nature of impact	Burrowing owl	6.5 acres of foraging habitat for each pair relocated on site; 9.75 to 19.5 acres per pair for offsite relocation	Create artificial burrows if necessary	Swainson's hawk	Preserve foraging habitat from 0.5:1 to 1.5:1	NA		
Species	Preservation	Creation/Restoration																			
Vernal pool fairy shrimp and vernal pool tadpole (would mitigate for other vernal pool species)	Minimum of 2:1 (1:1 for indirect impacts)	1:1																			
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Swainson's hawk	Preserve foraging habitat from 0.5:1 to 1.5:1	NA																			
Prior to construction	<p><u>Mitigation Measure BIO-7: Review Local City and County Policies, Ordinances, and Conservation Plans and Comply with Requirements</u></p> <p>As part of project-level environmental review, implementing agencies will ensure that projects comply with the most recent general plans, policies, ordinances, and conservation plans (including any HCPs, NCCPs, and other local, regional, and state plans). Review of these documents and compliance with their requirements will be demonstrated in project-level environmental documentation. Implementing agencies will ensure that projects comply with all policies, ordinances, and plans that exist at the time of project-level review, regardless of whether they existed during the program-level analysis.</p>	JPA/Project proponent	Verify prior to issuing grading or building permits																		
Prior to construction; during construction	<p><u>Mitigation Measure BIO-8a: Avoid and Minimize Impacts on Protected Trees</u></p> <p>As part of project-level environmental review, proponents of specific projects that may result in removal of protected woodland communities and individual trees will</p>	JPA/Project proponent	Verify prior to issuing grading or building permits; periodically																		

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>review local plans, policies, and ordinances related to their protection and comply with local jurisdiction requirements.</p> <p>If avoidance is required by the local planning jurisdiction and determined to be feasible, implementing agencies will install orange construction barrier fencing to identify environmentally sensitive areas around protected trees (the minimum size of tree to be protected will be determined by the local ordinance). If avoidance is not feasible then Mitigation Measure BIO-8b will be implemented (see discussion below).</p> <p>Before construction, a qualified biologist will work with the project engineer to identify the locations for the barrier fencing, and will place stakes around the sensitive resource sites to indicate these locations. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications:</p> <p><i>The Contractor's attention is directed to the areas designated as "environmentally sensitive areas." These areas are protected, and no entry by the Contractor for any purpose will be allowed unless specifically authorized in writing by the &lt;jurisdiction name here&gt;. The Contractor will take measures to ensure that Contractor's forces do not enter or disturb these areas, including giving written notice to employees and subcontractors.</i></p> <p>Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with a maximum of 10-foot spacing.</p>		<p>check during construction</p>
<p>Prior to construction; immediately after construction</p>	<p><u>Mitigation Measure BIO-8b Compensate for Impacts on Protected Trees</u></p> <p>If impacts on protected trees cannot be avoided, then the implementing agency will compensate for impacts on protected trees. For portions of the project in Sacramento County, the following policies from the Sacramento County General Plan (2011) regarding landmark and heritage tree protections will be implemented:</p> <ul style="list-style-type: none"> <li>● CO-138 – Protect and preserve non-oak native trees along riparian areas if used by Swainson's hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.</li> <li>● CO-139 – Native trees other than oak, which cannot be protected through development, shall be replaced with in-kind species in accordance with</li> </ul>	<p>JPA/Project proponent</p>	<p>Require measure as part of issuing grading/building permits. Verify compensation after construction</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.</p> <ul style="list-style-type: none"> <li>● CO-140 – For projects involving native oak woodlands, oak savannah or mixed riparian areas, ensure mitigation through either of the following methods:                             <ul style="list-style-type: none"> <li>○ An adopted habitat conservation plan.</li> <li>○ Ensure not net loss of canopy area through a combination of the following: (1) preserving the main, central portions of consolidated and isolated groves constituting the existing canopy and (2) provide an area on-site to mitigate any canopy lost. Native oak mitigation area must be a contiguous area on-site which is equal to the size of canopy area lost and shall be adjacent to existing oak canopy to ensure opportunities for regeneration.</li> <li>○ Removal of native oaks shall be compensated with native oak species with a minimum of a one to one dbh replacement.</li> <li>○ A provision for a comparable on-site area for the propagation of oak trees may substitute for replacement tree planting requirements at the discretion of the County Tree Coordinator when removal of a mature oak tree is necessary.</li> <li>○ If the project site is not capable of supporting all the required replacement trees, a sum equivalent to the replacement cost of the number of trees than cannot be accommodated may be paid to the County's Tree Preservation Fund or another appropriate tree preservation fund.</li> <li>○ If on-site mitigation is not possible given site limitation, off-site mitigation may be considered. Such a mitigation area must meet all of the following criteria to preserve, enhance, and maintain a natural woodland habitat in perpetuity, preferably by transfer of title to an appropriate public entity. Protected woodland habitat could be use as a suitable site for replacement tree plantings required by ordinances or other mitigation.                                     <ul style="list-style-type: none"> <li>● Equal or greater in are to the total are that is included within a radius of 30 feet of the dripline of all trees to be removed;</li> <li>● Adjacent to protected stream corridor or other preserved natural area;</li> <li>● Supports a significant number of native broadleaf trees; and</li> <li>● Offers good potential for continued regeneration of an integrated woodland community.</li> </ul> </li> </ul> </li> </ul>		

Mitigation Monitoring Program, Continued

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<ul style="list-style-type: none"> <li>● CO-141 – In 15 years the native oak canopy within on-site mitigation area shall be 50 percent canopy coverage for valley oak and 30 percent canopy coverage for blue oak and other native oaks.</li> </ul> <p>For areas outside of Sacramento County jurisdiction, at a minimum, for every tree impacted one existing tree will be preserved and one new tree will be planted. Compensation for impacted trees will be done at a minimum of the following:</p> <ul style="list-style-type: none"> <li>● planting replacement trees within project right-of-ways at 1:1, or</li> <li>● preserving (1:1) and planting replacement trees (1:1) at agency-approved offsite locations.</li> </ul>		
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure CUL-1: Conduct Site-Specific Cultural Resource Investigations and Implement the Recommendations</u></p> <p>Prior to construction, the JPA or local jurisdictions will update the consultation completed for this Program EIR with the NAHC to determine whether any sacred sites since have been identified in the specific project area, as well as update the list of Native American groups/individuals to contact. In addition, a qualified archaeologist will update the records search at the NCIC to determine whether additional surveys of the specific project area have been conducted or any new sites have been identified.</p> <p>The NCIC will recommend whether a cultural resources survey is warranted based on the specific details of the project design and the sensitivity of the specific project area for archaeological resources. If recommended, the JPA or local jurisdiction will retain a qualified archaeologist to conduct a site-specific cultural resource survey before any construction activities.</p> <p>If the cultural resource survey indicates that archaeological resources are located in the specific project area, the JPA or local jurisdiction will retain a qualified archaeologist to assess the significance of the resource(s) according to the applicable local, state, and federal significance criteria. Measures to reduce substantial adverse changes in the significance of significant archaeological resources will be developed in consultation with qualified archaeologists and other concerned parties. Avoidance will ensure that the impact is reduced to a less than significant level.</p> <p>If avoidance is not feasible, other measures will be implemented to reduce the impact, including data recovery excavation, and public interpretation of the resource. For some resources, these measures will not reduce the impact to a less than significant level.</p> <p>If this process indicates that the specific project area has the potential to yield cultural materials, the JPA or local jurisdiction will retain a qualified archaeologist</p>	<p>JPA/Project proponent</p>	<p>Verify prior to issuing grading/building permits</p>

Mitigation Monitoring Program, Continued

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>to monitor any subsurface operations, including but not limited to grading, excavation, trenching, and removal of existing features of the subject property.</p> <p>If archeological materials are uncovered during construction, they should be avoided. As described above, if avoidance is not feasible, other measures will be implemented to reduce the impact, including data recovery excavation, and public interpretation of the resource. For some resources, these measures will not reduce the impact to a less than significant level.</p>		
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure CUL-2: Stop Work If Archeological Materials Are Discovered during Construction</u></p> <p>If archaeological materials (e.g., chipped or ground stone, historic debris, or building foundations) are inadvertently discovered during ground-disturbing activities, the JPA or local jurisdiction will ensure that the contractor notify the agencies responsible for project implementation and will stop work in that area and within 100 feet of the find until a qualified archaeologist retained by the JPA or local jurisdiction can assess the significance of the find and implement Mitigation Measure CUL-1.</p>	<p>JPA/Project proponent; retained qualified archaeologist</p>	<p>Require in grading and building permits</p>
<p>During construction</p>	<p><u>Mitigation Measure CUL-3: Stop Work If Human Remains Are Discovered during Construction</u></p> <p>If human remains are uncovered, the JPA or local jurisdiction will ensure that the contractor contacts the county coroner and NAHC immediately. If human remains are discovered in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <ul style="list-style-type: none"> <li>• the county coroner has been informed and has determined that no investigation of the cause of death is required; and</li> <li>• if the remains are of Native American origin,</li> <li>• the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work regarding the means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98, or</li> <li>• the NAHC was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the NAHC.</li> </ul> <p>According to the HSC, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052).</p>	<p>JPA/Project proponent; county coroner</p>	<p>Require in grading and building permits; verify periodically during construction</p>
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure CUL-4: Conduct Historic Inventory and Evaluation for Architectural Resources</u></p> <p>For implementation of specific project activities, before construction activities</p>	<p>JPA/Project proponent; retained qualified</p>	<p>Require in grading and building permits; verify periodically during</p>

Mitigation Monitoring Program, Continued

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>begin, the JPA or local jurisdiction will ensure that a qualified architectural historian conducts a project-level inventory and evaluation for architectural resources, including an intensive field survey, background research on the history of the site-specific project area, and property-specific research.</p> <p>Should any historic architectural resources be identified in the area affected by the specific project activity, the architectural historian will evaluate the significance of architectural resources located using criteria for listing in the NRHP and CRHR. The resources will be recorded on appropriate California Department of Parks and Recreation (DPR) 523 forms, photographed, and mapped. The DPR forms will be produced and forwarded by the architectural historian to the appropriate Information Center.</p> <p>Significant historic resources should be avoided if feasible.</p>	architectural historian	construction
Prior to construction; During construction	<p><u>Mitigation Measure GEO-1: Implement Seismic Design Standards into Site-Specific Project Design</u></p> <p>Prior to construction, the JPA or local jurisdictions will ensure that the project is designed and constructed in compliance with the latest CBSC standards, Caltrans seismic design criteria, and county and city general plan seismic standards to ensure that all project components can withstand moderate to strong earthquake-shaking.</p>	JPA/Project Proponent Project Engineer; construction contractor	Require in grading and building permits; verify periodically during construction
Prior to construction; During construction	<p><u>Mitigation Measure GEO-2: Conduct Site-Specific Geotechnical Investigations and Implement the Recommendations</u></p> <p>Prior to construction, the JPA or local jurisdictions will prepare project-specific geotechnical investigations to guide the design of earthworks and foundations for proposed structures. Based on the subsurface conditions expressed through geotechnical investigation, the JPA and local jurisdictions, in conjunction with soil scientists or engineers, will ensure that specific project elements are designed to accommodate the effects of liquefaction of expansive soils. For roadways and bridges, subsurface borings at regular intervals along proposed roadways and in the vicinity of proposed bridges are recommended as part of the geotechnical evaluations.</p> <p>If the site-specific geotechnical investigations find that liquefiable soils, soils susceptible to seismically induced settlement, or expansive soils are present at any location where project activities would occur, corrective actions will be taken. These actions may include—depending on the extent and depth of susceptible soils and findings of the geotechnical evaluations—removal and replacement of soils; on-site densification; grouting; and design of special foundations or other similar measures. All of these measures reduce pore water pressure during ground shaking by making the soil more dense or improving its drainage capacity (Johansson 2000). The JPA or local jurisdictions will ensure that their contractors implement one or more of these measures in consultation with a qualified engineer</p>	JPA/Project Proponent Project Engineer; construction contractor	Require in grading and building permits; verify periodically during construction

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>before beginning and during construction.</p> <p>The JPA or local jurisdictions will ensure, as a contract specification, that their contractors implement the recommendations of site-specific geotechnical reports pertaining to site clearing and preparation, organic removal, engineered fill placement, trench backfilling, foundation design, soundwall systems, exterior flatwork, pavement design, and site drainage to minimize any adverse effects associated with runoff, erosion, and sedimentation.</p>		
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure GEO-3: Stop Work if Paleontological Resources are Discovered During Construction and Implement Recommendations of Paleontologist</u></p> <p>If paleontological resources (i.e., fossils) are discovered during ground-disturbing activities, the JPA or local jurisdictions will ensure that their contractors notify the JPA or local jurisdictions responsible for project implementation, and stop work in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and develop appropriate treatment measures. Treatment measures will be made in consultation with the JPA or local jurisdictions and would include the following steps to be taken by a qualified paleontologist:</p> <ul style="list-style-type: none"> <li>• Conduct a paleontological survey of the area before continuing with construction.</li> <li>• If construction could encounter significant paleontological resources, monitor construction in the area for the purpose of ensuring that construction does not destroy resources before they can be evaluated</li> <li>• Salvage, curate, and preserve significant paleontological resources to meet professional standards.</li> </ul>	<p>JPA/Project proponent; retained qualified paleontologist</p>	<p>Require in grading and building permits; verify periodically during construction</p>
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure HAZ-1: Perform a Phase I Environmental Site Assessment prior to Demolition and Construction Activities and Remediate If Required</u></p> <p>Prior to construction, the JPA or local jurisdictions will conduct appropriate environmental review during the tiered or project-level environmental documentation phase, including a Phase I environmental site assessment in conformance with the ASTM Standard Practice E1527-05. All environmental investigation, sampling, and remediation activities associated with properties in the project area will be conducted under a work plan approved by the regulatory oversight agency and will be conducted by a registered environmental assessor (pursuant to 22 CCR 69200) consistent with Phase I and Phase II environmental site assessments as detailed below. The results of any investigation and/or remediation activities conducted in the project area will be included in the project-level EIR.</p> <p>A Phase I environmental site assessment should, at a minimum, include:</p> <ul style="list-style-type: none"> <li>• an on-site visit to determine current conditions (e.g., vegetative dieback,</li> </ul>	<p>JPA/Project Proponent Project Engineer; Project proponent</p>	<p>Require in grading and building permits; verify periodically during construction</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>chemical spill residue, presence of above- or underground storage tanks, etc.);</p> <ul style="list-style-type: none"> <li>• an evaluation of possible risks posed by neighboring properties;</li> <li>• interviews with persons knowledgeable about the site's history (e.g., current or previous property owners, property managers, etc.);</li> <li>• an examination of local planning files to check prior land uses and any permits granted.</li> <li>• file searches with appropriate agencies (e.g., SWRCB, fire department, county health department) having oversight authority relative to water quality, groundwater and soil contamination;</li> <li>• examination of historical aerial photography of the site and adjacent properties;</li> <li>• review of Sanborn-Perris fire insurance maps;</li> <li>• a review of current and historic topographic maps of the site to determine drainage patterns; and</li> <li>• an examination of chain-of-title for environmental liens and/or activity and land use limitations.</li> </ul> <p>If the Phase I environmental site assessment indicates likely site contamination, a Phase II environmental site assessment will be performed (also by a registered environmental assessor).</p> <p>A Phase II environmental site assessment would include:</p> <ul style="list-style-type: none"> <li>• collection of original surface and/or subsurface samples of soil, groundwater, and building materials to analyze for quantities of various contaminants; and</li> <li>• an analysis to determine the vertical and horizontal extent of contamination (if the evidence from sampling shows contamination).</li> </ul> <p>If contamination is uncovered as part of Phase I or II environmental site assessments, remediation will be required. If materials such as ACM, LBP, or other hazardous building materials like mercury switches, or PCB-containing equipment are identified, these materials will be properly managed and disposed of prior to or during the demolition process.</p> <p>Any contaminated soil identified on a project site must be properly disposed of in accordance with DTSC regulations in effect at the time.</p> <p>Hazardous wastes generated by the proposed project will be managed in accordance with the California Hazardous Waste Control Law (HSC, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulation (Title 22, CCR, Division 4.5).</p>		

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Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>If, during construction/demolition of structures, soil or groundwater contamination is suspected the construction/demolition activities will cease and appropriate health and safety procedures will be implemented, including the use of appropriate personal protective equipment (e.g., respiratory protection, protective clothing, helmets, goggles).</p>		
<p>Prior to construction</p>	<p><u>Mitigation Measure HAZ-2: Ensure Compliance with Emergency Response and Evacuation Plans</u>                      Prior to project-specific design approval, the JPA or local jurisdiction will confer with SACOG, as the designated ALUC, to ensure that the project is consistent with any CLUP or ALUCP in effect at the time of consideration of the project-specific design.</p>	<p>JPA/Project Proponent Project Engineer or construction contractor</p>	<p>Require in grading and building permits</p>
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure HAZ-3: Prepare a Traffic Management Plan and Construction Scheduling</u>                      The JPA or local agencies, as applicable, will require that the contractor(s) prepare a traffic management plan (TMP) during the final stage of project design to ensure there is no interference with emergency vehicles/services or response/evacuation plans. The plan will list procedures, specific emergency response, and evacuation measures to be followed during emergencies. The contractor will prepare this manual, subject to review and approval by the JPA or local jurisdiction, and distribute the approved plan to contract workers involved in the proposed project before construction and during operation of the project. Implementation of the approved plan will be a requirement of the construction contract. The JPA or local jurisdiction will provide project maps to emergency personnel (e.g., fire protection agencies, police and sheriff departments, California Highway Patrol) that describe construction activities as well as access roads to ensure proper emergency response to all parts of the proposed project.</p> <p>Standards found in Caltrans' TMP guidelines (2009) outline the basic requirements for such plans. The JPA or local jurisdictions will require the following measures to be implemented as part of project construction.</p> <ul style="list-style-type: none"> <li>• The contractor will be required to prepare and implement a TMP that identifies the locations of temporary detours and signage to facilitate local traffic/truck patterns and through-traffic requirements.</li> <li>• The contractor will provide emergency service providers (i.e., law enforcement, fire protection, and ambulance services) adequate notice of any street closures during the construction phases of the proposed project.</li> <li>• Construction activities will be coordinated to avoid blocking or limiting auto, truck, bike, and pedestrian access to homes and businesses to the extent possible. Residents will be notified in advance about potential access or parking effects before construction activities begin. Facilities such as traffic lights, turn pockets, or common driveway access will be</li> </ul>	<p>JPA/Project Proponent Project Engineer or construction contractor</p>	<p>Require in grading and building permits; verify periodically during construction</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>provided continued access. Alternative methods of providing access could also be provided, such as relocation of existing access driveways and sidewalks, provision of frontage roads, construction of joint parking areas and pedestrian access from parking areas.</p> <ul style="list-style-type: none"> <li>• A comprehensive marketing campaign throughout the larger market area will be provided to ensure that customers know that businesses are operating during construction, and how to reach them. This would include signage posted well outside the impacted area, on routes leading into the construction area.</li> <li>• Any interchange, ramp, or road closures required during construction will, to the extent possible, be limited to nighttime hours to reduce effects on businesses within or adjacent to the project limits.</li> <li>• Construction activities will be coordinated to avoid blocking or limiting access to businesses in or adjacent to the project area during business hours. Businesses will be notified in advance concerning construction activities before construction begins near businesses.</li> <li>• The TMP will be prepared to address short-term disruptions in existing circulation patterns during construction. For example, the TMP will identify the locations of temporary detours or temporary roads to facilitate local traffic circulation and through-traffic requirements.</li> </ul>		
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure HYD-1: Obtain an NPDES Construction General Permit and Incorporate its Requirements as Well as Those of Other Water Quality Regulations in Site-Specific Project Designs</u></p> <p>The JPA or local jurisdiction undertaking later projects will implement the following actions either directly or through contract specifications:</p> <ol style="list-style-type: none"> <li>1. During the design of individual projects, in consultation with the applicable regulatory agencies, develop specific design and construction standards for stream crossings, including, but not limited to, maintaining open surface (bridged versus closed culvert) crossings, infrastructure setbacks, erosion control measures, sediment controlling excavation/fill practices, and other BMPs as described in item 4 below.</li> <li>2. In subsequent analysis, during individual project design or preparation of CEQA documents, include, for example, field surveys of potential surface water resources to further analyze potential impacts on water quality. The JPA or local jurisdiction will obtain the required permits from the appropriate agencies based on the results of the field surveys.</li> <li>3. During and after construction activities, monitor and ensure compliance with water quality objectives outlined in the Central Valley RWQCB Basin Plan.</li> <li>4. Minimize sediment transport caused by construction by following BMPs</li> </ol>	<p>JPA/Project Proponent Project Engineer; construction contractor</p>	<p>Verify prior to issuing grading/building permits</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>undertaken as part of NPDES Permit and SWPPP requirements that will be included in construction permits. The BMPs will be designed so that, when employed in concert, they will meet the requirement of the NPDES permit and avoid the transport of sediment from the project site. BMPs may include, but are not limited to, measures such as the following:</p> <ol style="list-style-type: none"> <li>a. providing permeable surfaces where feasible and where this would not result in erosion or the release of sediment;</li> <li>b. retaining and treating stormwater on site using catch basins and filtering wet basins;</li> <li>c. minimizing the contact of construction materials, equipment, and maintenance supplies with stormwater;</li> <li>d. reducing erosion through soil stabilization, watering for dust control, installing perimeter silt fences, placing rice straw bales, and installing sediment basins; and</li> <li>e. maintaining water quality by using infiltration systems, detention systems, retention systems, constructed wetland systems, filtration systems, biofiltration/bioretention systems, grass buffer strips, ponding areas, organic mulch layers, planting soil beds, sand beds, and vegetated systems such as swales and grass filter strips that are designed to convey and treat either fallow flow (swales) or sheetflow (filter strips) runoff.</li> </ol> <p>5. Develop and implement a procedure for spill prevention and control to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during all construction activities. If a spill should occur during construction that causes a release of a hazardous material, including oil and radioactive materials, the proper agencies will be notified and an Emergency Release Follow-up Notice Reporting Form will be submitted no more than 30 days following the release.</p> <p>6. Use methods such as habitat restoration, reconstruction of [habitat] on site, and habitat replacement off site to minimize surface water quality impacts.</p> <p>7. Comply with conditions included in permits issued under Sections 404 and 401 of the federal CWA.</p> <p>8. Comply with requirements of Section 10 of the federal Rivers and Harbors Act for work required around a water body designated as navigable (and applicable permit requirements).</p> <p>9. Comply with the requirements of a state Streambed Alteration Agreement for work along the banks of various surface water bodies.</p>		

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Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>10. Where feasible, avoid significant development of facilities in areas that may have substantial erosion risk, including areas with erosive soils or steep slopes.</p>		
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure HYD-2: Comply with Provisions for Dewatering</u> The JPA or local jurisdiction will require the following actions as part of construction contract specifications. Before discharging any dewatered effluent to surface water the contractor will determine whether the volume of water from the dewatering operation is covered under the NPDES Construction General Permit. If it is deemed that the volume is greater than the Construction General Permit allows, the contractor will obtain coverage under an NPDES Low Threat Discharge and Dewatering Permit from the Central Valley RWQCB. The NPDES Low Threat Discharge and Dewatering Permit will require the water from the dewatering operation to be treated prior to discharge to any local water way.</p>	<p>JPA/Project Proponent Project Engineer; construction contractor</p>	<p>Verify prior to issuing grading/building permits; verify periodically during construction</p>
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure HYD-3: Implement Measures to Maintain Water Quality after Construction</u> The design of individual projects will include, and the JPA or local jurisdiction will implement, either directly or through contract specifications, source and treatment control measures contained in County Stormwater Management Plans or EPA and other related guidance documents. General site housekeeping and design control measures incorporated into the project design can include, but are not limited to, conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control measures may include use of vegetated swales and buffers, detention basins, wet ponds, or constructed wetlands, infiltration basins, and other measures. LID approaches will be incorporated into site design and stormwater management to maintain the site's predevelopment runoff rates and volumes. Examples of such measures include, but are not limited to, sidewalk storage, vegetated swales, landscaped buffers and strips, tree preservation, permeable pavers, and impervious surface reduction and disconnection. The JPA or local jurisdiction will select and implement specific LID measures and techniques depending on project size and stormwater treatment needs.</p>	<p>JPA/Project Proponent</p>	<p>Require as part of contract specifications and verify prior to issuing grading/building permits</p>
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure HYD-4: Conduct Project-Level Drainage Studies for Project Design</u> The JPA or local jurisdiction will conduct drainage studies for later projects on a site-specific basis. The results of the studies will be integrated into the design of the later project's drainage systems. The studies will address county and city drainage study requirements that typically include the following topics:</p> <ul style="list-style-type: none"> <li>• A calculation of predevelopment runoff conditions and post-development runoff scenarios using appropriate engineering methods. This analysis will evaluate potential changes to runoff through specific design criteria and account for increased surface runoff.</li> <li>• An assessment of existing drainage facilities within the project area and</li> </ul>	<p>JPA /Project Proponent</p>	<p>Require as part of contract specifications and verify prior to issuing grading/building permits</p>

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	<p>an inventory of necessary upgrades, replacements, redesigns, or rehabilitation, including the sizing of onsite stormwater detention features and pump stations.</p> <ul style="list-style-type: none"> <li>• A description of the proposed maintenance program for the onsite drainage system.</li> <li>• Standards for drainage systems to be installed on a project-/parcel-specific basis.</li> <li>• Design measures to ensure structures will not impact 100-year floodplain areas.</li> </ul> <p>Drainage systems for the individual project will be designed in accordance with the findings of the studies, the requirements of the applicable local flood control agencies, and flood control design criteria established under applicable local ordinances. As a performance standard, the systems will provide for no net increase in peak stormwater discharge relative to current conditions to ensure that 100-year flooding and its potential impacts are maintained at or below current levels and that people and structures are not exposed to additional flood risk.</p>		
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure HYD-5: Design and Install Infiltration Systems</u> The design of individual projects will include infiltration systems, where feasible. Infiltration devices will be installed to replace the natural recharge rate of the soil to be paved over, reduce stormwater peak discharges and volumes to downstream catchments, and improve the quality of stormwater discharged to water bodies. Examples of infiltration devices include, but are not limited to, infiltration basins, pervious concrete, retention trenches, and bioretention measures. As discussed in Mitigation Measure HYD-3, LID techniques will be implemented to increase soil infiltration. Much of the proposed project is located within areas with Hydrologic Soil Group (HSG) D soils where certain infiltration devices do not work well. In these cases, other measures such as detention basins or vegetative barriers that will help retain waters.</p>	<p>JPA/Project Proponent Project Engineer; construction contractor</p>	<p>Verify prior to issuing grading/building permits and verify periodically during construction</p>
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure HYD-6: Avoid Restriction of Flood Flows and Obtain Agency Approval of Construction within 100-Year Floodplains</u> The design of individual projects will proceed in accordance with the best available mapping from DWR, FEMA, and USACE. The project design will comply with the requirements of the applicable local flood control agencies, and flood control design criteria established under applicable local ordinances. If unavoidable construction would occur within a 100-year floodplain, the JPA or local jurisdiction will prepare a letter of map amendment and submit to FEMA before construction of the project. The LOMR will include revised local base flood elevations for projects constructed within flood-prone areas. If the LOMR is approved, the design will reflect its provisions.</p>	<p>JPA/Project Proponent Project Engineer; construction contractor</p>	<p>Verify prior to issuing grading/building permits and verify periodically during construction</p>
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure HYD-7: Design Projects to Pass Flows in the Event of Levee or Dam Failure</u> During the design of individual projects, the JPA or local jurisdiction will consult</p>	<p>JPA/Project Proponent Project Engineer;</p>	<p>Verify prior to issuing grading/building permits and verify</p>

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	<p>with the applicable flood control agencies to ensure that the flooding risks of pre-project conditions will not increase as a result of construction of the individual projects. If a project has the potential to impede or redirect flows from a levee or dam failure, such that there would be less than a 1% chance that flooding would extend to areas not previously mapped as inundation areas, the project will be redesigned to the maximum extent practicable so that the project would not expand the area subject to pre-project inundation conditions. This may be achieved through incorporation of culverts or bridges into the project design.</p>	<p>construction contractor</p>	<p>periodically during construction</p>
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure LU-1: The Proponent Agency Will Implement All of the Following Measures Prior to Construction to Reduce Impacts on Significant Farmland</u></p> <ul style="list-style-type: none"> <li>• Design the proposed project to avoid or minimize the direct conversion of important farmland to nonagricultural uses and indirect conversion of farmland through severance or fragmentation. During preliminary design, the JPA or member agencies will locate the proposed project to avoid or minimize loss of agricultural lands and the potential for fragmenting agricultural lands or production in a manner that would make them uneconomical to farm, to the extent that doing so would not compromise safety or standard design criteria for a road of this type.</li> <li>• For important farmland (prime, statewide, unique, and local) converted by the project, either directly or indirectly as described above, important farmland of the same category will be permanently protected from development at a minimum ratio of 1:1. Productive off-site agricultural land subject to conversion will be protected through the purchase or transfer of its development rights and establishment of a farmland conservation easement over the agricultural land pursuant to California Civil Code Section 815, et seq. or other statute providing for its conservation in perpetuity for agricultural use. The JPA or member agencies will provide funds to an agricultural land trust or similar nongovernmental entity for the purchase of agricultural land or development rights on agricultural land and establishment of a farmland conservation easement. The JPA or member agencies shall fund only a land trust or nongovernmental entity with an established record of responsible agricultural land stewardship.</li> </ul>	<p>JPA/Project Proponent Project Engineer;</p>	<p>Require as a condition prior to issuing grading/building permits</p>
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure NOI-1: Employ Noise- and Vibration-Reducing Construction Practices</u></p> <p>Before final project design, the JPA or local jurisdiction will undertake a detailed evaluation of site-specific noise and vibration impacts and identify project-specific mitigation measures necessary to reduce construction noise and vibration to a level that is in compliance with local noise standards where feasible. This may be done as a part of the CEQA process when a later project is subject to CEQA. The JPA or local jurisdiction will ensure through contract provisions and specifications that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.</p>	<p>JPA/Project Proponent Project Engineer; construction contractor</p>	<p>Require as a condition prior to issuing grading/building permits; verify periodically during construction</p>

Timing for Implementation	Mitigation Measure	Implementing Party <sup>1</sup>	Monitoring Action
	<p>Documentation will be provided to the JPA or local jurisdiction on a weekly basis. The contract provisions and specifications will authorize the JPA or local jurisdiction to sanction contractors for non-compliance.</p> <p>The following measures will be implemented to reduce the effects of construction noise and vibration. Additional measures may be developed once project design has developed sufficiently to identify site-specific impacts.</p> <ul style="list-style-type: none"> <li>• Comply with all local sound control and noise level rules, regulations, and ordinances of the pertinent city, county, or both.</li> <li>• Limit the hours of noise-generating construction and related activity such as deliveries and staging activities to between 6 a.m. and 8 p.m. on Monday through Friday and between 7 a.m. and 8 p.m. on weekends, or as required by local noise ordinances in effect for site-specific projects.</li> <li>• Require that equipment and trucks used for project construction use noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) as necessary to limit noise to compliance levels.</li> <li>• Locate stationary noise sources such as generators or pumps as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors will be adequately muffled or an acoustic barrier will be installed to reduce their noise levels to comply with applicable local requirements.</li> <li>• Designate a complaint coordinator at the JPA or local jurisdiction to be responsible for responding to noise complaints received during the construction phase. The name and phone number of the complaint coordinator will be conspicuously posted at construction areas and on all advanced notifications. This person will be responsible for taking steps required to resolve complaints, including periodic noise monitoring and changes to construction activities, if necessary to meet the required mitigation.</li> <li>• Mitigate noise generated from any rock-crushing or screening operations performed within 3,000 feet of any occupied residence by strategic placement of material stockpiles between the operation and the affected dwelling or by other means such as temporary noise barriers approved by the local jurisdiction.</li> <li>• Require contractors to implement appropriate additional noise mitigation measures including (but not limited to) shutting off equipment (including trucks transporting aggregate or other construction materials) so that idling time does not exceed 3 minutes, and notifying adjacent residents by mail not less than 1 week in advance of construction work.</li> <li>• Prohibit pile-driving or blasting operations within 3,000 feet of an occupied residence on Sundays, legal holidays, and between 9 p.m. and 6 a.m. on</li> </ul>		

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	<p>other days, or as governed by local noise ordinances at site-specific locations.</p> <ul style="list-style-type: none"> <li>• Use sonic or vibratory pile drivers instead of impact pile drivers (sonic pile drivers are only effective in some soils). If sonic or vibratory pile drivers are not feasible, install acoustical enclosures as necessary to ensure that pile-driving noise does not exceed applicable local noise standards at the closest sensitive receptor.</li> <li>• Limit pile driving in residential areas to between 8 a.m. and 5 p.m.</li> <li>• Use engine and pneumatic exhaust controls on pile drivers as necessary to ensure that exhaust noise from pile driver engines is minimized to the extent feasible.</li> <li>• Where feasible, pre-drill pile holes to reduce potential noise and vibration impacts.</li> </ul>		
<p>Prior to construction; During construction</p>	<p><u>Mitigation Measure NOI-2: Develop and Employ Site-Specific Measures to Reduce Traffic Noise</u> During project design, the JPA or local jurisdiction will incorporate feasible measures to reduce traffic noise related to the project such that traffic noise from new roadways does not exceed applicable land use compatibility standards at adjacent uses, and such that traffic noise increases along existing roadways does not exceed Sacramento County significance thresholds for traffic noise increases. This may be done as a part of the CEQA process when a later project is subject to CEQA and sufficient detail is available at the time of the CEQA process. Potential measures that can be implemented include (but are not limited to) setbacks, site design, construction of noise barrier walls between the roadway and noise-sensitive uses and installation of low noise pavement such as open-grade asphalt or rubberized asphalt. Emphasis will be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.</p>	<p>JPA/Project Proponent Project Engineer</p>	<p>Require as a condition prior to specific-project approval</p>
<p>Prior to construction</p>	<p><u>Mitigation Measure POP-1: Require Consistency with the JPA's Planning Principles</u> The JPA or local jurisdiction, in developing the final design of any component of the Connector Project, will ensure that such design is consistent with the planning principles set forth in the Joint Powers Agreement that established the JPA, including:</p> <ol style="list-style-type: none"> <li>a. Improve access to, and connections between, residential and employment areas within and outside of the Connector Project corridor;</li> <li>b. Acknowledge that the Connector Project is in the Metropolitan Transportation Plan and further support the transportation and land use principles in the general plans of the local jurisdictions and the Metropolitan Transportation Plan;</li> <li>c. Relieve demand on (i) local streets and roads, and (ii)</li> </ol>	<p>JPA/Project Proponent Project Engineer</p>	<p>Require as a condition prior to specific-project approval</p>

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	<p>regional freeway facilities (US-50, SR-99, and I-5);</p> <ul style="list-style-type: none"> <li>d. Strategically apply access control and capacity characteristics to preserve and enhance regional functionality while discouraging growth in areas not designated for growth as determined by the local jurisdiction's general plan;</li> <li>e. Enhance regional mobility and preserving the livability of communities;</li> <li>f. Provide efficient and safe facilities for automobile, transit, bicycle, and pedestrian options for multi-modal travel;</li> <li>g. Minimize direct and indirect physical impacts on the natural and built environments;</li> <li>h. Preserve open space to reinforce and support approved land use plans; and</li> <li>i. Permit phased implementation with respect to (i) funding, (ii) location, and (iii) design characteristics.</li> </ul>		
<p>Prior to construction</p>	<p><u>Mitigation Measure POP-2: Require Consistency with the JPA's Functional Guidelines</u></p> <p>The JPA or local jurisdiction, in developing the final design of any component of the Connector Project, will consider the Functional Guidelines referenced in the in the JPA's Joint Powers Agreement, as they may be amended and adopted by the JPA , as summarized below:</p> <ul style="list-style-type: none"> <li>• <b>Capacity and Cross-Section:</b> The Connector roadway should be designed and constructed to serve the demand projected in the MTP and adopted local plans.</li> <li>• <b>Access Characteristics:</b> To maximize the efficiency of the roadway, access to the Connector should be allowed only at a limited number of access points; principally, existing primary facilities and new facilities included in the MTP. Access should be limited to the greatest extent possible to retain efficiency, reduce congestion, and enhance mobility. New access to the Connector from areas not designated for growth in the general plans should not be permitted.</li> <li>• <b>Profile:</b> The Connector profile, where feasible, practicable, and consistent with acceptable design standards, should emulate the profiles of existing roadways to the greatest extent possible. The design of the Connector corridor should recognize impacts to sensitive habitats, including elevation adjustments to allow for passage of wildlife.</li> <li>• <b>Design Aesthetics, Materials, and Maintenance:</b> To minimize the</li> </ul>	<p>JPA/Project Proponent Project Engineer</p>	<p>Require as a condition prior to specific-project approval</p>

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	<p>impact on the livability of communities, the Connector should be designed with due consideration to aesthetics for users and adjacent property owners (residents, employers, and employees).</p> <ul style="list-style-type: none"> <li>• <b>Transit Services:</b> Transit service in the corridor (coverage and frequency) should be maximized to the extent feasible. The design of the Connector project should accommodate appropriate transit facilities.</li> <li>• <b>Non-Motorized Facilities:</b> The Connector should provide flexible and efficient modes of use, including automobile, transit, bicycle, and pedestrian.</li> <li>• <b>Open Space Preservation:</b> Concurrently with the environmental review and design process, the sponsors will develop an open space preservation plan, and associated phasing and funding plan for the corridor consistent with the Sacramento Transportation Authority Measure A expenditure plan.</li> <li>• <b>Other Facilities:</b> In order to meet the goals of the MTP and the Connector, complementary projects may be phased in over time as conditions necessitate.</li> <li>• <b>Phasing and Interim Use:</b> The Connector should be implemented in a phased manner. The design of temporary sections (if any), should provide for widening in accordance with the MTP and local adopted plans at minimal cost and impact.</li> <li>• <b>Funding Coordination:</b> Investments in the Connector should be coordinated and balanced with other transportation investments in a manner that maximizes benefits to the public while minimizing costs.</li> </ul>		
	<p><u>Mitigation Measure POP-3: Develop and Implement a Relocation and Compensation Plan</u></p> <p>Before proceeding with final design, the JPA or local jurisdiction will develop and implement a relocation plan consistent with California Code of Regulations, Title 25, Section 6038 to ensure that eligible residential, commercial, and industrial uses are compensated for moving and residential/business replacement costs. Eligibility of specific residences or businesses for compensation will be determined after evaluation of the impact on the specific use(s) to be relocated, but would include both full and partial property/parcel acquisitions.</p> <p>The JPA or local jurisdiction will use applicable relocation assistance programs (including those administered by local, state and federal governments) to compensate owners and tenants for the relocation costs of residential, commercial, and industrial uses displaced by the project components.</p>		
Prior to construction	<p><u>Mitigation Measure PS-1: Implement Low-Impact Development Techniques for Control of Surface Drainage</u></p> <p>The JPA or local jurisdiction will ensure that the project design will employ low-intensity development (LID) techniques and features to maintain the site's</p>	JPA/Project Proponent Project Engineer	Verify prior to issuing grading/building permits

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	<p>predevelopment runoff rates and volumes to the extent feasible. The objective of the LID design is to mimic the site's predevelopment hydrology by including project features and techniques that infiltrate, filter, store, evaporate, and detain stormwater runoff close to the source. LID design features and techniques can incorporate (but are not limited to) minimizing impermeable surfaces where practical; inclusion of bioretention facilities or rain gardens; preserving natural drainages, vegetation, and buffer zones; inclusion of grass swales and channels to direct storm drainage; construction of cisterns to collect water for later use in irrigation; inclusion of vegetated filter strips; and use of permeable pavements.</p>		
<p>Prior to construction; during construction</p>	<p><u>Mitigation Measure PS-2: Use Drought-Resistant Plants and Irrigation in Project Landscaping</u>                      The JPA or local jurisdiction will ensure that the design of the project will include a landscaping and irrigation plan that is based on the use of drought-resistant landscaping materials. This includes the use of suitable drought-resistant native plants, where feasible, and nonnative plants that are suitable to the site, such as grasses. Suitable plants are those matched to the climate, soils, and Sacramento region. No invasive, nonnative plants (as inventoried by the California Invasive Plant Council) nor noxious weeds (as listed by the California Department of Food and Agriculture) will be used in the landscaping plan. The irrigation system design will rely on recycled water or nonpotable water (including water from LID cisterns) whenever available, consistent with quality and health standards. The irrigation system design will include the use of smart irrigation controllers to minimize the amount of supplemental water required to maintain the landscaping.</p>	<p>JPA/Project Proponent Project Engineer</p>	<p>Verify prior to issuing grading/building permits; verify periodically during construction</p>
<p>Prior to construction; during construction</p>	<p><u>Mitigation Measure PS-3: Construction and Demolition Debris Produced by Implementation of the Proposed Project Will be Recycled and Properly Disposed</u>                      The JPA or local jurisdiction will require that the contractor will employ one of the following options for recycling construction and demolition debris:</p> <p>1. If there is room at the construction site for multiple sorting bins, construction and demolition debris will be sorted and dropped off at recycling facilities. Currently, the following facilities accept sorted construction and demolition waste:</p> <ul style="list-style-type: none"> <li>• Kiefer Landfill</li> <li>• Crete Crush, LLC, which accepts brick, gravel, sand, asphalt, concrete, and soil</li> <li>• Elder Creek Recovery &amp; Transfer Station BFI</li> <li>• EBI Aggregates, which accepts concrete and asphalt</li> <li>• Vulcan Materials, which accepts concrete and asphalt</li> <li>• Sims Metal Management</li> <li>• Granite Construction Company, which accepts only clean, separated concrete and asphalt</li> <li>• Bell Marine Company, Inc., which accepts concrete and asphalt</li> </ul>	<p>JPA/Project Proponent Project Engineer; construction contractor</p>	<p>Verify prior to issuing grading/building permits; verify periodically during construction</p>

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	<ul style="list-style-type: none"> <li>• L and D Landfill Company</li> <li>• Sacramento Recycling &amp; Transfer Station</li> <li>• Sacramento Habitat for Humanity, which accepts tax deductible donations of clean wood and various building materials</li> <li>• Second Cycle, Inc.</li> </ul> <p>2. If the construction site is crowded, or mixed recycling is preferable for another reason, the Sacramento Regional Solid Waste Authority provides a list of certified construction and demolition debris sorting facilities.</p> <ul style="list-style-type: none"> <li>• Allied Waste/Elder Creek Transfer and Recovery</li> <li>• L and D Landfill Company</li> <li>• Waste Management/K&amp;M Recycle America</li> <li>• Florins-Perkins Public Disposal</li> </ul> <p>If a waste type produced by project construction is a type not accepted by regional landfills, the project engineer(s) will ensure that the waste is disposed of in accordance with all federal, state, and local statues and regulations related to solid waste.</p>		
Prior to construction	<p><u>Mitigation Measure REC-1: Conduct Project-Level Assessment of Impacts on Recreational Resources</u></p> <p>To determine the specific impacts resulting from implementation of the proposed project and its design options on recreation, a project-level assessment of impacts will be conducted by the JPA or local jurisdiction undertaking later projects. This study shall determine the specific recreational qualities and facilities significantly affected by the project, in consultation with the agency(ies) with jurisdiction over the recreational resources. The JPA or local jurisdiction will provide, in cooperation with the affected agency(ies), 1) land of equal quality and with similar characteristics will be secured by the JPA or local jurisdiction to compensate for the loss of existing recreational resources at a ratio of at least 1:1 or 2) sufficient enhancements to the existing parks. The JPA or local jurisdiction may provide these lands by acquiring them and dedicating them to the affected agency(ies) or by providing the affected agency(ies) with in lieu fees sufficient to acquire the lands and replace the lost facilities, at the option of the affected agency.</p>	JPA/Project Proponent/	Verify prior to issuing grading/building permits