Delta Conveyance Project Mitigation, Monitoring and Reporting Program Explainer

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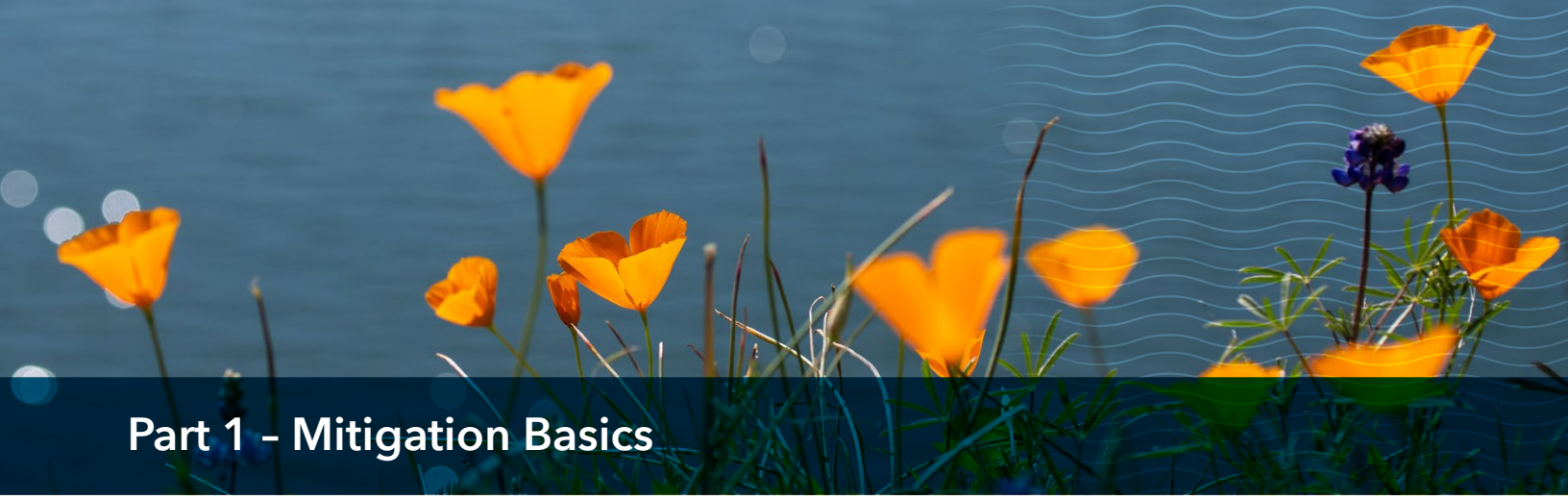
The Delta Conveyance Project is a large and complex undertaking with many interconnected parts.

It is often challenging to understand how the various parts are interconnected. Mitigation, a key aspect of the project, is one component of the project that is often misunderstood. This explainer document is intended to help interested parties and the public better understand the various components of mitigation and what they mean for the project as a whole.

This document is organized into three sections. The first section explains the concept of mitigation and its importance. The second section provides specific details related to the mitigation already adopted and approved for Delta Conveyance Project. Finally, the third section highlights key mitigation measures that are likely to be of interest. While the list is not exhaustive, it provides an overview of select measures. For complete details on all mitigation measures included in the Final Environmental Impact Report (FEIR), you can access the Mitigation Monitoring and Reporting Program document available on the project website.



Part 1 – Mitigation Basics

What is a mitigation monitoring and reporting program?

Mitigation plays a critical role in preventing or minimizing the negative effects of a project. A mitigation measure is an action intended to avoid or lessen potential negative impacts. These actions help protect the environment, health, and safety of people. The California Environmental Quality Act (CEQA) requires the adoption of a Mitigation Monitoring and Reporting Program (MMRP) to reduce the severity and magnitude of potentially significant environmental impacts associated with a project.

The Mitigation Monitoring and Reporting Program is a structured framework designed to track and document the implementation of mitigation measures. It ensures that these efforts to reduce impacts are executed correctly and achieve their desired objectives.

PRC 21081.6 (a)(1) "The reporting or monitoring program shall be designed to ensure compliance during project implementation."

PRC 21081.6 (b) "A public agency shall provide that measures to mitigate or avoid significant effects on the environment are fully enforceable…"

When are mitigation actions completed?

When mitigation measures are implemented depends on the impact the measure is intended to reduce or avoid. Mitigation actions can take place during different stages of a project. Some actions might be completed before the project starts, while others will be done during and after the project is completed. Some mitigation measures are physical activities such as installation of fencing. Other mitigation measures are plans that are developed and implemented. For example, a mitigation measure could be the development of a plan outlining specific steps, such as changing the time of activities, best practices, and equipment to be used to minimize potential impacts.

Where do mitigation actions take place?

Mitigation actions will generally take place in areas affected by the project. This could include construction sites, nearby communities, and natural habitats. However, in some cases, activities might occur beyond the immediate project area but still within the region where the project is being constructed.

What happens if mitigation is not sufficient to reduce or avoid potential impacts?

Mitigation measures are developed to be robust and multi-layered to ensure success. Through careful monitoring, implementation of mitigation measures will be assessed against performance standards. If actions fall short of the performance standards, specific, predefined additional actions will be implemented. Additional actions might include changing the project plan, facility or equipment modifications, funding programs to offset impacts, and even work stoppage to protect the environment and people's health.

Part 2 – Mitigation for the Delta Conveyance Project

DCP Commitments to Avoid and Reduce Potential Impacts

The DCP has committed to avoiding and reducing potential impacts in multiple ways. The DCP MMRP is unique in that it includes environmental impact mitigation and compensatory mitigation to lessen impacts but also includes other environmental commitments and best management practices which are not typically included in an MMRP. Tables 1 through 3 of the MMRP describe the specific actions, timing, reporting schedule, and implementing party.

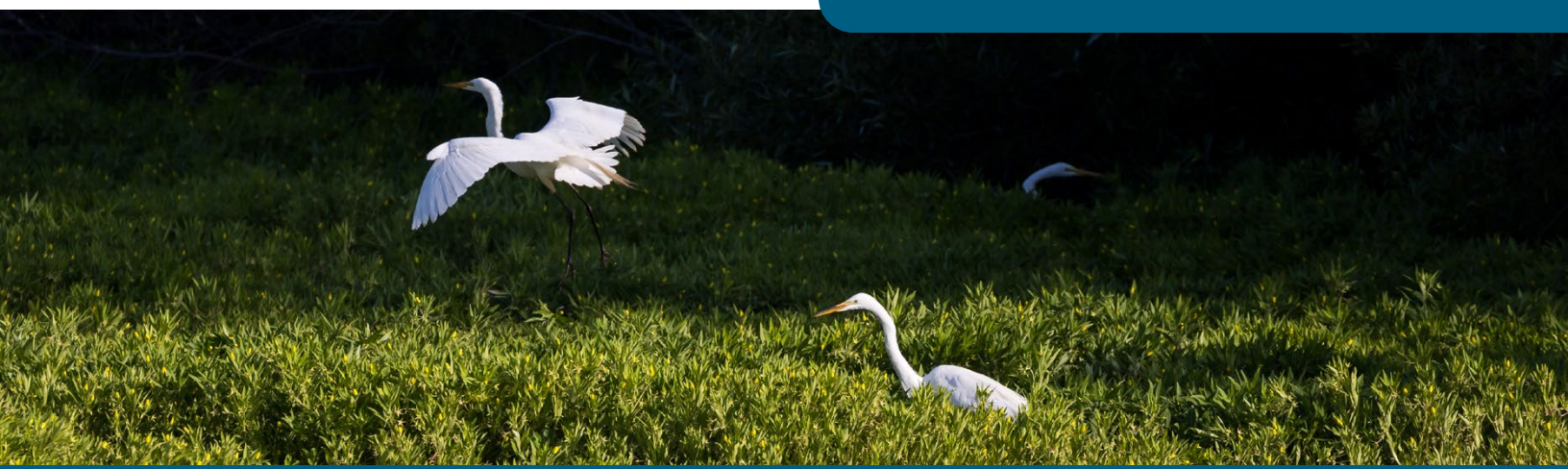
Environmental Impact Mitigation is designed to reduce or avoid impacts that were found to be potentially significant in the Final Environmental Impact Report. Potentially significant impacts identified in the EIR are based on conservative estimates and likely overestimate actual impacts. Many mitigation measures include surveys and additional analysis to better estimate actual impacts prior to construction. Due to the large scope of the Delta Conveyance Project, some mitigation actions will take place directly "on-site" where construction is taking place while some measures will be implemented "off-site", in the region of the construction sites. In both cases, measures are specifically designed to effectively lessen the environmental impacts. Many mitigation measures depend on collaboration with local and regional agencies. Given that DWR can't guarantee this cooperation, some impacts were assessed conservatively. With effective partnerships, these impacts could be less significant than outlined in the EIR.

Compensatory Mitigation is a component of regulatory mitigation but includes specific habitat restoration and preservation measures to address impacts on habitat for special-status, aquatic, wildlife and plant species, as well as natural communities (including wetlands and other waters or "aquatic resources") that may result from the construction and operation of the project.

Environmental Commitments and Best Management Practices are included as part of the project that either indirectly or generally address potential negative effects of the project alternatives but are separate from environmental impact mitigation measures. Generally, Environmental Commitments are those actions that are incorporated into the engineering or design of the project and are intended to avoid, reduce, or minimize environmental impacts common to most large infrastructure projects.

Regardless of the type of mitigation action, environmental commitment or best management practice, the MMRP includes a description of each mitigation measure or action, the timing of the action, the type of implementation action, the reporting schedule, the party responsible for implementation, the implementation mechanism, and the partnering or participating organizations.

DWR is working to secure additional permits and approvals, which may require additional mitigation not included in the MMRP.



Timing of Actions to Avoid and Reduce Potential Impacts

Mitigation actions will be implemented in three phases, pre-construction, construction, and operations.

- Preconstruction mitigation actions include things like development of plans to avoid or reduce impacts, building protective structures, preserving land, replace or relocate local infrastructure e.g. irrigation drainage, execution of specific agreements with local jurisdictions, preconstruction resource surveys and restoration of habitat.
- Construction mitigation actions include things like implementing worker awareness training, limiting construction to specific timeframes and work windows to avoid impacts, construction resource surveys, and habitat restoration.
- Operations and maintenance mitigation actions include things like application of landscaping and design standards to project structures, habitat restoration, resource surveys and monitoring.

Reporting

DWR intends to have a robust tracking and reporting platform to share activities and progress related to mitigation actions. DWR is committed to providing regular updates regarding environmental impact mitigation and other permit conditions in a way that is easily accessible and transparent.

Community Input

Typically, infrastructure projects do not include a community engagement component related to environmental impact mitigation. DWR recognizes that the implementation of mitigation could have impacts that are of concern to the community. DWR is committed to offering opportunities for engagement with the public or other interested parties related to regulatory mitigation, where feasible and appropriate, or where required by the mitigation measure.

The Delta Conveyance Design and Construction Authority (DCA) would also convene an Environmental Compliance and Mitigation Committee to provide a public forum to discuss construction and related environmental conditions and mitigation measures. Other types of public input would include some combination of outreach to local subject matter experts, broad or localized sharing of draft plans for community input, or short-term working groups, such as Community Advisory Groups. Outreach would not strictly relate to regulatory mitigation and may include opportunities for community input into the final design of Delta Conveyance Project features.

Accountability Action Plan:

The Department of Water Resources (DWR) has made numerous commitments to address effects within the local community during construction of the Delta Conveyance Project, with the overall goal being to avoid, minimize or offset these effects for residents, businesses, recreators, subsistence fishers, Tribes, Environmental Justice communities, emergency responders, tourists, environmental NGOs, agricultural operations, and the traveling public, among many others.

To describe, memorialize, track, and fulfill these commitments, DWR has established an Accountability Action Plan.

With public transparency being its most important tenet, the plan seeks to facilitate awareness of the numerous available programs and commitments made and will aim to foster assurance and trust among interested parties that DWR's intent is comprehensive, earnest and binding.

There are five core components of the Accountability Action Plan:

1. Ombudsmen Office
2. Regulatory Mitigation
3. Community Benefits Program
4. Community Advisory Group(s)
5. Project Communications – Information, Outreach, Engagement

Part 3: Delta Conveyance Project Mitigation Monitoring and Reporting Program Highlights

This section provides an overview of some important mitigation measures that might be of interest. This list is not exhaustive, and full details can be found in the MMRP.

Visual and Aesthetic Mitigation

- **Visual Barriers:** Installation of temporary visual barriers at the construction work areas with direct line-of-sight from public and residents. This includes barriers to minimize light from construction impacting nearby residents.
- **Aesthetic Design Treatments:** Require aesthetic design treatments to minimize the impact on existing visual quality and character.
- **Landscaping:** Apply landscape treatments and use best management practices as part of the post-project reclamation effort to restore and maintain local character, improve aesthetics, and reduce the visual impacts.
- **Limit Construction Work Windows:** Limit non-tunnel related surface construction to daylight hours and establish a hotline for residents to report any violations.
- **Minimize Light from Construction:** Minimize nighttime lights to the greatest extent feasible. Operate lights at the lowest feasible wattage and height, screen all lights and direct light downward toward work activities as much as possible given safety considerations.

Air Quality Mitigation

- **Offset Construction-Generated Pollutants:** The MMRP includes separate mitigation measures to address construction pollutants in three air quality management regions. While each mitigation measure has important distinctions, they all include common elements. They include updating emissions analysis using the latest engineering data and approved methods to ensure accurate calculations based on changes to regulations and performance standards since the publication of the Final EIR. Through these agreements, DWR will provide funding for emissions reduction projects to be implemented by the regional air quality management districts according to a specified timeframe and performance standards.

  Potential emissions reduction projects could include engine retrofitting, vehicle replacements and facility modifications. If regional agreements cannot be reached or do not meet performance standards, DWR will develop an alternative program to fund emissions reduction projects. Potential projects could include rebates for electric equipment, electric vehicle charting stations, engine retrofits and alternative fuel or low emissions school buses, transit buses or other vehicles. Annual reports will verify that projects meet the reduction requirements and detail achievements, compliance, and corrective actions if needed. A third-party expert will assist with reviewing these reports, which will be published on DWR's website.

- **Avoid Public Exposure to Localized Particulate Matter and Pollutants:** DWR will take multiple steps to limit exposure to particulate matter and emissions in affected areas. Refined pollutant concentration modeling will be conducted at locations identified in the EIR analysis as potentially exceeding standards, using representative seasonal and site-specific data. If the refined modeling shows an exceedance of standards at certain locations, DWR will conduct real-time air quality monitoring in accordance with predefined monitoring requirements during construction. Monitoring locations include on-site and downwind locations to account for immediate construction emissions and incremental contributions to pollutant concentrations in the area.

  If exceedances are detected, corrective actions will be implemented to reduce emissions and ensure compliance. Corrective actions may include limiting construction activities, relocating construction activities during adverse weather conditions, covering storage piles and limiting operation of equipment. DWR will select background monitoring stations before obtaining construction permits and conduct daily monitoring throughout construction. Monthly reviews of air quality data will be performed, and records maintained during the project. If increments exceed standards, DWR will report to the local air district and describe the corrective actions taken.
- **Greenhouse Gas Reduction Plan:** Before construction begins, DWR and qualified professionals will create a GHG Reduction Plan to offset emissions from construction and displaced CVP electricity purchases to achieve net zero greenhouse gas emissions. DWR must mitigate GHG emissions on a continual basis and "stay ahead" of estimated emissions throughout the life of the project. Updated calculations of actual emissions and new state regulations may adjust the specific reduction commitment. The GHG reduction plan will be developed in phases, ensuring flexibility for future technologies and applying lessons learned to subsequent stages. The first phase will address at least five years of construction and use updated emissions analyses to calculate reduction commitments.
- The plan will prioritize environmental commitments, on-site construction strategies, off-site strategies, and GHG credits. Environmental commitments include measures such as the use of electric vehicle charging stations, electric shuttles, and best management practices to reduce emissions. On-site strategies include purchasing zero-carbon electricity and optimizing delivery logistics (e.g. maximizing use of rail for deliveries) to minimize emissions from construction activities. Off-site strategies focus on community improvements, such as funding renewable energy projects, enhancing pedestrian and bicycle networks, and expanding public transit. DWR will also support innovative projects like biomass waste conversion, agriculture waste processing, and wetland restoration for carbon sequestration. Urban tree planting programs and agricultural land conservation efforts will further reduce emissions and promote sustainability.

  GHG credits are mechanisms used to offset greenhouse gas (GHG) emissions through verified reduction projects. These credits must meet rigorous standards such as being real, permanent, quantifiable, verifiable, enforceable, and additional. DWR prioritizes credits from projects near the Sacramento and Central Valley areas and ensures their verification through accredited independent experts. Credits must be aligned with California Air Resources Board (CARB) protocols or equivalent standards, and any delays in implementation require additional compensatory credits.
- All strategies will be evaluated for feasibility, reliability, and environmental benefits, with new technologies incorporated as they become available. The phased approach will ensure flexibility and allow adjustments to meet evolving reduction commitments and regulations. Annual reports will document GHG reduction strategies, compliance, and corrective actions, and include verification of any offset credits purchased. All reports will be reviewed by qualified professionals and published on DWR's website.

Noise Mitigation

- **Noise Control Plan:** DWR will develop a noise control plan, including pre-construction actions, sound-level monitoring, and noise barriers to address areas exceeding noise limits. Before construction, pile testing and sound monitoring will be performed, followed by updated noise modeling to predict impacts. A sound insulation program will be offered to qualifying residences and businesses affected by elevated noise levels, providing measures like dual-pane windows, improved exterior doors, and new HVAC systems. Updated modeling will help identify sensitive receptors eligible for this insulation. The plan will ensure compliance with daytime and nighttime noise criteria while minimizing impacts on the community.

  A sound-level monitoring system will continuously collect data at designated locations to ensure compliance with noise limits and identify exceedances. If construction noise exceeds daytime or nighttime thresholds, affected residents will be offered the opportunity for relocation assistance or sound insulation improvements at their residence. Best practices include restricting construction hours, using noise shrouds, creating Quiet Zones, and installing enclosures around noisy equipment. Temporary sound barriers will be used at work areas to mitigate noise impacts on nearby sensitive receptors. These measures aim to minimize community impacts from construction noise while ensuring adherence to noise criteria.

Biological and Ecological Mitigation

- **Underwater Sound Control:** DWR will implement a plan to reduce underwater construction noise, including modifying the timing of activities, best practices, and specific equipment that will be used to minimize effects on fish, especially those caused by impact pile driving.
- **Barge Operations Plan:** DWR will develop a barge operations plan, to be approved by relevant agencies to address topics including bottom scour, bank erosion, material spillage, sedimentation, and hazardous material spills during construction. This plan will include measures to avoid or minimize effects on sensitive resources like fish, aquatic habitats, sediments/turbidity, food sources, and riparian and submerged vegetation, with daily monitoring by a biological observer. The plan also aims to protect listed species and their habitat through avoidance measures, environmental training, and clear operational protocols for barge activities.
- **Fish Rescue and Salvage:** Rescue operations will occur at any in-water construction site where isolation of fish may occur. Fish rescue operations will be conducted at construction sites to prevent aquatic species from becoming trapped during activities like cofferdam placement. Rescue and salvage plans, approved by relevant agencies, will outline procedures such as herding fish out with nets, followed by relocation to safe areas consistent with established guidelines within 48 hours to minimize impacts. All operations will be supervised by qualified biologists and comply with required permits to ensure minimal effects on listed species and their habitats.

- **Avoid and Minimize Impacts on Terrestrial Biological Resources from Maintenance Activities:** To protect sensitive biological resources during project maintenance activities, a team of biologists will assess potential impacts and conduct surveys before maintenance begins. Non-disturbance buffers will be set up around sensitive areas, flagged to avoid accidental damage, and removed once risks are mitigated. Maintenance activities will follow work windows and weather restrictions to minimize impacts. Workers will receive training on protecting sensitive natural resources and avoiding harm to wildlife. Biologists will monitor activities, ensuring wildlife is unharmed and vegetation removal will be minimized. Spill prevention measures will be enforced to avoid contamination of aquatic habitats. Maintenance vehicles will follow speed limits and stick to designated routes to prevent unnecessary habitat disturbance. Herbicide and rodenticide use will comply with regulations to avoid harming sensitive species and their prey. Erosion control methods will exclude materials that could cause smaller wildlife to become entangled or caught.
- **Electrical Power Line Support Placement:** DWR will work with electric utilities to design and place power lines to avoid and minimize impacts on sensitive habitats and agricultural land. Avoidance measures include establishing non-disturbance buffers as determined by a qualified biologist. Disturbed areas will be restored to preconstruction conditions to the extent feasible or compensated as necessary. To reduce effects on farming, measures include using single-pole structures, minimizing crop damage, and placing lines near roads or existing infrastructure. Bird-safe designs and bird flight diverters will be implemented to prevent avian collisions and electrocution. These diverters will be installed following the best available guidance and inspected periodically for effectiveness. Efforts will prioritize reusing existing infrastructure and minimizing habitat impacts wherever feasible.
- **Avoid and Minimize Operational Traffic Impacts on Wildlife:** DWR will implement measures to reduce wildlife-vehicle collisions on facility access roads by posting speed limits and using traffic control structures like speed bumps. Vehicles will adhere to a maximum speed of 15 miles per hour on unpaved roads and 30 miles per hour on paved roads. Speed limit and wildlife crossing signs will be posted in both directions on new or widened access roads that overlap with habitat for special-status wildlife, to the extent practicable.
- **Avoid and Minimize Impacts on Terrestrial Wildlife Connectivity and Movement:** To reduce impacts on terrestrial wildlife connectivity, a qualified biologist will oversee the design, monitoring, and construction of wildlife crossing structures. These structures will include fencing to prevent wildlife access to dangerous areas while facilitating movement along riparian banks and corridors. Riparian vegetation and canopy will be preserved as much as possible during construction to maintain habitat connectivity. Where fencing is necessary, it will be carefully placed to balance safety and movement needs. Project plans will also include features to reduce noise, light, and other disturbances that could affect wildlife movement. All measures will be coordinated with the biologist during construction phases to ensure effective implementation. Native vegetation and canopy along riparian banks will be preserved as much as possible during operations as well. In areas where reestablishment is not feasible, landscaping with native plants or other non-vegetative options such as faux rocks or snags will be used. Wildlife fencing will be installed to restrict access to roads while facilitating movement through riparian corridors. A qualified biologist will oversee the design and monitoring of these measures during operations to ensure their effectiveness. Monitoring techniques like wildlife cameras, tracking, and roadkill assessments will be employed for at least five years of operations across seasons. Findings from monitoring will inform adaptive management strategies to ensure connectivity is functioning as intended.
- **Compensatory Mitigation:** The Compensatory Mitigation Plan (CMP) outlines over 30 separate measures to address impacts of construction and operation on habitat for special-status plant and wildlife species (including fish) as well as natural communities (including wetlands and other waters or "aquatic resources"). The CMP identifies several sites that could support habitat creation and enhancement actions based on the best available scientific information on the Delta ecosystem and restoration practices for special-status species and habitats. From among those sites where habitat creation and enhancement is deemed feasible, specific mitigation actions would be implemented to reduce the impact on aquatic resources and species habitat. Feasible mitigation actions are expected to include habitat creation, enhancement, conservation bank credit purchases, and habitat protection. The final compensatory mitigation needs will be determined once the project is approved, and all permits are secured. Implementation of the CMP will include the development of detailed plans in coordination with regulatory agencies to ensure effectiveness.

Agricultural Mitigation

- **Preserve Agricultural Land:** Safeguard agricultural land through land acquisition, conservation easements, or payments to fund preservation efforts at a rate of 1 acre preserved for every 1 acre impacted (1:1 ratio).
- **Relocation of Agricultural Infrastructure:** Modified project designs to avoid any conflicts with irrigation or drainage infrastructure servicing farmland located outside the construction footprint for the project. If conflicts cannot be avoided, relocate or replace wells, pipelines, power lines, drainage systems and other infrastructure that are needed to support ongoing agricultural uses, or compensate landowners through a negotiated settlement.

Hazards

- **Assess and Remediate Prior to Construction Activities:** Areas planned for excavation during construction, such as for water conveyance facilities or staging areas, will be tested for soil and groundwater contamination if historical information indicates potential contamination or if there are other indicators like soil discoloration, odors, or abandoned storage tanks. All environmental assessments, testing and cleanup for properties in the project area will follow established practices and plans approved by the appropriate oversight agency (like DTSC or EPA) and will be conducted by qualified professionals.

Traffic Mitigation

- **Site Specific Transportation Demand Management (TDM) and Transportation Management Plan:** Develop Transportation Demand Management (TDM) plans and Traffic Management Plans (TMPs) to minimize vehicle miles traveled (VMT) and ensure workers use park-and-ride facilities during construction. These plans should include incentives like gas cards or transit passes to encourage carpooling, vanpooling, or alternative travel modes and achieve a goal of reducing single occupancy vehicles. Quarterly and yearly reports will track the effectiveness of these measures, ensuring compliance and adjustments as needed throughout the project.

  To manage construction impacts, TMPs will coordinate with local agencies to ensure accessibility for emergency responders, residents, and businesses. Notifications in multiple languages will be provided to inform affected communities about construction activities and alternate routes. Plans will also address topics such as coordination with local emergency responders on a weekly basis, scheduling material deliveries during off-peak hours, scheduling closures for road and bridge improvements for off-peak hours, and measures to reduce traffic in construction zones. Park-and-ride facilities will be designed to minimize queuing and disruption to traffic during peak hours. A multilingual project website will keep residents updated on construction schedules and detours.

As stated at the beginning of this section this list is not exhaustive, and full details can be found in the MMRP.