Appendix A
MITIGATION MONITORING AND REPORTING PLAN

This mitigation monitoring and reporting plan (MMRP) identifies the mitigation measures identified in the Stanislaus Regional Water Authority's (SRWA's) Surface Water Supply Project Addendum No. 1. These measures are identical to those cited in the Surface Water Supply Project Environmental Impact Report (EIR), and this MMRP has retained the numbering from that document for clarity. For each mitigation measure, the MMRP identifies monitoring and reporting actions that shall be carried out and the applicable schedule for monitoring activities. This MMRP also includes a column where responsible parties can check off monitoring and reporting actions as they are completed.

As lead agency, SRWA (for activities involving the infiltration gallery, water treatment plant, and transmission pipelines) and the Cities of Ceres and Turlock (for activities involving their respective terminal tank facilities) will be responsible for ensuring that mitigation measures identified in this EIR are fully implemented. Some mitigation measures would be implemented by the contractor(s) on behalf of SRWA and the Cities. Contract documents for the proposed project will identify the obligations of the contractor, including relevant mitigation measures. SRWA and the Cities will require that the contractor(s) provide them with documentation that the contractor has adequately implemented all contractual obligations, including applicable mitigation measures.

Thus, in the descriptions of the mitigation measures provided in below, while SRWA and the Cities may be specifically referenced in implementing a mitigation measure (i.e., where the measure states "SRWA and the Cities shall"), this is intended to be inclusive of the contractor's role in implementing certain mitigation measures during construction or as part of design.

Acronyms and Abbreviations

APE	area of potential effect
CARB	California Air Resources Board
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
Cities	the City of Turlock and the City of Ceres
CO_2e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
dBA	A-weighted decibel
EIR	environmental impact report
GHG	greenhouse gas
HAZCOM	Hazardous Materials Communication
HMWMP	Hazardous Materials and Waste Management Plan
hp	horsepower
MLD	Most Likely Descendent

MMRP	mitigation monitoring and reporting plan
MT	million tons
NAHC	Native American Heritage Commission
NO_X	oxides of nitrogen
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
Pub. Res. Code	Public Resources Code
SJVAPCD	San Joaquin Valley Air Pollution Control District
SRWA	Stanislaus Regional Water Authority
WPT	western pond turtle

References Cited

California Air Resources Board. 2017. Area Designations. Available at: www.arb.ca.gov/desig/changes.htm#summaries. Accessed on April 3, 2017.

San Joaquin Valley Air Pollution Control District. 2017. Ambient Air Quality Standards & Valley Attainment Status Available at: www.valleyair.org/aqinfo/attainment.htm. Accessed on April 3, 2017.

Swainson's Hawk Technical Advisory Committee. 2000. Recommended timing and methodology for Swainson's Hawk nesting surveys in California's Central Valley.

Table A-1. Mitigation Measures and Implementation Requirements

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
Aesthetics			
Mitigation Measure AES-4: Use Shielded Lighting if Nighttime Construction Is Necessary. If nighttime construction is performed, SRWA and the Cities shall require the contractor(s) to use lighting that is shielded and oriented downward to minimize effects on any nearby receptors. Lighting shall be directed toward active construction areas only, and shall have the minimum brightness necessary to ensure worker safety	1. Include lighting requirements in construction documents 2. Inspect construction sites on a regular basis for compliance	1. During construction 2. During construction	
Air Quality			
Mitigation Measure AQ-1: Prepare Quantitative Analysis of Construction-related Air Quality and Greenhouse Gas Emissions, and Implement Measures to Cap Emissions. As the project design is further defined to a level that construction emissions can be estimated and evaluated, and prior to construction, SRWA and the Cities shall prepare a quantitative analysis of construction-related air quality and greenhouse gas (GHG) emissions for the proposed project. The quantitative construction air quality and GHG analysis shall be based on the types, locations, numbers, and operations of equipment to be used; the amount and distance of material to be transported; and worker trips required. In addition, the analysis shall be based on the projected quantity and frequency of vehicle and truck trips, and other activities that generate emissions. The analysis shall determine whether the combined emissions of the quantified construction activities exceed the San Joaquin Valley Air Pollution Control District's (SJVAPCD's) construction-related air quality thresholds (Table 3.3-2) or the 10,000 million tons (MT) of carbon dioxide equivalents (CO_2e) per year threshold for industrial sources. If the analysis determines that construction emissions would exceed the air quality and/or GHG significance thresholds, then SRWA shall identify and implement appropriate mitigation to the extent feasible. As a	1. Develop quantitative estimate of construction-related emissions using the identified information 2. If emissions would exceed SJVAPCD construction thresholds, work with SJVAPCD to identify appropriate implement measures that will achieve emissions reductions to the extent feasible 3. Inspect construction sites on a regular basis to ensure compliance	1. During final project design 2. During final project design 3. During construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
performance standard, the mitigation measures shall demonstrate that off-road equipment (greater than 50 horsepower [hp]) and material hauling vehicles used during construction (i.e., owned, leased, and subcontracted vehicles) will achieve emission reductions to the extent feasible. Equipment and material hauling vehicles shall achieve at least a project-wide fleet average of 20 percent oxides of nitrogen (NO_X) reduction and 45 percent DPM reduction compared to the most recent California Air Resources Board (CARB) fleet average up to a Tier IV-equivalent engine. Examples of appropriate mitigation may include, but not be limited to, alternative-fueled equipment, phasing of material hauling trips, phasing of construction activities, use of chemical additives or after-market devices to reduce emissions on existing equipment, use of electrically powered equipment, reduction in total equipment hours, use of newer equipment models, use of alternative fuels, engine retrofit technology, adopting a vehicle idling policy requiring all vehicles to adhere to a 5-minute idling policy, and sourcing of material from local sources. Actual emissions efficiency for off-road equipment and motor vehicles shall be at least as efficient as the most recent CARB fleet average for off-road equipment and motor vehicles for the current calendar year. For GHG emissions, the following measures will be considered and implemented to the extent feasible: implement energy efficiency improvements of pumps through design, construction, and refurbishment methods; investigate and implement opportunities for renewable energy development at the facilities, subject to safety, emergency, and environmental considerations; and implement a construction worker commute strategy to minimize GHG emissions from workers commuting to the site. This may include encouraging use of carpools, vanpools, and public transportation.			
Biological Resources			
Mitigation Measure BIO-5: Minimize Impacts on Nesting Birds with Site Assessments, Surveys, and Avoidance Measures. If vegetation clearing or ground-disturbing activities commence between February 15 and August 31, SRWA or its contractor(s) shall	1. Retain a qualified biologist 2. Conduct a nesting bird survey within 2 weeks before construction.	1. Before construction 2. Before construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
require that a qualified biologist conduct a nesting bird survey within 2 weeks prior to the start of work. If a lapse in project-related work of 2 weeks or longer occurs during this period, another focused survey shall be conducted before project work can be reinitiated. If nesting birds are found, a buffer shall be established around the nest and maintained until the young have fledged. Appropriate buffer widths are 300 feet for non-listed raptors and special-status passerines and 100 feet for non-listed passerines, unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on nesting raptors. Work shall not commence within the buffer until fledglings are fully mobile and no longer reliant upon the nest or parental care for survival.	3. If a lapse of 2 weeks or longer occurs during construction, conduct another focused survey before construction is reinitiated. 4. If birds are found, establish an appropriate buffer. 5. Monitor nests to determine when construction activities can begin within the buffer.	3. During construction 4. Before and during construction 5. During construction	
Mitigation Measure BIO-6: Conduct Nesting Raptor Surveys and Establish Buffers to Avoid or Minimize Impacts on Swainson's Hawk and White-tailed Kite. If construction occurs between February 1 and August 31, SRWA or its contractor(s) shall require that a qualified biologist conduct surveys for Swainson's Hawk and White-tailed Kite in accordance with the recommended timing and methodology developed by the Swainson's Hawk Technical Advisory Committee (2000 or most recent). Surveys will cover a minimum 500-foot radius around the construction area. If nesting Swainson's Hawk or White-tailed Kite are detected, buffers shall be established around active nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely affected by construction. Buffers around active nests will be 500 feet unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on nesting raptors. Factors to be considered when determining buffer size include the presence of natural buffers provided by vegetation or topography, nest height, locations of foraging territory, and baseline levels of noise and human activity. Buffers shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant on the nest or parental care for survival.	1. Retain a qualified biologist 2. Conduct surveys for Swainson's Hawk and White-tailed Kite within a minimum 500-foot radius around construction areas. 3. Establish buffers around active nests. 4. Monitor nests to determine when construction activities can begin within the buffer.	1. Before construction 2. Before construction 3. Before construction 4. During construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
Mitigation Measure BIO-7: Conduct Preconstruction Surveys for Burrowing Owls and Avoid or Minimize Impacts. SRWA or its contractor(s) shall require that a qualified biologist conduct a preconstruction survey in all accessible areas of suitable Burrowing Owl habitat within 500 feet of construction activity. Surveys shall be conducted within 14 days before the start of construction activity in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012 or current version). If no Burrowing Owls or signs of Burrowing Owls are detected during the survey, no further mitigation shall be required. If a preconstruction survey detects occupied burrows, a buffer shall be established, within which no ground-disturbing or vegetation removal activity is permissible. In accordance with guidance provided by the California Department of Fish and Wildlife (CDFW), buffers around occupied burrows shall be a minimum of 656 feet (200 meters) during the breeding season (February 1 through August 31), and 160 feet (100 meters) during the non-breeding season, unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on the Burrowing Owl burrow. This protected area will remain in effect until the end of the Burrowing Owl nesting season (February 1 through August 31) or until CDFW approves a passive relocation plan. No Burrowing Owls will be relocated from burrows during the Burrowing Owl nesting season. ▪ If occupied burrows are to be relocated, a passive relocation plan shall be developed by a qualified biologist and approved by CDFW prior to implementation. SRWA shall enhance or create burrows in appropriate habitat at a 1:1 ratio (burrows destroyed to burrows enhanced or created) one week prior to implementation of passive relocation techniques. If burrowing owl habitat enhancement or creation takes place, SRWA shall develop and implement a monitoring and management plan to assess the effectiveness of the mitigation. The plan shall be subject to the approval of CDFW.	1. Retain a qualified biologist 2. Conduct surveys for Burrowing Owls and burrows. 3. Establish buffers around occupied burrows. 4. Monitor burrows to determine when construction activities can begin within the buffer. 5. If burrows are to be relocated, prepare and implement a relocation plan with CDFW approval that includes a monitoring and management plan.	1. Before construction 2. Before construction 3. Before construction 4. During construction 5. Before and during construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
Mitigation Measure BIO-8: Conduct Preconstruction Surveys, Establish Buffers around Nests, and Implement Measures to Avoid or Minimize Impacts on Western Pond Turtle (WPT). SRWA or its contractor(s) shall require that preconstruction surveys for WPT are conducted by a qualified biologist 14 days before and 24 hours before the start of construction activities in areas where suitable habitat exists (i.e., riparian areas, freshwater emergent wetlands, and adjacent uplands). If WPTs or their nests are observed during preconstruction surveys, the following measures shall be implemented. WPTs found within the construction area will be allowed to leave on their own volition or will be relocated by a qualified biologist out of harm's way to suitable habitat immediately upstream or downstream of the project site. To be qualified to move turtles, the biologist shall possess a valid memorandum of understanding from CDFW authorizing the capture and relocation of turtles. If a WPT nest is identified in the work area during preconstruction surveys, a 50-foot no-disturbance buffer shall be established between the nest and any areas of potential disturbance unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on the nest. Buffers will be clearly marked with temporary fencing. Construction will not be allowed to commence in the exclusion area until hatchlings have emerged from the nest or the nest is deemed inactive by a qualified biologist.	1. Retain a qualified biologist 2. Conduct surveys for WPT 14 days before and 24 hours before construction activities begin in areas of suitable habitat. 3. Allow WPTs to leave the construction area or relocate WPTs to suitable habitat. 4. Establish buffers around WPT nests. 5. Monitor nests to determine when construction activities can begin within the buffer.	1. Before construction 2. Before construction 3. During construction 4. Before or during construction 5. During construction	
Mitigation Measure BIO-9: Conduct Preconstruction Surveys and Implement Measures to Avoid or Minimize Impacts on Special Status Bats. SRWA or its contractor(s) shall require that a preconstruction survey is conducted by a qualified bat biologist between May 1 and July 15 to maximize detection of bats during maternity season. The survey shall focus on the Geer Road Bridge and consist of a daytime pedestrian survey to inspect the bridge for indications of bat use (e.g., occupancy, guano, staining, smells, or sounds) and a night roost/emergence survey using night vision equipment and/or infrared-sensitive optical or video equipment. Suitable large trees in the surrounding area will also be	1. Retain a qualified biologist 2. Conduct surveys for bats during maternity season. 3. If bats are using the construction area, develop and implement measures with CDFW approval to minimize impacts on roosts or exclude bats from roost sites.	1. Before construction 2. Before construction 3. Before construction 4. During construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
inspected for evidence of bat use. Bioacoustic detectors (bat detectors) may be deployed to maximize detection. If the bat biologist determines that the bridge is being used, or is likely to be used, as a bat maternity roost and may be affected by construction, then specific measures will be developed and implemented to minimize impacts on the roost. Such measures may include minimizing construction activity (including truck traffic) under the bridge during the maternity season (May 1-July 15), excluding bats from the roost site prior to the maternity season during the year(s) of construction, or other measures developed by a qualified bat biologist that will minimize the disturbance. If bat exclusion is feasible for the Geer Road Bridge, a plan detailing the specifications for exclusion measures shall be developed by a qualified bat biologist and submitted to CDFW for approval.	4. Monitor roosts to determine when construction activities can begin within the buffer.		
Cultural Resources			
Mitigation Measure CUL-2: Suspend Construction Immediately if Cultural Resources Are Discovered, Evaluate All Identified Cultural Resources for CRHR Eligibility, and Implement Appropriate Mitigation Measures for Eligible Resources. Not all cultural resources are visible on the ground surface. If any cultural resources, including structural features, unusual amounts of bone or shell, flaked or ground stone artifacts, historic-era artifacts (e.g., glass, ceramics, metal objects, bricks), human remains, or architectural remains, are encountered during proposed project construction activities, work shall be suspended immediately at the location of the find and within a radius of at least 50 feet and SRWA will be contacted. SRWA will engage a qualified archaeologist to evaluate the nature of the finds. All archaeological resources uncovered during construction within the proposed project area of potential effect (APE) shall be evaluated for eligibility for inclusion in the National Register of Historic Places (NRHP) and/or California Register of Historical Resources (CRHR). Resource evaluations shall be conducted by individuals who meet the U.S. Secretary of the Interior's professional standards. If any of the resources	1. Retain a qualified archaeologist 2. Halt construction activities in the event any cultural resources are encountered. 3. If cultural resources are uncovered, retain a qualified individual who meets the U.S. Secretary of the Interior's standards to conduct resource evaluations. 4. If uncovered resources meet eligibility criteria, implement mitigation measures consistent with State CEQA Guidelines Section 15126.4(b). 5. If cultural resources are uncovered, mitigation measures will be developed in consultation	1. Before construction 2. During construction 3. During construction 4. During construction 5. During construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
meet the eligibility criteria identified in 36 Code of Federal Regulations (CFR) Part 60.4, Public Resources Code (Pub. Res. Code) Section 5024.1, or California Environmental Quality Act (CEQA) Guidelines Section 21083.2(g), SRWA will develop and implement mitigation measures in accordance with State CEQA Guidelines Section 15126.4(b) before construction resumes. If the discovered resource is identified as eligible for listing in the NRHP/CRHR and it would be rendered ineligible by the proposed project construction, additional mitigation measures shall be implemented. Mitigation measures for archaeological resources may include (but are not limited to) avoidance; incorporation of sites within parks, greenspace, or other open space; capping the site; deeding the site into a permanent conservation easement; or data recovery excavation. Mitigation measures for archaeological resources shall be developed in consultation with responsible agencies and, as appropriate, interested parties such as Native American tribes. Native American consultation is required if an archaeological site is determined to be a tribal cultural resource. Implementation of any SRWA-approved mitigation is required before resuming any construction activities with the potential to affect identified eligible resources at the site.	with SRWA and Native American tribes before construction resumes.		
Mitigation Measure CUL-4: Halt Construction Immediately if Human Remains Are Discovered and Implement Applicable Provisions of the California Health and Safety Code. If human remains are discovered during construction activities, the requirements of Section 7050.5 of the California Health and Safety Code shall be followed. Potentially damaging excavation shall halt on the proposed project site within a minimum radius of 100 feet of the remains and the County Coroner shall be notified. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). In accordance with the provisions of Pub. Res. Code Section 5097.98,	1. Retain a qualified archaeologist 2. In the event that human remains are encountered, halt work and contact the County Coroner. 3. If discovered remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination. 4. NAHC shall identify a MLD, upon which this person shall be notified and given at least 48 hours to inspect the site and propose treatment and	1. Before construction 2. During preparation of plans and specifications 3. During construction 4. During construction 5. During construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
the NAHC shall identify a Most Likely Descendent (MLD). The MLD designated by the NAHC shall have at least 48 hours to inspect the site and propose treatment and disposition of the remains and any associated grave goods. SRWA or its designee shall work with the MLD to ensure that the remains are removed to a protected location and treated with dignity and respect.	disposition of the remains and any associated grave goods. 5. Cooperation with MLD is required.		
Greenhouse Gas Emissions and Energy Use			
Mitigation Measure AQ-1: Prepare Quantitative Analysis of Construction-related Air Quality and Greenhouse Gas Emissions, and Implement Measures to Cap Emissions. See full description above	1. See above	1. See above	
Hazards and Hazardous Materials			
Mitigation Measure HAZ-1. Prepare and Implement a Hazardous Materials and Waste Management Plan for Construction and Operation. SRWA or its contractor(s) shall prepare and implement a Hazardous Materials and Waste Management Plan (HMWMP). The HMWMP shall specify hazardous materials handling and spill response procedures applicable to construction activities and to operation of the project sites, including the following information: ▪ A list of hazardous materials present on site during construction and operation, to be updated as needed along with product Safety Data Sheets and other information regarding storage, application, transportation, and disposal requirements; ▪ A Hazardous Materials Communication (i.e., HAZCOM) Plan; ▪ Assignments and responsibilities of proposed project hazardous materials handling and spill response roles; ▪ Standards for any secondary containment and countermeasures that will be required for any hazardous materials spill; ▪ Spill response procedures based on product and quantity, which shall include materials to be used, location of such materials within the proposed project area, and disposal protocols; and	1. Develop a HMWMP that contains the required information and protocols. 2. Implement the HMWMP.	1. Before construction 2. During construction and operation	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
▪ Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction, which will address possible termination of work within the area of suspected contamination, sampling by an Occupational Safety and Health Administration (OSHA)-trained individual, and testing at a certified laboratory.			
Mitigation Measure TRANS-1. Prepare and Implement a Construction Traffic Management Plan. See full description below	1. See below	1. See below	
Noise			
Mitigation Measure NOI-1. Limit Nighttime Construction Noise. SRWA and its contractor(s) shall ensure that no construction activities are conducted in close proximity to a residence outside the hours of 7:00 a.m.–7:00 p.m. on weekdays and 9:00 a.m.–7:00 p.m. on Saturdays, Sundays, and state or federal holidays unless the project has received a variance or special permit, following procedures outlined in the applicable noise ordinance, to operate outside of these hours.	1. Include mitigation requirements in construction documents. 2. Confirm that construction is taking place within identified hours.	1. During preparation of plans and specifications. 2. During construction.	
Mitigation Measure NOI-3. Implement Vibration Reduction Measures. SRWA and/or its contractor(s) shall implement the following vibration-reducing measures during all construction activities, unless specified below, to minimize impacts on nearby sensitive receptors: ▪ Ensure proper tuning of vibration-causing equipment. ▪ Use vibration-damping devices to the extent feasible. ▪ Limit use of vibratory equipment to the extent feasible and do not overlap use of multiple pieces of vibratory equipment. Where possible, maintain a distance of 15 feet or more from buildings. ▪ Require contractor(s) to ensure that impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, require use of an exhaust muffler on the compressed	1. Include mitigation requirements in construction documents. 2. Confirm that contractor(s) implement identified measures.	1. During preparation of plans and specifications 2. During construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
air exhaust; this muffler can lower noise levels from the exhaust by up to about 10 A-weighted decibels (dBA). External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible. ▪ Use electric stationary equipment (e.g., generators) where feasible. ▪ Implement noise and/or vibration shields, such as sound aprons or temporary enclosures with sound-absorbing material, on or around construction equipment, particularly if construction activities are conducted after 7:00 p.m. For all construction activities occurring within 60 feet of residences at any time of day, install a temporary noise and vibration barrier between the project site and the nearest sensitive receptors. Following the completion of construction activities within that distance, the barrier will be removed.			
Transportation and Traffic			
Mitigation Measure TRANS-1. Prepare and Implement a Construction Traffic Management Plan. SRWA shall require that the contractor(s) prepare and implement a construction traffic management plan to manage traffic flow during construction, reduce potential interference with local emergency response plans, reduce potential traffic safety hazards, and ensure adequate access for emergency responders. Development and implementation of this plan shall be coordinated with Stanislaus County, the City of Ceres, the City of Turlock, and the City of Hughson. SRWA, the Cities, and/or the construction contractor(s) shall ensure that the plan is implemented during construction. The plan shall include, but will not be limited to, the following measures: ▪ Identify construction truck haul routes and timing to limit conflicts between truck and automobile traffic on nearby roads. The identified routes will be designed to minimize impacts on vehicular and pedestrian traffic, circulation, and safety. ▪ Implement comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic	1. SRWA will ensure that the Construction Traffic Management Plan is implemented during construction. 2. Identified haul routes will be recorded in the contract documents. 3. Implement traffic control measures. 4. Evaluate need for traffic control flaggers. 5. Notify adjacent property owners and public safety personnel regarding timing of major deliveries, detours, and lane closures.	1. During construction 2. During construction 3. During construction 4. Before and during construction 5. Before construction 6. Before construction 7. Before construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
hours, warning and detour signs (if required), lane closure procedures (if required), and traffic cones for drivers indicating potential road hazards or detours (if required). ▪ Coordinate construction activities to ensure that one lane of traffic in each direction remains open at all times on East Hatch Road and Berkeley Road, unless flaggers or temporary traffic controls are in place, to provide emergency access. ▪ Evaluate the need to provide flaggers or temporary traffic control on East Hatch Road and Berkeley Road or at key intersections along the construction route during all or some portion of the construction period. ▪ Notify affected adjacent property owners and public safety personnel regarding timing of major deliveries, detours, and lane closures. ▪ Develop a process for responding to and tracking issues pertaining to construction activity impacts on traffic, including identification of an on-site traffic manager. Post 24-hour contact information for the traffic manager on all construction sites. ▪ Document road pavement conditions for all routes that would be used by construction vehicles before and after project construction. Make provisions to monitor the condition of roads used for haul routes so that any damage or debris attributable to haul trucks can be identified and corrected. Roads damaged by construction vehicles shall be repaired to their preconstruction condition.	6. Develop process for responding and tracking issues related to construction activity. 7. Post 24-hour contact information for the traffic manager on site. 8. Document road pavement conditions for all routes used for construction.	8. Before and after construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
Tribal Cultural Resources			
Mitigation Measure CUL-2: Suspend Construction Immediately if Cultural Resources Are Discovered, Evaluate All Identified Cultural Resources for CRHR Eligibility, and Implement Appropriate Mitigation Measures for Eligible Resources. See full description above	1. See above	1. See above	
Mitigation Measure CUL-4: Halt Construction Immediately if Human Remains Are Discovered and Implement Applicable Provisions of the California Health and Safety Code. See full description above	1. See above	1. See above	

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Tables Cited in MMRP

Table 3.3-2. Attainment Status of the San Joaquin Valley Air Basin (within Stanislaus County) for the State and Federal Ambient Air Quality Standards

Contaminant	Averaging Time	Concentration	State Standards Attainment Status[1]	Federal Standards Attainment Status[2]
Ozone (O_3)	1-hour	0.09 ppm	N (Severe)	See footnote 3
	8-hour	0.070 ppm	N	
		0.075 ppm		N (Extreme)
Carbon Monoxide (CO)	1-hour	20 ppm	U/A	
		35 ppm		U/A
	8-hour	9.0 ppm	U/A	U/A
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm	A	
		0.100 ppm[5]		U/A
	Annual arithmetic mean	0.030 ppm	A	
		0.053 ppm		U/A
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm	A	
		0.075 ppm		U/A
	24-hour	0.04 ppm	A	
		0.14 ppm		U/A
	Annual arithmetic mean	0.030 ppm		U/A
Particulate Matter (PM_{10})	24-hour	50 µg/m^3	N	
		150 µg/m^3		A
	Annual arithmetic mean	20 µg/m^3	N	
Fine Particulate Matter ($PM_{2.5}$)	24-hour	35 µg/m^3		N (Moderate)
	Annual arithmetic mean	12 µg/m^3	N	N (Moderate)
Sulfates	24-hour	25 µg/m^3	A	
Lead (Pb)[6]	30-day average	1.5 µg/m^3	A	
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm	U	
Vinyl Chloride[6] (chloroethene)	24-hour	0.010 ppm	A	

Contaminant	Averaging Time	Concentration	State Standards Attainment Status[1]	Federal Standards Attainment Status[2]
Visibility-Reducing Particles	8-hour (10:00 to 18:00 PST)	See footnote 4	U	

A – attainment
N – nonattainment
U – unclassified

ppm – parts per million
µg/m3 – micrograms per cubic meter
PST – Pacific Standard Time

km – kilometer
PM10 – particulate matter of aerodynamic radius of 10 microns or less
PM2.5 – particulate matter of aerodynamic radius of 2.5 microns or less

Notes:

[1] California standards for O_3, CO (except Lake Tahoe), SO_2 (1-hour and 24-hour averages), NO_2, PM_{10}, and visibility-reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe CO, Pb, H_2S, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour, or 24-hour average (i.e., all standards except for Pb and the $PM_{2.5}$ and PM_{10} annual standards), some measurements may be excluded. In particular, measurements are excluded that the California Air Resources Board (CARB) determines would occur an average of less than once per year.

[2] National standards shown are the "primary standards" designed to protect public health. National air quality standards are set by the U.S. Environmental Protection Agency (USEPA) at levels determined to be protective of public health with an adequate margin of safety. National standards other than for O_3, particulates, and those based on annual averages are not to be exceeded more than once per year. The 1-hour O_3 standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is less than or equal to one. The 8-hour O_3 standard is attained when the 3-year average of the fourth highest daily concentrations is 0.075 ppm (75 parts per billion) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the ninety-ninth percentile of monitored concentrations is less than 150 µg/m^3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of ninety-eighth percentiles is less than 35 µg/m^3. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met by spatially averaging annual averages across officially designated clusters of sites and then determining whether the 3-year average of these annual averages falls below the standard.

[3] The national 1-hour O_3 standard was revoked by USEPA on June 15, 2005. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. However, the attainment status has not yet been updated based on this revised 8-hour standard. It is likely that the region will remain in nonattainment.

[4] Statewide Visibility-Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per km when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment resulting from regional haze and is equivalent to a 10-mile nominal visual range.

[5] To attain this standard, the 3-year average of the ninety-eighth percentile of the daily maximum 1-hour average at each monitoring station within an area must not exceed 0.100 ppm (effective January 22, 2010).

[6] CARB has identified Pb and vinyl chloride as toxic air contaminants with no threshold level of exposure below which there are no adverse health effects determined. Although the vinyl chloride CAAQS remains in force, current regulatory efforts are under CARB's Air Toxics Program.

Sources: SJVAPCD 2017, CARB 2017, USEPA 2017