



MITIGATION MONITORING PROGRAM

Sonoma County Permit and Resource Management Department

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Pursuant to Section 21081.6 of the Public Resources Code, the mitigation measures listed in this program are to be implemented as part of the project. This program identifies the time at which each mitigation measure is to be implemented and the person(s) responsible. The signature of each responsible person will indicate completion of their portion of the mitigation measure.

Project: River Road over Gill Creek Bridge Replacement Project

Project Applicant: Sonoma County Department of Transportation and Public Works

Location: River Road, Bridge over Big Sulphur Creek

Lead Agency: Sonoma County

Decision Making Body: Board of Supervisors

P.P.R #

Date Approved:

SCH #

Contact Person(s): Robert Agüero

Time of Implementation

- Design:* The mitigation measure will be incorporated into the project design and/or included in the plans and contract special provisions prior to awarding a construction contract.
- Pre-Construction:* The mitigation measure will be implemented before construction begins.
- Construction:* The mitigation measure will be implemented during construction.
- Post-Construction:* The mitigation measure will be implemented after project construction.

Responsible Persons

The Permit and Resource Management Department will designate an Environmental Specialist. The Department of Transportation and Public Works will designate a Design Engineer and a Construction Engineer.

The Environmental Specialist will certify that a review of the project and plans and specifications was made with the Design Engineer prior to advertising for construction bids or otherwise initiating project construction. The Design Engineer will identify how each mitigation measure has been incorporated into the project. The Construction Engineer (or other person identified in the program) will certify that the mitigation measure has been implemented.

Environmental Record

Before the construction contract is awarded, the Design Engineer will forward the mitigation monitoring program to the Construction Engineer, with a copy to the Environmental Specialist. At completion of construction the Construction Engineer will return the original signed mitigation monitoring program to the Environmental Specialist for filing.

RECORD OF COMPLIANCE

The Environmental Specialist has reviewed the project design, and plans and specifications with the Design Engineer to assure that the responsibility for completion of the mitigation measures has been assigned and plans and specifications incorporate the appropriate mitigation measures.

Environmental Specialist _____ date _____

Mitigation Measure AES-1: The County will or has incorporated the following measures to avoid or minimize visual impacts:

The County will or has incorporated the following measures to avoid or minimize visual impacts:

- Minimize vegetation removal to the extent possible, and trim trees rather than remove where possible.
- Protect existing vegetation to remain (outside of clearing and grubbing limits) from the contractors operations, equipment and materials storage. Environmentally Sensitive Areas (ESA) are identified on the project plans to limit contractor action areas and will be fenced off

Screen Construction staging and storage areas where feasible. Place unsightly material, equipment storage and staging so that they are not visible to the maximum extent possible.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure AIR-1: The following dust and air quality control measures shall be included in the project:

The County shall include provisions in the construction bid documents that the contractor shall implement a dust control program to limit fugitive dust emissions. The dust control program shall include, but not be limited to, the following elements, as appropriate:

- Water inactive construction sites and exposed stockpile sites at least twice daily, including during non-work days, or until soils are stable.
- Pursuant to the California Vehicle Code (State of California 2009), all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 in. of freeboard (i.e., minimum vertical distance between top of load and the trailer).
- Any topsoil that is removed for the construction operation shall be stored on-site in piles not to exceed 4 ft. in height to allow development of microorganisms prior to resoiling of the construction area. These topsoil piles shall be clearly marked and flagged. Topsoil piles that will not be immediately returned to use shall be revegetated with a non-persistent erosion control mixture.
- Soil piles for backfill shall be marked and flagged separately from native topsoil stockpiles. These soil piles shall also be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be immediately used.
- Equipment or manual watering shall be conducted on all stockpiles, dirt/ gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-1: Mitigation Measures for Erosion and Sedimentation Control

Erosion control measures shall be implemented during construction of the proposed project. These measures shall conform to the provisions in the Caltrans Standard Specifications and the special provisions included in the contract for the project. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which describes and illustrates the of best management practices (BMPs) in the project site. Erosion control measures to be included in the SWPPP or to be implemented by the County include the following:

- To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. In channel construction will be conducted from June 15-October 31 and upland construction will likely occur throughout the year as long as work activities comply with the conservation and avoidance and minimization measures identified herein and for the protection of other sensitive or special-status plant or animal species. For upland construction activities (above the top of bank) that must take place during the late fall, winter, or spring, temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
- Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County. Exclusionary fencing will be installed around areas that do not need to be disturbed.
- At completion of construction and in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.
- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities. Further, sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction.
- If temporary stock piling is used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a stockpiles drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Stockpiles shall be graded and vegetated with native species, or covered by other means to reduce the potential for erosion.
- Sediment control measures (BMPs) shall be in place prior to the onset of the rainy season and will be monitored and maintained to be in good working condition until disturbed areas have been revegetated with native species.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-2: Mitigation Measures to Prevent Accidental Spills and Pollution

Construction specifications shall include the following measures to reduce potential impacts to vegetation and aquatic habitat resources in the project area associated with accidental spills of pollutants (e.g., fuel, oil, asphalt and grease):

- A site-specific spill prevention plan shall be prepared, approved by the County and implemented for potentially hazardous materials. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching surface water features.
- Where feasible, equipment and hazardous materials shall be stored at least 50 ft away from surface water features.
- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 ft away from Big Sulphur Creek or within an adequate fueling containment area.
- Equipment operating within the channel shall use non-toxic vegetable oil for operating hydraulic equipment opposed to traditional hydraulic fluids that can contain a wide range of chemical compounds.
- Place plastic materials (or similar) under asphaltic concrete (AC) paving equipment while not in use, to catch and/or contain drips and leaks.
- Minimize sand and gravel from new asphalt from getting into storm drains, streets, and creeks by sweeping. Old or spilled asphalt must be recycled or disposed as approved by the Resident Engineer.
- AC grindings, pieces, or chunks used in embankments or shoulder backing must not be allowed to enter any storm drain or watercourses. Install silt fence until structure is stabilized or permanent controls are in place.
- Collect and remove all broken asphalt and recycle when practical; otherwise, dispose in accordance with Standard Specification 7-1.13 and to an appropriately permitted site.
- During deck pothole patching application and sweeping operations, petroleum or petroleum covered aggregate must not be allowed to enter any storm drain or water courses. Use silt fence until installation is complete.

Do not allow Portland Concrete Cement (PCC) or slurry to enter storm drains or watercourses.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-3: Mitigation for Loss of Riparian Habitat

The following measures shall be implemented to reduce potential impacts to riparian habitat in the action area:

- Exclusionary fencing shall be installed along the boundaries of all riparian areas to be avoided to ensure that impacts to riparian vegetation outside of the construction area are minimized.
- Riparian habitat areas temporarily disturbed shall be replanted using riparian species that have been recorded along Gill Creek in the action area, including willow (*Salix laevigata*), white alder (*Alnus rhombifolia*), CA Buckeye (*Aesculus californica*), Fremont cottonwood (*Populus fremontii*), coast live Oak (*Quercus agrifolia*) and valley oak (*Quercus lobata*).
- Onsite habitat creation/restoration shall occur in areas that have been disturbed during project construction and within interstitial spaces of the RSP. The amount of habitat created/restored shall be at a 3:1 ratio of new plantings per large (6 in. in diameter at breast height) woody plant removed. This replanting ratio will help ensure successful establishment of at least one vigorous plant for each plant removed to accommodate the project.
- Plant spacing intervals will be determined as appropriate based on site conditions following construction.

Revegetation monitoring would be implemented in compliance with regulatory permit conditions (typically 5 years in duration) and be initiated immediately following completion of the planting. The monitoring surveys will consist of a general site walkover evaluating the survival and health of riparian plantings, signs of drought stress, weed or herbivory problems, and the presence or trash or other debris. Within the mitigation area, less than 50 percent total mortality of planted species (including container stock and hardwood cuttings) would be considered a success, unless other permitting documents require greater survival rates. Volunteer growth of native species would be counted toward the vegetation coverage in the mitigation area. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures would be implemented.

Time of Implementation: Design, Pre-Construction, Construction

- Method:
- X Incorporated into the project design
 - X Included in the project plans and specifications (contractor will implement) or
 - X County forces
 - X Other (specify) County to hire a revegetation specialist to implement planting

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-4: Mitigation to Prevent of Spread of Invasive Species

The following measures shall be implemented to prevent the spread of invasive species in the action area:

- If project implementation calls for mulches or fill, they will be weed free

Any seed mixes or other vegetative material used for re-vegetation of disturbed sites will consist

- of locally adapted native plant materials.

Time of Implementation: Design, Pre-Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement) **or**

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-5: Mitigation for Salmonids

- Construction outside of the creek channel may occur any time of the year, provided all BMPs necessary to protect the creek are in place and well maintained.
- Construction below top of bank may occur between June 15 and October 15, provided all BMPs necessary to protect the creek are in place and well maintained.
- No work will occur in water, and no dewatering of the active stream channel will occur during construction.
- Regulatory approval will be obtained for all work within potentially jurisdictional areas, including approval from the Corps, RWQCB, and CDFW. All work within these areas will conform to any conditions imposed by the regulating agencies.
- Prior to any clearing, grubbing, pruning, or groundbreaking activity, the limits of construction shall be fenced with temporary high-visibility construction fencing to protect environmentally sensitive areas, protect all riparian vegetation beyond that which must be cleared for construction access, and prevent any equipment from unnecessarily extending the work area or entering the wetted channel. In addition, silt fencing shall be installed at the base of construction fencing to prevent debris from entering the creek. All fencing shall be removed upon project completion.
- Prior to construction, the contractor shall be required to prepare an Accidental Spill Prevention and Cleanup Plan. This plan shall include required spill control absorbent material, for use beneath stationary equipment, to be present on-site and available at all times.
- To minimize fluid leaks during operation, refueling, and maintenance of stationary equipment spill control absorbent material shall be in place underneath this equipment at all times to capture potential leaks.
- All stockpiling of construction materials, equipment, and supplies, including storage of chemicals, refueling and maintenance, shall occur approximately 100 feet outside the creek channel. No equipment shall be washed where runoff could enter the creek.
- All refueling and maintenance of equipment, other than stationary equipment, shall occur outside the creek's top-of-bank. Receptacles containing fuel, oil, or any other substance that may adversely affect aquatic resources shall be stored outside of the channel. Any hazardous chemical spills shall be cleaned immediately.
- The County will not allow any motorized equipment to be left within the creek channel (top of bank to top of bank) overnight, unless a container or similar method is securely placed beneath the equipment to catch any fluid leakage. All contained fluids will be disposed of in a permitted manner.
- The County shall require the contractor to use a drilling mud and slurry seal that is nontoxic to aquatic life for all drilling activities related to construction of project. All drilling muds and fluid shall be contained on-site in tanks and disposed of in a permitted manner. Fluids from saw cutting shall be collected and not be allowed to flow into the creek.

Mitigation Measure BIO-5 (continued): Mitigation for Salmonids

- No equipment, including concrete trucks, shall be washed within the channel of the creek, or where wash water could flow into the channel. Prior to project construction, the contract shall establish a concrete washout area for concrete trucks in a location where wash water will not enter Gill Creek. The washout area shall follow the practices outlined in the San Francisco Bay Regional Water Quality Control Board Erosion and Sediment Control Field Manual (page 107-108, July 1999) or equivalent guidelines. Substitution of the designated concrete washout area or methods shall require prior approval of PRMD and the DTPW.
- All water that comes in contact with wet concrete must be pumped directly into tanks and disposed of at a permitted location.
- If work is to occur on the roadway bridge approaches during the period October 15 to June 15, all drainage inlets within the project site shall be protected from receiving polluted storm water through the use of filters such as fabrics, gravel bags, straw wattles, or other appropriate BMPs.
- Water encountered during construction of the bridge foundations will be pumped upslope for disposal on nearby uplands in a way that would prevent it from flowing back into the creek, or pumped directly into tanks and disposed of at a permitted location.
- All workers will ensure that food scraps, paper wrappers, food containers, cans, bottles, and other trash from the BSA are deposited in covered or closed trash containers. The trash containers shall not be left open and unattended overnight.
- By October 15, the County will require that all disturbed areas around the permanent and temporary bridge abutments be re-graded to match the surrounding topography. Seed and straw will be placed on these and all other disturbed areas in the project site. A jute mesh type or equivalent matting shall be placed over the straw, installed per the manufacturer's instructions. This matting shall have no plastic incorporated into it. Substitution of materials or erosion control methods shall require prior approval of PRMD and DPTW.

The project site shall be inspected following the first heavy rain, during the middle of the rainy season following construction. During each visit areas of significant erosion or erosion control device failure shall be noted and appropriate remedial actions taken.

Time of Implementation: Design, Construction

- Method:
- X Incorporated into the project design
 - X Included in the project plans and specifications (contractor will implement)
 - X County forces
 - Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-6: Mitigation measures for Migratory Birds:

Mitigation measure BIO-3 (replacement of lost riparian habitat), the project will minimize permanent loss of nesting sites. However, some removal of riparian vegetation and street trees is required. Tree removal during times of nesting could result in negative effects to the young of nesting birds. The following avoidance and minimization measure will reduce any potential impact to breeding birds:

- The County shall only allow trees to be removed from the project site after August 31, and before February 15 of the following year, when bird nesting is most likely avoided, unless a qualified biologist has inspected the site and determined that the tree removal will not affect nesting birds.

If work is conducted during the nesting season, pre-construction surveys for nesting birds shall be conducted no more than 3 days prior to ground disturbing activities. If an active nest is found, a qualified biologist, in conjunction with CDFW, shall determine the appropriate buffer size and delineate the buffer using fencing, pin flags, yellow caution tape, and etc. During construction, the qualified biologist shall conduct regular monitoring (at CDFW approved intervals) to evaluate the nest(s) for potential disturbances associated with construction activities. Construction within the buffer shall be prohibited until the qualified biologist determines the nest is no longer active. If an active nest is found after the completion of the pre-construction surveys and after construction begins, all construction activities shall stop until a qualified biologist has evaluated the nest and erected the appropriate buffer around the nest. If establishment of the buffer is not feasible, CDFW and/or USFWS shall be contacted for further avoidance and minimization guidelines.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

- X Included in the project plans and specifications (contractor will implement) or
- X County forces
- Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-7: Mitigation Measures for Special Status Plants

Surveys will be conducted to determine the presence or absence of special status plants within the project area. If special-status plants are documented within the Project Area, a qualified biologist shall determine if the Project would constitute a significant impact under CEQA. If so, then a Habitat Mitigation and Management Plan. (HMMP) shall be drafted to reduce these impacts to less than significant. The HMMP shall detail the existing population(s) and specific microhabitat conditions. Unoccupied potential habitat shall be targeted as a donor site(s) for relocated impacted special-status plants. Because all the potential special-status plants are annuals, the HMMP shall detail seed collection and storage, donor site preparation (e.g., weed removal, disking), and seed distribution to maximize germination. Annual monitoring methods and performance criteria shall be developed and included in the HMMP. Finally, the HMMP shall include contingency measures and adaptive management techniques to provide some assurance of success.

Time of Implementation: Design, Construction

- Method:
- Incorporated into the project design
 - Included in the project plans and specifications (contractor will implement)
 - County forces
 - Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-8: Mitigation Measures for Amphibians

- Because California foothill yellow-legged frogs may move into and out of the BSA at any time, a pre-construction survey for the species is necessary to confirm its status (presence/absence) on the site immediately prior to the onset of project construction. Therefore, a qualified biologist shall conduct a minimum of one survey of the BSA for these amphibians. The survey shall be conducted a maximum of one week prior to construction. If individuals of any of these species is found within a construction impact zone, the biologist shall move it to a safe location within suitable habitat based upon their extensive experience working with the species.
- If a foothill yellow-legged frogs is encountered during construction, activities in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the individual will not be harmed. A qualified biological monitor may need to be present to survey the construction site each morning prior to starting construction, any frogs encountered shall be moved to a safe location with suitable habitat. Alternatively, any frogs encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed frogs shall be reported immediately to CDFW.

Time of Implementation: Design, Construction

Method: Incorporated into the project design
Included in the project plans and specifications (contractor will implement)
X County forces
Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-9: Mitigation Measures for Western Pond Turtles

- Because turtles may move into and out of the project site at any time, a pre-construction survey for the species is necessary to confirm its status (presence/absence) on the site immediately prior to the onset of project construction. Therefore, a qualified biologist shall conduct a minimum of one survey of the project site for pond turtles and their nests. The survey shall be conducted a maximum of one week prior to construction. If a pond turtle is found within a construction impact zone, the biologist shall move it to a safe location within similar habitat. If a pond turtle nest is found, the biologist shall flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, the County shall contact CDFW to determine appropriate measures.
- If a western pond turtle is encountered during construction, activities in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the turtle will not be harmed. A qualified biological monitor may need to be present to survey the construction site each morning prior to starting construction, any frogs or newts encountered shall be moved to a safe location with suitable habitat. Alternatively, any frogs encountered during construction shall be allowed to move away on their own. Any turtles encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed turtles shall be reported immediately to CDFW.

Time of Implementation: Design, Construction

Method: Incorporated into the project design
Included in the project plans and specifications (contractor will implement)
X County forces
Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-10: Mitigation for Riparian Vegetation

The project shall be designed and constructed to avoid and minimize removal of riparian vegetation to the maximum extent practicable. Staging areas and construction access routes will avoid encroachment into riparian vegetation where practicable and minimize encroachment where complete avoidance is not practicable. "Avoided" riparian habitat will be clearly identified in the construction drawings and contractor work plans. Exclusionary fencing will be installed to mark boundaries of avoided riparian areas. The exclusionary fencing shall be inspected and maintained on a regular basis throughout project construction.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure BIO-11: Mitigation Measure for Waters of the United States/ Waters of the State

- To the extent practicable, the discharge of dredged or fill material into “waters of the United States,” including wetlands shall be avoided (this also includes waters not subject to Corps jurisdiction, but subject to RWQCB jurisdiction). However, complete avoidance is not feasible due to the need for the placement of new piers, thus the following measures shall be implemented to avoid or minimize the potential for project-related impacts on “waters of the United States”:
- To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. If these activities must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
- Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County.
- Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch shall be applied to all exposed areas upon completion of the day’s activities. Soils shall not be left exposed during the rainy season.
- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities.
- If temporary stockpile sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a stockpile drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Stockpile sites shall be graded and vegetated to reduce the potential for erosion.
- Sediment control measures shall be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated.
- Any new or previously excavated gravel material placed in the channel shall be washed at least once and have a cleanliness value of 85 or higher based on Caltrans Test No. 227.
- A site-specific spill prevention plan shall be implemented for potentially hazardous materials. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching surface water features.
- Where possible, equipment and hazardous materials shall be stored at least 50 ft away from surface water features.
- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 ft away from the Big Sulphur Creek or within an adequate fueling containment area.

Mitigation Measure BIO-11 (continued): Mitigation Measure for Waters of the United States/ Waters of the State

- Per Executive Order 11990, Protection of Wetlands (1977), no net loss of habitats referred to as wetlands, any jurisdictional areas impacted by the project would be replaced in kind and on-site at a 1:1 ratio to ensure no net loss.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure CUL-1: Mitigation Measure for Cultural Resources

If archaeological or paleontological materials are discovered during project construction, construction shall cease in the immediate vicinity of the find until a qualified archaeologist is consulted to determine the significance of the find, and has recommended appropriate measures to protect the resource. Further disturbance of the resource shall not be allowed until those recommendations deemed appropriate by the County have been implemented.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure CUL-2: Mitigation Measure for Human Remains

In the event that human remains are unearthed during construction, state law requires that the County Coroner be notified to investigate the nature and circumstances of the discovery. At the time of discovery, work in the immediate vicinity would cease until the Coroner permitted work to proceed. If the remains were determined to be prehistoric, the find would be treated as an archaeological site and the mitigation measure CUL-1 would apply.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure HAZ-1: Storage of Hazardous Materials

The construction contract shall require that any storage of hazardous materials be in compliance with all applicable local, state and federal laws for the protection of surface waters. In the event of a spill of hazardous materials the contractor shall immediately call the emergency number 9-1-1 to report the spill, and shall take appropriate actions to contain the spill to prevent further migration of the hazardous materials to stormwater drains or surface waters.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure HYD-1: Mitigation Measure for Surface Water

- By October 15, the County shall require that all disturbed areas around the permanent and temporary bridge abutments and piers be re-graded to match the surrounding topography. Seed and straw will be placed on disturbed areas above channel banks, and all other disturbed areas in the project site, with a jute mesh type or equivalent matting placed over the straw and on disturbed banks, installed per the manufacturer's instructions. This matting shall have no plastic in it. Substitution of materials or erosion control methods shall be required prior approval from PRMD and the DTPW.
- No work will occur in water and no dewatering of the active stream channel will occur during construction.
- The project site shall be inspected following the first heavy rain, during the middle of the rainy season and at the end of the rainy season following construction. During each visit, areas of significant erosion or erosion control device failure shall be noted and appropriate remedial actions taken.
- All stockpiling of construction materials, equipment, and supplies, including storage of chemicals, refueling and maintenance, shall occur outside the creek channel. No equipment shall be washed where wash runoff could enter the creek.
- All refueling and maintenance of equipment, other than stationary equipment, shall occur outside the channel of Gill Creek, top-of-bank to top-of-bank. Receptacles containing fuel, oil, or any other substance that may adversely affect aquatic resources shall be stored outside of the channel. Any hazardous chemical spills shall be cleaned up immediately.
- Equipment and vehicles operated in the project area will be checked daily to prevent leaks of fuels, lubricants or other fluids to the creek.
- To minimize fluid leaks during operation, refueling, and maintenance of stationary equipment, spill control absorbent material shall be in place underneath this equipment at all times to capture potential leaks.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

Included in the project plans and specifications (contractor will implement)

County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure HYD-2: Mitigation Measures for Storm Water

- If work is to occur on the roadway and bridge approaches during the period between October 15 to June 15, all drainage inlets within the project limits shall be protected from receiving polluted storm water through the use of filters such as fabrics, gravel bags, straw wattles, or other appropriate BMPs.

Construction grading and drainage shall be designed and constructed to maintain natural and existing drainage patterns.

Time of Implementation: Design, Construction

- Method:
- X Incorporated into the project design
 - X Included in the project plans and specifications (contractor will implement)
 - X County forces
 - Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure HYD-3: Mitigation Measures for Groundwater

Water encountered during construction of the bridge foundations shall be pumped to an upland location where it cannot flow back into water courses or to storage tanks or trucks for disposal to a permitted upland location (not within the banks of any waterway).

Time of Implementation: Design, Construction

- Method:
- Incorporated into the project design
 - X Included in the project plans and specifications (contractor will implement)
 - X County forces
 - Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure HYD-4: Projects disturbing greater than 1 acre (General Construction Permit)

Construction activities which involve disturbing 1 or more acres of ground, are subject to the requirements of the State Water Resources Control Board (SWRCB) NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). Construction activities include clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. Applicants of construction projects must file for coverage under the General Construction Permit by submitting a complete Notice of Intent (NOI) package to the SWRCB, and developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must contain a site map that shows the construction site perimeter; existing and proposed buildings, lots, roadways, and storm water collection and discharge points; general topography both before and after construction; and drainage patterns across the project site. The SWPPP must include the Best Management Practices (BMPs) that the applicant will use to protect the quality of storm water runoff and the placement of those BMPs.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

Included in the project plans and specifications (contractor will implement)

County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure TRANS-1: Notification of Closure

- The County shall notify property owners along Geysers Road at least 7 days in advance of the proposed temporary closure.

Signage shall be placed at both ends of Geysers road notifying motorists of the planned closure.

Time of Implementation: Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments:

Mitigation Measure TRANS-2: Emergency Access

Emergency response organizations will be notified of the project construction schedule and any closure in advance. The County will require the contractor to provide passage of emergency vehicles through the project site at all times. The Contractor shall make plans for emergency vehicle staging on the easterly approach if complete closure is determined necessary at any point in the construction schedule.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

Comments: