



MITIGATION MONITORING PROGRAM

Sonoma County Permit and Resource Management Department

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(707) 565-1900 Fax (707) 565-1103

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: King Ridge Road Bridge over Austin Creek Replacement Project

Project Applicant: Sonoma Public Infrastructure

Location: King Ridge Road crossing Ausitn Creek, north of Cazadero, California

Lead Agency: Sonoma County

Decision Making Body: Board of Supervisors

P.P.R #

Date Approved: pending

SCH # pending

Contact Person(s): Dave Walsh

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 (Permit Sonoma) will designate an Environmental Specialist. Sonoma Public Infrastructure (SPI) will designate a Design Engineer and a Construction Engineer. Both Permit Sonoma and SPI are collectively referred to as "County" in this MMP.

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.

King Ridge Road Bridge over Austin Creek Replacement Project

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 AIR-1 Air Quality/ Fugitive Dust Control.

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:

- 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-workdays, 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

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

King Ridge Road Bridge over Austin Creek Replacement Project

MMP

County forces

Other (specify)

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

Comments:

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:

- 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.

- All dewatering activities will be conducted in compliance with the Caltrans Field Guide for Construction Site Dewatering and Section 13-4.03G of the Caltrans Standard Specifications. Water removed from the excavated area for pier and abutment footings or construction of fishway shall be pumped to a temporary sediment retention basin outside of the channel, through a mechanized water filtration system, or into baker tanks or similar storage system and trucked offsite to an authorized disposal site. If a temporary basin is constructed, it shall be located outside of the active channel and include sediment sock or similar sediment control on the discharge.
- 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 stockpiles drain 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:

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):

- 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 Austin Creek or within an adequate fueling containment area.
- Equipment operating within the Ordinary High Water Mark 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.

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| | <ul style="list-style-type: none">• Use only non-toxic substances to coat asphalt transport trucks and asphalt spreading equipment.• Do not allow Portland Concrete Cement (PCC) or slurry to enter storm drains or watercourses. |
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Time of Implementation: Design, Pre-Construction, Construction

Method: Incorporated into the project design

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

County forces

Other (specify)

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

Comments:

BIO-3- Mitigation for Lost Riparian Habitat

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

- The width of the construction disturbance zone within the riparian habitat shall be minimized through careful pre-construction planning.
- 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 the Austin Creek in the action area, including willow (*Salix lasiolepis* and *Salix laevigata*) white alder (*Alnus rhombifolia*) Bay Laurel (*Laurus nobilis*) Coast Redwood (*Sequoia sempervirens*) Fir (genus *Abies*) Live Oak (*Quercus wislizenii*) Black Oak (*Quercus kelloggii*) and Valley Oak (*Quercus lobata*).
- Onsite creation/restoration shall occur in areas that have been disturbed during project construction and within interstitial spaces of the rock slope protection (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.
- Non-native tree species removed in riparian areas during project construction will be replaced with native riparian (e.g., willow, alder, and cottonwood)
- 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

King Ridge Road Bridge over Austin Creek Replacement Project

MMP

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:

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:

- All equipment used for off-road construction activities will be weed-free prior to entering the construction 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.
- Any personal equipment (including boots/waders), construction materials (falsework members, sand bags, etc.) and construction equipment shall be properly disinfected or cleaned according guidance provided by the State of California Aquatic Invasive Species Management Plan (California Department of Fish and Game, (CDFG) 2008; U.S. Bureau of Reclamation 2012) prior to in-channel work to prevent the spread of aquatic invasive species.

Time of Implementation: Design, Pre-Construction, Construction

Method: Incorporated into the project design

King Ridge Road Bridge over Austin Creek Replacement Project

MMP

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:

Time of Implementation: Design, Pre-Construction, Construction

BIO-5- Mitigation for Salmonids

- Prior to October 15, all temporary culverts, pipe, and work platforms shall be removed from the channel. The river rock base shall be excavated down to the point at which there is a thin veneer remaining on the existing channel bed. Upon removal of the culverts and fish rock, hand crews may redistribute the remaining fish rock such that it does not become a barrier to the free passage of water or the movement of fish and aquatic animals. It shall not impede, or tend to impede, the passage of fish at any time, pursuant to Fish and Game Code Section 5901.
- The crossings shall not change the flow characteristics (i.e., velocity, depth, width) of the water as it flows through the project area. No ponding of flow shall occur upstream of the pipe.
- Culverts shall be maintained and kept open while in place. Any ponding shall be corrected immediately. The County is responsible for such maintenance as long as the culvert remains in the stream.
- Any structure/culvert placed within a stream where fish do/may occur shall be designed, constructed, and maintained such that they do not constitute a barrier to upstream or downstream movement of aquatic life or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream fish migration. For this project, this equates to designing the culverts to meet guidelines outlined in NMFS (2001).
- Any new or previously excavated gravel material placed in the channel shall meet Caltrans' Gravel Cleanliness Specification #227 having a value of 85 or higher (excluding such materials as soil in the RSP to allow for riparian planting).
- Impacts to herbaceous cover will be offset by reseeding any unvegetated and impacted areas with a suitable seed mixture post construction.
- All of the interstitial spaces of the RSP will be filled with well-graded soil to allow for revegetation.
- Any construction equipment operating upon work pads or adjacent to Austin Creek shall be inspected daily for leaks. External oil, grease, and mud shall be removed from equipment and disposed of properly. Spill containment booms shall be maintained onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks shall maintain adequate spill containment materials at all times.
- The contractor shall develop and implement site-specific BMPs, a water pollution control plan, and emergency spill control plan. The contractor shall be responsible for immediate containment and removal of any toxins released.
- The project will require some work in the flowing water of the creek to construct the gravel work pad. In addition, coho salmon and steelhead could be indirectly impacted if soils, fuels or other debris from construction are allowed to enter the

water. The fish capture and relocation plan along with the avoidance and minimization measures to protect water quality will minimize these impacts to steelhead.

- Coho salmon and steelhead could also be impacted through loss of shading to the creek via loss of riparian vegetation. The BIO-3- Replacement of lost riparian habitat will minimize this impact to steelhead.

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:

BIO-6- Mitigations for Amphibians

- Foothill yellow-legged frogs and red-bellied newt may move into and out of the construction area (BSA) at any time. These amphibians tend to hide and shelter under boulders and down vegetation. One year prior to construction a County biologist will simplify habitat by removing features within the BSA to lessen the possibility of these species being present when construction begins.
- Because foothill yellow-legged frogs and red-bellied newt 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 frog or red-bellied newt 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. 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)

County forces

Other (specify)

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

Comments:

BIO-7- Mitigation measures for 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, it will be excavated and re-buried at a suitable location outside of the construction impact zone by a qualified biologist. The County will inform Caltrans when such an activity occurs.
- 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. 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)

County forces

Other (specify)

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

Comments:

BIO-8- Mitigation measures for Bats

- To the extent practicable, the removal of any large trees shall occur outside of the breeding season of pallid bat and western red bat. For the purposes of implementation of this measure, the breeding season is considered to be from April 1 through August 15th.

Time of Implementation: Design, Pre-Construction, 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:

BIO-9- Mitigation measures for Northern Spotted Owl

- SPI will include all conservation measures, including USFWS approved NSO surveys prior to construction, to keep any potential project related impacts to NSO at less than significant.

Time of Implementation: Design, Pre-Construction, 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:

	<p>BIO-10- Mitigation measures for Migratory Birds</p> <ul style="list-style-type: none">• 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 and other special-status birds and appropriate nesting habitat 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.
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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:

	<p>BIO-11: Mitigation for Riparian Vegetation</p> <ul style="list-style-type: none">• 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.
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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:

BIO-12- 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 stockpiles drain 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

	<p>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.</p> <ul style="list-style-type: none"> • 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 Austin Creek or within an adequate fueling containment area. • 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.
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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:

	<p>BIO-13- Mitigation Measure for Disposal of Surplus Solid Waste</p> <ul style="list-style-type: none"> • All surplus soils that cannot be used on the project site shall be disposed of at an acceptable disposal site. If any areas outside the project site are used for disposal or stockpiling of soil or other materials, the contractor shall be required to demonstrate that the site has all the required permits, including, if applicable, a grading permit. The contractor shall notify CDFW of the intent to use the site, and the Sonoma County PRMD to determine if a grading permit is required. The contractor shall be required to provide evidence to the County that the site does not affect wetlands under the jurisdiction of the Corps, or that the site has the appropriate permit from the Corps. • Surplus concrete rubble or pavement shall either be disposed of at an acceptable and legally permitted disposal site or taken to a permitted concrete and/or asphalt recycling facility.
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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:

	<p>Mitigation Measure CUL-1: Cultural Resources</p> <ul style="list-style-type: none"> • 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.
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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:

	<p>Mitigation Measure CUL-2: Human Remains</p> <ul style="list-style-type: none"> 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.
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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:

	<p>HAZ-1- Storage of Hazardous Materials</p> <ul style="list-style-type: none"> 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.
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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-1- Surface Water

- No work shall occur between October 15 and June 15 below Austin Creek top-of-bank.
- By October 15, the County shall require that all disturbed areas around the two permanent 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 SPI.
- 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.
- 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 fence shall be installed at the base of the construction fencing to prevent debris from entering the creek. All fencing shall be removed upon project completion.
- 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 Austin 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.
- 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.

	<ul style="list-style-type: none"> • The County shall require the contractor to use a drilling mud and slurry seal that is non-toxic to aquatic life for all drilling activities related to the permanent or temporary bridges. All drilling muds and fluid within all drilled holes shall be contained on site in tanks, removed from the project area, and disposed of in a permitted manner. • 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 contractor shall establish a concrete washout area for concrete trucks in a location where wash water will not enter Austin Creek. The washout area shall follow the practices outlined in the North Coast 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 from PRMD and the DTPW.
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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:

	<p>Mitigation Measure HYD-2 Storm Water</p> <ul style="list-style-type: none"> • If work is to occur on the roadway and bridge approaches during the period 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. • The County proposes to plant willow springs around the outfall located near the top of the easterly bank in order to reduce erosion of the bank associated with storm water discharge, which will in turn reduce sediment discharge to the creek. • Construction grading and drainage shall be designed and constructed to maintain natural and existing drainage patterns.
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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:

	<p>Mitigation Measure HYD-3 Groundwater</p> <ul style="list-style-type: none"> • 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).
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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:

	<p>Mitigation Measure HYD-4- Projects disturbing greater than 1 acre (General Construction Permit)</p> <ul style="list-style-type: none"> 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.
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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:

	<p>Mitigation Measure TRANS-1- Notification of Closure</p> <ul style="list-style-type: none"> • The County shall notify property owners along King Ridge Road at least 7 days in advance of the proposed temporary closure. • Signage shall be placed at both ends of King Ridge Road notifying motorists of the planned closure.
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Time of Implementation: 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:

	<p>Mitigation Measure TRANS-2 - Emergency Access</p> <ul style="list-style-type: none"> 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.
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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: