

Memorandum

Tab 31

To: CHAIR AND COMMISSIONERS

CTC Meeting: May 21, 2014

Reference No.: 2.2b. (1)
Action

From: ANDRE BOUTROS
Executive Director

Subject: **DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE WILDWOOD ROAD
REALIGNMENT AND WIDENING PROJECT**

ISSUE:

Should the Commission, as a Responsible Agency, provide comments in response to the Draft Environmental Impact Report (DEIR) for the Wildwood Road Realignment and Widening Project (project) located in Trinity County?

RECOMMENDATION:

Staff recommends that the Commission make no comments regarding the environmental issues addressed in the DEIR. However, staff recommends that a letter be sent to the Trinity County Department of Transportation (County) that states:

- The Commission has no comments with respect to the alternatives or environmental impacts addressed in the DEIR.
- The Commission recommends that the County and its partners identify and secure the necessary funding to complete the project.
- If, in the future, funds or other actions under the purview of the Commission are anticipated, notification should be provided to the Commission as a Responsible Agency.

BACKGROUND:

The proposed project is located in Trinity County near the community of Hayfork and will reconstruct, widen, and realign a 6.6 mile section of Wildwood Road between East Fork Road and Gemmill Gulch. The project will be designed and constructed in 3 phases and will provide two standard travel lanes with shoulders, reduce curve severity, improve sight distance, rehabilitate the roadway structural section, and improve drainage. Trinity County as the California Environmental Quality Act (CEQA) lead agency, is circulating a Program EIR that analyzes the entire project. Follow-up CEQA documents may be prepared as each project phase is designed to address issues not within the scope of the Program EIR. Caltrans is concurrently preparing an environmental document for this project pursuant to the National Environmental Policy Act (NEPA). Funding for this project is programmed in the 2014 STIP.

The decision to prepare an EIR was made due to analysis results indicating potentially significant impacts to the following areas:

- Land Use
- Agricultural and Forestry Resources
- Air Quality
- Transportation and Traffic
- Noise
- Biological Resources
- Cultural Resources
- Aesthetics
- Hydrology and Water Quality
- Geology and Soils
- Hazards and Hazardous Materials

The alternatives considered for the proposed project include:

- Alternative 1 – This alternative would widen Wildwood Road between Post Miles 5.0 and 11.6 to provide two 11-foot-wide lanes with 2-foot-wide paved shoulders and additional 1-foot-wide gravel shoulders where feasible, realign several tight-radius curves to achieve a 20 miles per hour (mph) design speed with a 35 mph design speed for the rest of the project, complete reconstruction of the roadway to provide a new structural section, installation of new culverts or concrete boxes, installation of retaining walls, rock slope projection and guardrails and chain link fencing to contain rock fall as necessary on cut banks.
- Alternative 2 – This is the no-build alternative and would continue maintenance of Wildwood Road with no reconstruction. The comparative impacts of this alternative were analyzed in Chapter 4 of the DEIR.
- Alternative 3 – This alternative would propose major realignment of Wildwood Road between Post Miles 6.2 and 7.7 to avoid extremely steep terrain. This alternative was considered but eliminated from detailed evaluation due to increased environmental impacts and construction costs.
- Alternative 4 – This alternative would include bridges across large ravines in the project area rather than currently proposed fill. This alternative was considered but eliminated from detailed evaluation due to increased environmental impacts associated with disposing fill material generated by the project excavation.
- Alternative 5 – This alternative would make spot improvements along Wildwood Road where they are most needed such as guardrails, replacement of drainage structures, etc. This alternative was considered but eliminated from detailed evaluation due to the fact that drainage and safety problems on the roadway could persist or become worse.
- Alternative 6 – This alternative would allow Trinity County to approve only a portion of the proposed project, such as one or two of the project segments. This alternative was considered but eliminated from detailed evaluation due to the fact that drainage and safety problems on the roadway could persist or become worse.

Alternative 1 is identified as the locally preferred alternative in the DEIR. A summary of potential impacts and proposed mitigation measures are included in Table ES-1 of the attached Executive Summary. The DEIR indicates that all impacts can be mitigated to a less than significant level.

Attachments - Notice of Availability
DEIR Executive Summary

Wildwood Road Realignment and Widening Project

Draft Program Environmental Impact Report

SCH No. 2009092086



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Executive Summary

ES.1 Introduction

Trinity County has prepared a Draft Program Environmental Impact Report (EIR) for the proposed Wildwood Road Realignment and Widening Project (proposed project). The purpose of the EIR is to provide information to County and state officials, agency personnel, and the general public regarding the potentially significant environmental impacts of the proposed project, to identify possible means to minimize those impacts, and to describe reasonable alternatives to the proposed project pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15121. In addition, the document discloses impacts found not to be significant, growth-inducing impacts, significant cumulative impacts, and significant environmental impacts that cannot be avoided, if any. The EIR is a Program EIR that analyzes the overall project plans and three proposed phases of the proposed project in as much detail as possible. As each project phase is designed, it will be evaluated to determine if it is within the scope of the EIR. If the County determines that proposed work is outside of the scope of this EIR, they will prepare and circulate for public review and comment a follow up CEQA document (e.g., Subsequent EIR or Initial Study/Mitigated Negative Declaration) that tiers off of this program EIR. California Department of Transportation, acting as agent for the Federal Highway Administration, is concurrently preparing an environmental document under the National Environmental Policy Act (NEPA). In addition, the U.S. Forest Service will be conducting an independent NEPA evaluation as part of the special use permit process, which cannot be initiated until the County has completed the design work for each segment.

The proposed project will require approvals from multiple federal and state agencies, including the U.S. Forest Service, U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Army Corps of Engineers, Federal Highway Administration, California Department of Transportation, California Department of Fish and Wildlife, California Transportation Commission, North Coast Regional Water Quality Control Board, and State Water Resources Control Board. These agencies may also use this EIR and the supporting technical studies during their review and permitting processes. Funding for the proposed project is being provided through the State Transportation Improvement Program.

ES.2 Areas of Controversy and Issues to Be Resolved

Trinity County initiated scoping for the proposed project with the circulation of a Notice of Preparation on September 28, 2009. Comments received during the scoping period identified concerns about the project need, funding, schedule, permitting requirements, biological resources (sensitive species, trees), water quality, traffic management, cultural resources, hazardous materials, air quality, and visual resources. Copies of the comment letters are included in Appendix A of the EIR.

Initial communications with resource agencies identified potential issues associated with:

- Northern spotted owl (*Strix occidentalis caurina*), a species federally listed as threatened;

- Southern Oregon/Northern California Coasts evolutionarily significant unit coho salmon (*Oncorhynchus kisutch*), a species federally listed as threatened;
- Water quality impairment status of Hayfork Creek;
- Floodplain encroachment into Hayfork Creek; and
- Potential visual changes on National Forest System lands.

Based on the analyses contained in the EIR, these issues have been resolved through project-specific design measures and recommended mitigation measures.

ES.3 Summary of Proposed Project

The proposed project would involve widening Wildwood Road between Post Miles 5.0 and 11.6 to two standard travel lanes with shoulders, improving its alignment to reduce the severity of its curves and improve sight distance, and rehabilitating the roadway structural section and drainage. The new road alignment would extend beyond the existing easement and right-of-way in multiple areas and would require large amounts of fill in some ravines and stream crossings. Approximately 6.6 miles of Wildwood Road, from the intersection with East Fork Road at the East Fork of Hayfork Creek south to the Gemmill Gulch Picnic Area, would be improved. The project would be designed and constructed in three phases, approximately 2 miles at a time, starting at the north end at the intersection with East Fork Road.

Specific design details for the Wildwood Road improvements will be refined during the design period for each phase. The proposed road improvements are described below.

- All segments of the road would be widened to two 11-foot-wide lanes with 2-foot-wide paved shoulders along both sides. An additional 1-foot-wide gravel shoulder would extend beyond the paved shoulder where feasible on the outboard side, and a paved gutter would be constructed on the inboard side. These improvements would involve roadway excavation and embankment modification. Excavations into inboard slopes or the placement of fill onto outboard slopes would be required to achieve the desired width.
- Several tight-radius curves would be realigned to improve sight distance and safety. They would be designed to achieve 20 miles per hour (mph) design speeds. The rest of the improved roadway may be realigned to meet a 35 mph design speed.
- The road would be reconstructed with new structural section, aggregate base, and asphalt concrete pavement with edge and centerline striping and appropriate signage.
- Culverts at all stream crossings would be replaced with new pipes or concrete boxes equipped to handle 100-year storm events and to facilitate fish passage, where appropriate. Some culverts may be fitted with downspouts or outlet protection to prevent erosion of fill slopes and to protect against formation of hydraulic drop. Culvert inverts would be aligned with the channel bottom and angle of the stream.
- Retaining walls, rock slope protection, and guardrails may be used to enhance stability and safety. Retaining walls would be either gabion walls (cages built of heavy gage wire and filled with rock), can walls (steel pipes driven vertically and filled with soil), MSE walls

(mechanically stabilized earth walls using welded wire, engineering fabric, or geogrids), or soldier pile walls (cast-in-drilled hole piles with timber, concrete, or steel lagging). No pile driving will occur adjacent to or within occupied coho salmon habitat. If pile driving must occur adjacent to a stream, the work will be conducted during the summer instream work period.

- Chain link may be placed on the cutbanks where necessary to contain rock fall.
- Construction activities would require extensive road closures, but access to most areas along the road would be maintained at all times via either State Route 3 north of Hayfork or State Route 36 west of Platina.

The three segments (or phases) are:

- Segment 1, which extends from Post Mile 11.6 to 9.7 between the intersection with East Fork Road and the Shiell Gulch Campground. Design of this segment is currently expected to occur from 2016-2017, with construction planned for 2020-2021.
- Segment 2, which extends from Post Mile 9.7 to 7.0 between the Shiell Gulch Campground and the Hayfork/Yolla Bolla Ranger District boundary. Design of this segment is currently expected to occur from 2019-2021, with construction planned for 2022-2024.
- Segment 3, which extends from Post Mile 7.0 to 5.0 between the Ranger District boundary and the Gemmill Gulch Picnic Area. Design of this segment is currently expected to occur from 2022-2024, with construction planned for 2024-2025.

ES.4 Alternatives to the Proposed Project

The no-project alternative and action alternatives for the Wildwood Road Realignment and Widening Project were developed during project meetings and scoping with the agencies and the public. The alternatives that have been considered are:

- Alternative 1: Proposed Project, as described in Chapter 2 of the EIR
- Alternative 2: No-Project (continued maintenance but no reconstruction)
- Alternative 3: Major Realignment between Post Miles 6.2 and 7.7
- Alternative 4: Bridge Gulches instead of Filling
- Alternative 5: Spot Improvements
- Alternative 6: Approve One or Two Segments

An evaluation of engineering, economic, and environmental factors resulted in the selection of two alternatives (the proposed project and the no-project alternative) for further analysis. Alternatives 3 through 6 were considered early in the project development process but were eliminated from detailed analysis because they did not meet the purpose and need for the project, created greater environmental impacts resulting from construction, or had substantially higher construction costs.

ES.5 Summary of Environmental Impacts and Mitigation Measures

The proposed project would result in temporary and long-term impacts on environmental resources in the project area. The majority of the adverse impacts would be temporary, and long-term impacts would be mostly beneficial as a result of the improved roadway conditions. Table ES-1 summarizes the environmental impacts discussed in Chapter 3 of the EIR and lists the mitigation measures identified to reduce potentially significant adverse impacts. The impacts are presented in the order they are discussed in Chapter 3. Most of the project-related impacts would be localized in and around the project area, and no significant cumulative impacts are anticipated with implementation of the mitigation measures identified in Chapter 3.

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
Land Use		
Impact LU-1: Construction activities could create conflicts with nearby uses.	None necessary (<i>construction measures as part of the project would minimize impacts</i>)	Less than significant
Impact LU-2: The proposed project could be inconsistent with the STNF LRMP or Trinity County General Plan.	None necessary	Less than significant
Impact LU-3: The proposed project may induce growth in the surrounding area.	None necessary	No impact
Agricultural and Forestry Resources		
Impact AF-1: The proposed project could conflict with zoning for agriculture or forestry in or adjacent to the project area.	None necessary	Less than significant
Impact AF-2: The proposed project could result in the conversion of agricultural or forest lands to other uses.	None necessary	Less than significant
Transportation and Traffic		
Impact TT-1: Construction activities could restrict or impede access to lands along Wildwood Road.	Mitigation Measure TT-1a: Require contractor to make special accommodations for residents and property owners. In Segment 1, from Post Mile 11.6 to 11.4, and in Segment 3, from Post Mile 5.3 (Gemmill Gulch) to Post Mile 6.2 (STNF boundary—north end of private properties), maximum delays of 30 minutes will be allowed. Contractor will be required to post flag people equipped with radios at each end of the	Less than significant with mitigation

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<p>construction zone. When no cars are waiting at either end of the construction zone, construction may proceed until the first car arrives at the north or south limits of the construction area. Then, the delay timer will start. Traffic must be allowed through in both directions when the first car has waited for 30 minutes.</p> <p>Mitigation Measure TT-1b: Require contractor to make special accommodations for emergency services. The contractor or Resident Engineer shall have radios and/or portable telephones and shall provide contact information to the Forest Service and local emergency service providers (ambulance, local fire districts, and sheriff). Upon being contacted regarding an emergency call on Wildwood Road, the contractor or Resident Engineer shall inform the provider of the estimated time it will take to open the road and will proceed with road opening immediately. If no phone or radio contact is made, contractor shall proceed with road opening as soon as emergency vehicles arrive. The road shall be kept open (at a minimum of one lane with flag persons, signals, or signage) until the emergency is over.</p>	
Impact TT-2: Detours required by the proposed project could increase traffic on SR 3 and SR 36.	None necessary	Less than significant
Impact TT-3: The proposed project could create hazards from design features or incompatible uses.	None necessary	Less than significant (beneficial)
Impact TT-4: Project implementation could conflict with federal, state, or local transportation system goals and objectives.	None necessary	Less than significant
Air Quality		
Impact AQ-1: Construction activities would generate emissions, including greenhouse gas emissions, and could result in violations of air quality standards.	<p>Mitigation Measure AQ-1: Implement fugitive dust and greenhouse gas emission reduction measures. The contractor will be required to implement a dust-control program to limit fugitive dust emissions and implement emission reduction measures for GHGs. The dust control program and GHG emission reduction measures shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> ▪ Water inactive work areas at least twice daily on work days when soils are not naturally moist. Water shall be applied in a manner that does not result in runoff. Disturbed areas shall be covered with mulch, vegetation, rock, paving, or fabrics during extended non-working periods. ▪ Pursuant to the California Vehicle Code (State of California 2012), all trucks hauling soil and other loose 	Less than significant with mitigation

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<p>material to and from the construction site shall be covered or should maintain at least 6 inches of freeboard (minimum vertical distance between top of load and the trailer).</p> <ul style="list-style-type: none"> ▪ Exposed stockpiles of soil and other fine backfill material shall be watered twice daily, be covered, or have soil binders added. ▪ Any topsoil that is removed during construction shall be stored on site in piles not to exceed 4 feet tall to allow development of microorganisms prior to resoiling of the work 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 be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be immediately used. ▪ A construction traffic and parking management plan will be developed and implemented to maintain traffic flow and minimize vehicle trips. Construction workers will park in designated parking area(s) to help reduce dust emissions. ▪ On-site vehicles will be limited to a speed that minimizes dust emissions on unpaved roads or dirt work areas. ▪ All construction equipment will be maintained in proper tuning according to manufacturer’s specifications. Unnecessary vehicle idling will be limited to 5 minutes. ▪ A publicly visible sign with the telephone number and person to contact regarding dust complaints will be posted in a publicly accessible area near the project area. The person named will respond to complaints and take corrective action within 24 hours. The telephone number of the North Coast Unified AQMD will also be visible. ▪ Contractors will commit to using the best available emissions control technology. The use of diesel construction equipment meeting the California Air Resources Board 1996 or newer certification standard for off-road heavy-duty diesel engines and having Tier 4 engines will be maximized to the extent feasible. Equipment may be electrified if feasible, and gasoline-powered equipment should be substituted for diesel-powered equipment when feasible, unless alternatively fueled construction equipment can be used. If the use of all equipment with Tier 4 engine standards is not feasible, the contractor should commit to using CARB and EPA-verified particulate traps, oxidation catalysts, and other appropriate controls when suitable to reduce emissions of diesel particulate matter and other pollutants during construction. ▪ To the extent feasible, a minimum of 50 percent of construction and demolition waste including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard will be reused and/or recycled. 	

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
Impact AQ-2: The proposed project could conflict with the PM10 attainment plan for the air basin.	None necessary	Less than significant
Noise		
Impact NO-1: Construction activities could generate excessive noise or groundborne vibrations near sensitive uses.	None necessary	Less than significant
Impact NO-2: The proposed project could increase noise levels along Wildwood Road over the long term.	None necessary	No impact
Biological Resources		
Impact BR-1: Construction activities could affect resident and special-status aquatic species and their habitat.	<p>Mitigation Measure BR-1a: Remove fish from instream work areas and divert flows. No equipment will be operated in a live stream. Gemmill Gulch and any other perennially flowing streams will be diverted before operating equipment to excavate in the channel and/or place culverts and rock slope protection. Prior to stream diversion, the work area will be isolated from the rest of the stream by permeable fencing materials. A qualified biologist shall salvage and relocate all aquatic life, including fish, and place them upstream or downstream outside of the fenced area. The instream diversion structure shall be installed by hand and shall direct flows into a culvert, pipe, or hose to be pumped or gravity-fed around the work area. The biologist shall check the worksite daily for stranded aquatic life until dewatering is complete.</p> <p>Mitigation Measure BR-1b: Prevent impedance of fish passage. The County will be responsible for designing the culverts to accommodate hydraulic function, including, but not limited to, incorporating the measures listed below into the design. The contractor will be responsible for installing culverts in accordance with the specifications of those designs. The contractor will also be responsible for installing them by mid-November, or earlier as specified by the National Marine Fisheries Service (NMFS) or CDFW, to accommodate fish passage. The following measures will be implemented:</p> <ul style="list-style-type: none"> ▪ Any new or previously excavated gravel material placed in the channel will meet Caltrans' Gravel Cleanliness Specification #227 with a value of 85 or higher indicating the relative proportions of clay-sized material clinging to coarse aggregate and screenings. Gravel would also be completely free of oils, clay, debris, and organic material. ▪ Prior to mid-November (or earlier as specified by NMFS or CDFW), culverts will be in place and fully functional and 	Less than significant with mitigation

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<p>all equipment and temporary construction materials removed from the stream. No structure or fill shall be left where it could become a barrier to the free passage of water or the movement of fish and aquatic animals between mid-November and June 15 or after construction is complete.</p> <ul style="list-style-type: none"> ▪ To the extent feasible, culverts will be designed to mimic natural stream processes, such that sediment transport and flood and debris conveyance occur as they would in a natural channel, consistent with the Stream Simulation Design Method. Fish passage design will be a priority for perennial tributaries because they have the greatest potential to affect habitat connectivity. Culverts at each perennial tributary (except Gemmill Gulch) will be designed to meet the need for sediment transport, flood, and debris conveyance and will include measures to protect fish passage to the extent possible. This means that culverts will be a minimum of 3 feet in diameter and that they will be installed at the same gradient as the stream in which they are placed. Where conditions preclude embedment measures, downspouts, outlet protection, or energy dissipaters will be designed and installed to prevent changes in channel elevation below the culvert that could exceed the maximum allowable hydraulic drop. ▪ Hydraulic drops between the water surface in the culvert and the water surface at the culvert inlet and outlet of the adjacent channel should be avoided. Where a hydraulic drop is unavoidable, its magnitude should be evaluated for both high design flow and low design flow and will not exceed 1 foot under the high flows for adult fish or 6 inches under the low flows for juvenile fish. If a hydraulic drop occurs at the culvert outlet, a jump pool of at least 2 feet deep should be provided. ▪ Consistent with the Hydraulic Design method (excluding the determination of high and low fish passage designs), fish passage at Gemmill Gulch will meet the following: (1) minimum culvert width will be 3 feet; (2) culvert slope will not exceed the slope of the stream; and (3) if physically possible, the bottom of the culvert will be buried into the streambed a minimum of 20 percent of the height of the culvert below the elevation of the tail-water control point downstream of the culvert. <p><i>Mitigation Measure BR-1c: Conduct preconstruction surveys for special-status herpetofauna and implement avoidance measures.</i></p> <p>The County or its contractor will implement the following measures to avoid or minimize project-related impacts on foothill yellow-legged frogs, tailed frogs, and western pond turtles:</p> <ul style="list-style-type: none"> ▪ Any project activities in perennial streams or adjacent riparian habitat will be preceded by a preconstruction survey conducted by a qualified biologist within the stream and adjacent riparian habitat in the project area. Surveys will be conducted within 24 hours of any instream construction (including diversion installations) or riparian 	

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<p>vegetation removal. If a foothill yellow-legged frog, tailed frog, or western pond turtle is found, the qualified biologist will move the animal to habitat either up or downstream of the project area. Monitoring and species removal shall continue daily until the work area is dewatered or in-stream and riparian zone construction is complete.</p> <ul style="list-style-type: none"> ▪ To the extent feasible, vegetation removal and grading activities within 660 feet of aquatic habitat should be scheduled outside the western pond turtle nesting period (March-August). If this is not feasible, a preconstruction survey will be conducted by a qualified biologist within 2 weeks prior to construction to locate western pond turtle nests. This survey will be conducted within 660 feet of aquatic habitat in riparian and upland areas that provide nesting habitat for western pond turtle. If a pond turtle nest is found, the biologist will flag the site and determine whether construction activities can avoid affecting the nest. In consultation with CDFW, a no-disturbance buffer zone may be established around the nest until the young have left the nest or the nest may be excavated and re-buried at a suitable location outside of the construction impact zone by a qualified biologist. ▪ If a foothill yellow-legged frog, tailed frog, or western pond turtle is encountered during instream or riparian zone activities, work in the vicinity will cease until appropriate corrective measures have been implemented (e.g., relocation of the animal by a qualified biologist) or it has been determined that the frog or turtle will not be harmed. Any trapped, injured, or killed frogs or turtles will be reported immediately to the CDFW. 	
<p>Impact BR-2: Construction activities could adversely affect special-status birds and mammals that nest or breed in the project area.</p>	<p>Mitigation Measure BR-2a: Minimize noise and tree removal and implement limited operating periods for nesting birds and special-status mammals.</p> <p>The construction contractor will implement the following measures to avoid or minimize impacts on nesting birds and special-status mammals during construction activities:</p> <ul style="list-style-type: none"> ▪ All construction equipment will be properly muffled. ▪ Tree removal will be minimized. Large snags and old-growth trees that are not within the project limits and that do not pose a risk to the safety of motorists will be avoided, to the extent feasible. ▪ Vegetation removal will be scheduled to avoid the breeding/nesting or denning seasons listed below to the extent practicable. If the breeding/nesting or denning season cannot be avoided, preconstruction and protocol-level surveys will be conducted as described in subsequent measures. If no nesting birds or special-status mammals are observed, trees and other vegetation may be removed without seasonal restrictions. Surveys for nesting birds and special-status mammals will be repeated each year if construction activities commence in subsequent years during the nesting or breeding period. ▪ Northern spotted owl: February 1 to July 31 ▪ Other nesting birds: February 15 to August 31 ▪ Pacific fisher and ring-tailed cat: March 1 to July 31 	<p>Less than significant with mitigation</p>

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<p><i>Mitigation Measure BR-2b: Conduct preconstruction surveys for nesting raptors and other birds.</i> The County will retain a qualified biologist to conduct surveys during the nesting season. The construction contractor will implement avoidance measures if birds are nesting in or near the project area. Survey requirements and avoidance measures include the following:</p> <ul style="list-style-type: none"> ▪ If construction is to occur during the breeding season, a qualified biologist will conduct preconstruction surveys of the project area and a surrounding 250-foot buffer (where accessible) for raptors and migratory birds 2 weeks prior to the initiation of construction in any given area to ensure that no nests will be disturbed during project implementation. Surveys may be conducted concurrently with other required preconstruction surveys for special-status species. ▪ If an active nest more than half completed is found, a construction-free buffer zone will be established around the nest until nestlings have fledged or breeding has failed based on field verification by a qualified biologist. The size of the buffer zone will be determined by a qualified biologist in consultation with CDFW. If no active nests are identified, no further mitigation is necessary. <p><i>Mitigation Measure BR-2c: Conduct preconstruction surveys for nesting northern spotted owls.</i> The County or contractor will retain a qualified biologist to conduct protocol-level surveys for northern spotted owl. Survey requirements and avoidance measures include the following:</p> <ul style="list-style-type: none"> ▪ Construction activities that will generate sound levels ≥ 20 decibels above ambient sound levels or sound levels > 90 decibels, such as blasting, within 330 feet of nesting/roosting habitat for northern spotted owls will be conducted between August 1 and January 31, outside the spotted owl nesting season. If schedule restrictions are not feasible, construction may occur during the nesting/breeding season if protocol-level surveys reveal no active nest sites within 330 feet of the construction area (actual footprint of ground-disturbing activities). The County shall retain a qualified biologist to conduct protocol-level surveys for northern spotted owl following the U.S. Fish and Wildlife Service (2011) <i>Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls</i> or current USFWS Protocol. The protocol requires six surveys between March and August for 2 years prior to construction and should be scheduled no more than 2 years in advance of the anticipated construction season. Year 2 surveys will be completed the summer/fall prior to construction, so construction may commence the following spring/summer. Surveys will be phased and would be completed only along the segment proposed for construction. The surveys will be used to detect northern spotted owls in the project area and should be conducted in the delineated functional habitats within 330 feet of the project area (North State Resources, Inc. 2013b; U.S. Fish & Wildlife 	

Table ES-1. Summary of Impacts and Mitigation Measures

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	<p>Service 2013). If an owl or pair of owls is observed, the biologist should determine if an active nest site is located nearby. If a nest site is observed, the following restrictions will be in place around the site until the young have successfully fledged:</p> <ul style="list-style-type: none"> ▪ Between February 1 and July 31, no activities allowed within 330 feet of the nest site that cause noise above 90 A-weighted decibels. ▪ Between March 1 and July 31, no activities allowed within 650 feet of the nest site that involve nighttime construction (0.5 hour before sunset to 0.5 hour after sunrise). ▪ If no surveys have been conducted, or if owls have been detected, then no blasting shall occur within 0.25 mile of suitable nesting/roosting habitat between March 1 and September 30. If no nests are observed, the restrictions will not be necessary. <p>Mitigation Measure BR-2d: Conduct surveys for denning Pacific fisher and ring-tailed cat.</p> <p>The County will retain a qualified biologist to conduct surveys during the breeding season for Pacific fisher and ring-tailed cat. The construction contractor will implement avoidance measures if a potential den tree is discovered in or near the project area. Survey requirements and avoidance measures include:</p> <ul style="list-style-type: none"> ▪ If vegetation removal is to occur during the breeding season (March 1 through July 31), a qualified biologist will survey for potential natal or maternity den trees using stand search techniques within areas slated for vegetation removal and within 375 feet of the vegetation removal area no more than 2 weeks before construction activities begin. No potential den trees will be felled within the natal denning period between March 1 and May 15. Female fishers move kits from one maternal den to another to minimize potential threats from predation and disturbance; vegetation removal is a disturbance that would cause a fisher to move her kits. During the maternal denning period (May 16 through July 31), trees that have maternal den characteristics will be retained until the day after all other trees within a 375-foot-radius have been felled. ▪ If no potential denning trees are observed within 375 feet of vegetation removal, these restrictions will not be necessary. <p>Mitigation Measure BR-2e: Conduct surveys for pallid bat roosts.</p> <p>The County will retain a qualified biologist to conduct surveys for potential roost trees for pallid bats and coordinate with the CDFW if necessary. The construction contractor will implement avoidance measures if a potential roost tree is discovered in or near the project area. Survey requirements and avoidance measures include the following:</p> <ul style="list-style-type: none"> ▪ If trees greater than 12 inches in diameter or snags are to be removed, a preconstruction survey for roosting bats will be conducted by a qualified biologist no more than 2 weeks prior to vegetation removal during any time of year. 	

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<p>If a maternity roost is present, a qualified biologist will determine, in consultation with CDFW, the extent of construction-free zones to be maintained around active nurseries until the mother and young have dispersed.</p> <ul style="list-style-type: none"> ▪ If a non-breeding bat hibernaculum is found in a tree or snag scheduled for removal, the individuals will be safely evicted, under the direction of a qualified bat biologist (as determined in consultation with CDFW), by opening the roosting area to allow air flow through the cavity. Removal of the tree or snag will be done no earlier than the following day (i.e., at least one night will be provided between initial disturbance and the demolition). This action will allow bats to leave during dark hours, which increases their chance of finding new roosts with a minimum of potential predation during daylight. 	
<p>Impact BR-3: Construction activities could adversely affect plant and animal species designated as Forest Service Sensitive or Survey and Manage.</p>	<p>Mitigation Measure BR-3. Implement measures developed by the Forest Service to minimize effects on Forest Service Sensitive species and manage known sites of Survey and Manage species.</p> <p>In addition to the measures provided to avoid and minimize effects on special-status aquatic and terrestrial species, the Forest Service will identify project-specific avoidance and mitigation measures to reduce effects on Forest Service Sensitive and Survey and Manage species that have the potential to occur in the project area. Measures prescribed by the Forest Service may include presence/absence surveys, habitat preservation measures, or management recommendations for Survey and Manage species (e.g., avoid known sites). Habitat preservation measures include limiting ground disturbance and soil compaction; conservation of favorable temperature and moisture conditions, herbaceous plants that are important as food, litter, large downed wood, decaying plant matter, and talus rock; avoidance of herbicides, pesticides, and other chemicals; and control of non-native plants and animals.</p>	<p>Less than significant with mitigation</p>
<p>Impact BR-4: Construction activities could result in a temporary or permanent loss of riparian habitat.</p>	<p>Mitigation Measure BR-4a: Minimize removal of riparian habitat and restore similar habitat in nearby areas.</p> <p>The County will design the project to minimize impacts on riparian vegetation by incorporating the measures listed below. The construction contractor will avoid and minimize impacts on riparian trees and implement restoration practices. Measures to reduce impacts on riparian vegetation include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▪ The width of the construction disturbance zone within the riparian habitat will be minimized through careful preconstruction planning. ▪ Exclusionary fencing will 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. ▪ Equipment and materials will be stockpiled outside of riparian habitat. ▪ Impacts to herbaceous cover will be offset by reseeding any affected areas, including unvegetated areas, with a suitable seed mixture post construction. 	<p>Less than significant with mitigation</p>

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<ul style="list-style-type: none"> ▪ Where possible, temporary impacts on woody riparian vegetation should be minimized by trimming trees and shrubs rather than removing entire woody plants or by cutting trees or shrubs at least 1 foot above ground level to leave root systems intact and allow more rapid regeneration following construction. ▪ Revegetation to mitigate for permanent impacts will occur in areas suited for restoration or enhancement to help ensure that no net loss of riparian habitat function and value occurs within the project area. ▪ Riparian habitat areas temporarily disturbed will be replanted using riparian species that have been recorded along Hayfork Creek in the project area, including white alder, big-leaf maple, arroyo willow, narrowleaf willow, American dogwood, Sierra plum, and western choke cherry. ▪ Onsite creation/restoration of riparian habitat will occur in riparian areas disturbed during project construction and the amount of habitat created/restored will be at a 3:1 ratio of new plantings per each large woody plant removed that is greater or equal to 6 inches diameter at breast height. These replanting ratios will help ensure successful establishment of at least one vigorous plant for each large woody plant removed to accommodate the project, which shall be the success standard 5 years after construction is complete in each segment. ▪ Plant spacing intervals will be determined as appropriate based on site conditions following construction. ▪ Non-native tree species removed from riparian areas during project construction will be replaced with native riparian species. <p><i>Mitigation Measure BR-4b: Create, restore, or enhance riparian vegetation to compensate for the permanent loss of riparian vegetation in Segment 1.</i></p> <p>The County will develop a restoration plan that will describe the specific restoration criteria and methods for the replacement of permanently lost riparian habitat in Segment 1. A suitable restoration site will be identified in the plan and selected by the County in coordination with the respective land owner (e.g., Forest Service or a private land owner). The site will be within or near the project area and will be along Hayfork Creek in riparian areas devoid of riparian vegetation or in degraded or disturbed riparian areas as determined by a qualified biologist. The plan will also describe restoration requirements for Segments 2 and 3, as outlined in Mitigation Measure BR-4a. The success standard required by the plan at the end of 5 years of annual monitoring will be a minimum of one living riparian tree per each riparian tree greater or equal to 6 inches diameter at breast height that is removed by the project.</p>	
Impact BR-5:	<i>Mitigation Measure BR-5: Compensate for the loss of</i>	Less than significant

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
<p>Construction activities could result in placement of fill material into waters of the United States and disturbance of wetlands.</p>	<p>waters of the United States in accordance with permit conditions provided by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife.</p> <p>The County will design each segment to minimize the discharge of fill material into waters of the United States. The County will apply for the appropriate permits from the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW) and will comply with the conditions of each respective permit. As applicable, the contractor will comply with the permit conditions. The County or its construction contractor will implement the following measures to avoid and minimize effects on waters of the United States:</p> <ul style="list-style-type: none"> ▪ To the extent practicable, the design of each segment would consider waters of the United States and would minimize the discharge of dredged or fill material into these features. ▪ Prior to any discharge of dredged or fill material into waters of the United States, including wetlands, the County will obtain appropriate authorization from the Corps (CWA Section 404 nationwide or individual permit) and the RWQCB. (CWA Section 401 water quality certification). ▪ Prior to any activities that would obstruct the flow of or alter the bed, channel, or bank of any perennial, intermittent, or ephemeral creeks, the County will notify the CDFW of the alteration, and, if required, the CDFW would issue a Streambed Alteration Agreement. ▪ Any monitoring, maintenance, and reporting required by the regulatory agencies (i.e., Corps, RWQCB, and CDFW) will be implemented and completed. All measures contained in the permits or associated with agency approvals will be implemented. ▪ Impact on wetlands will be compensated at a ratio specified by the U.S. Army Corps of Engineers. Compensation of the loss of wetlands would be completed through on-site creation, restoration, enhancement, and/or preservation unless off-site mitigation is feasible and preferred by the Corps. ▪ Exclusionary fencing will be installed to mark the boundaries of all streams and wetlands that will be avoided. The fencing will be maintained throughout construction and pedestrian or vehicular entry will be prohibited during construction. ▪ Construction activities that will affect waters of the United States will be conducted during the dry season to minimize erosion. ▪ Appropriate sediment control measures to protect avoided waters of the United States will be in place prior to the onset of construction and will be monitored and maintained until construction activities have ceased. Temporary stockpiling of excavated or imported material will occur only in approved construction staging areas. Excess excavated soil will be used on site or stockpiled in an upland area and stabilized to prevent erosion into 	<p>with mitigation</p>

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	waters of the United States. Temporary stockpiles that are to remain on the site through the wet season will be protected to prevent erosion (e.g., silt fences, straw bales, covers).	
Impact BR-6: Construction activities could introduce noxious weeds or modify habitats in the project area in a manner that would displace native plant species and increase the spread of invasive plant species.	<p>Mitigation Measure BR-6: Implement construction measures to prevent the spread of invasive plants.</p> <p>The County will require the contractor to implement the following measures to prevent the spread of invasive species in the project area:</p> <ul style="list-style-type: none"> ▪ All equipment used for off-road construction activities will be weed-free prior to entering the project area. ▪ If project implementation calls for mulches or fill, they will be weed free. ▪ Any seed mixes or other vegetative material used for revegetation of disturbed sites will consist of locally adapted native plant materials to the extent practicable. 	Less than significant with mitigation
Impact BR-7: The proposed project could result in long-term impacts on special-status species or restrictions to wildlife movement through the project area.	None necessary	Less than significant
Cultural Resources		
Impact CR-1: Construction activities could disturb or damage previously undiscovered historical or archaeological resources or human remains.	<p>Mitigation Measure CR-1a: Coordinate with the local Native American tribes prior to construction.</p> <p>The County shall consult with members of the Nor-EI-Muk Nation and the Wintu Education and Cultural Council before construction begins for each segment. They will be notified of the construction schedule for each segment and invited to visit the project area to view the project limits. If construction is to occur in areas considered by the Nor-EI-Muk Nation or Wintu Cultural Council to be likely to contain burials or other archeological resources, then the Nation or Council may assign a representative to monitor construction in that vicinity under the provisions of a Memorandum of Agreement between the County and the Nor Rel Muk Wintu Nation. The physical limits of the areas to be monitored will be established in consultation with Nation and Council representatives prior to the commencement of construction. Contact numbers for a professional archaeologist under contract with the County, the STNF archaeologist, and the Caltrans archaeologist will be on file with the construction supervisor, Native American monitor, and other responsible individuals during construction. These individuals shall be contacted in the event resources are uncovered during construction.</p> <p>Mitigation Measure CR-1b: Implement treatment measures and record previously undiscovered resources.</p> <p>In the event that previously unidentified cultural resources are encountered during construction, all work in the immediate vicinity of the find will be halted, and the materials will be left untouched. The Trinity County Project Engineer, the STNF</p>	Less than significant with mitigation

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<p>archaeologist the County's archaeologist and the Caltrans archaeologist shall be notified immediately. At least one of these qualified archaeologists shall evaluate the find to determine its historical or archaeological significance. If the find is determined to be a significant historical or archaeological resource, the archaeologist shall make recommendations for appropriate mitigation. Any cultural resources discovered during construction will be recorded according to accepted contemporary standards and evaluated to determine their eligibility for listing on the NRHP and CRHR. Impacts on the resources, if any, will be evaluated, and specific treatment measures will be identified in consultation with the State Historic Preservation Officer, Caltrans, and the Forest Service to determine the appropriate course of action if eligible resources would be adversely affected. Specific measures may be implemented to reduce adverse impacts, such as data recovery and curation of recovered materials or protection in place by avoiding the resource. Work in the area shall not resume until the mitigation measures have been implemented.</p> <p><i>Mitigation Measure CR-1c: Implement treatment measures for human remains.</i></p> <p>In the event that previously unidentified evidence of human burial or human remains are discovered, all work in the immediate vicinity of the find will be halted, and the remains will be left untouched. The STNF archaeologist and County coroner will be notified immediately, and the Forest Service or Trinity County will notify local Native American tribes and the Native American Heritage Commission, as appropriate. Discoveries on federal lands are subject to the Native American Graves Protection and Repatriation Act. The ancestry of the remains will be determined if feasible with minimal disturbance of the remains by the coroner or a qualified archaeologist. All human remains and associated burial artifacts encountered will be protected and assessed in a respectful and dignified manner. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent. They will be given an opportunity to make recommendations for means of treatment of the human remains and any associated grave goods. If removal is necessary, it will be undertaken with a Native American representative present (if appropriate), and the remains will be treated according to the provisions set forth in Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code. Work in the area shall not continue until the human remains are protected or removed according to the recommendations of the County coroner, Native American Heritage Commission, and/or the most likely descendent.</p>	

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
Aesthetics		
Impact AE-1: Construction activities could degrade the visual character of the project area.	None necessary	Less than significant
Impact AE-2: The proposed project could permanently alter the visual character of the project area.	None necessary	Less than significant
Hydrology and Water Quality		
Impact HW-1: Construction activities could discharge pollutants or sediment into Hayfork Creek.	<p>Mitigation Measure HW-1a: Implement water quality control measures during construction.</p> <p>The construction contractor will be responsible for implementing BMPs identified in the project SWPPP. In addition, the County or its contractor will develop an erosion control plan in compliance with Forest Service Standards and Guidelines that identifies specific practices or techniques incorporated into the project design to minimize erosion. The BMPs outlined in the SWPPP shall be implemented during all phases of construction and will include, but not be limited to, the measures identified in the project description in combination with the following:</p> <ul style="list-style-type: none"> ▪ Riparian and vegetative coverage shall only be minimally removed near drainages and stream road crossings during construction to prevent potential temperature increases in the streams and other water bodies. Cleared areas will be revegetated immediately following construction and before predicted rains or the rainy season. ▪ Temporary erosion and sediment control structures must be in place and operational at the end of each construction day during the rainy season or when rain is forecast and maintained until disturbed ground surfaces have been successfully revegetated. ▪ A specified buffer will be established between staging areas and stream banks or riparian areas. Sedimentation fencing or erosion and sediment control measures will be installed between staging areas and streams to avoid sediment and pollutant discharges to creeks. Riparian vegetation shall not be removed for staging purposes. ▪ Maintenance and refueling areas for equipment will be located a minimum of 100 feet away from the active stream channel. If equipment must be washed, washing will occur where the water cannot flow into the creek channel. ▪ Major ground-disturbing activities will be completed during the dry season (i.e., May 1 to November 15) to avoid stormwater sedimentation and turbidity effects to Hayfork Creek and its tributaries. Major ground-disturbing activities may occur outside the defined dry season based on a forecast of dry weather and permission from the appropriate regulatory agencies. Ground-disturbing 	Less than significant with mitigation

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<p>activities will not take place when the soils are saturated.</p> <ul style="list-style-type: none"> ▪ All instream work will be conducted from the top of the bank or existing road surface where feasible. Instream work will require the preparation of a dewatering plan. ▪ The construction contractor will keep on site at all times straw bales, straw wattles, silt fencing, or other similar sediment-control materials. Exposed soils will be covered with erosion blankets, straw, hydromulch, or similar ground-covering materials as soon as feasible to control wind and water erosion of exposed soils and prevent erosion and sedimentation. ▪ Spill containment booms will be maintained on site at all times during construction operations and/or staging or fueling of equipment. <p>Mitigation Measure HW-1b: Implement site-specific erosion control measures.</p> <p>The County will incorporate site-specific erosion control measures into the project design and identify the measures on construction drawings. The measures will be identified based on the final alignment and design and the soil conditions where extensive cuts into steep slopes or extensive fill is required. In areas of high to very high erosion potential near Hayfork Creek, the following measures will be considered and incorporated into the design, as appropriate:</p> <ul style="list-style-type: none"> ▪ minimize the cutslope area and grade the cutslope to no steeper than a 0.5:1 slope, ▪ use subsoil to stabilize the grade and re-contour disturbed areas, ▪ grade finished slopes to a stable grade, ▪ minimize side-cast on the fill slope and end haul excess fill, ▪ use approved engineered structural fill and compact to standards specified by the engineer, ▪ use hydromulch with a tackifier to cover cut and fill slopes and revegetate the slopes, ▪ armor any inboard ditches with coarse rock, and/or ▪ construct sediment basins on the downslope ends of inboard ditches before water crossings. 	
<p>Impact HW-2: The proposed project could increase the potential for pollutant or sediment discharge into water bodies over the long term.</p>	<p>None necessary</p>	<p>Less than significant</p>
<p>Impact HW-3: The proposed project would encroach on the floodplain of Hayfork Creek and could alter flood flows.</p>	<p>Mitigation Measure HW-3: Design road improvements to incorporate flood requirements for drainage structures and floodplain encroachment.</p> <p>The County will conduct appropriate hydrologic and flood hazard studies to support development of the final design for each segment and ensure that FEMA and Forest Service requirements are followed and adhered to. More specifically, the final design will verify that the 100-year flood elevation is not raised by more than 0.5 foot at and near Post Miles 11.15</p>	<p>Less than significant with mitigation</p>

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
	<p>and 11.44 and ensure that the design of the drainage structure near Post Mile 5.34 would not result in overbank flooding. The studies shall identify specific design measures relating to the inlet and outlet elevations of the drainage structures, the road elevation, and armoring of the creek or slopes near drainage structure outlets. All drainage structures will be designed using capacity and geometry criteria to accommodate 100-year peak flows. These designs should account for landslide and woody debris potential and would reduce the risk of overbank flooding, degraded water quality, and damage to life and property. The following specific measures for drainage structures will be followed:</p> <ul style="list-style-type: none"> ▪ All existing culverts will be replaced with new drainage structures that can accommodate the 100-year peak flow. Culvert sizes will be as recommended by a qualified hydrologist or engineer. ▪ The inlets of the nine key drainage features should be designed with headwalls and with a beveled edge (1.5:1) to decrease head loss as flow enters the culvert barrel, to protect the fill, and to reduce erosion potential. ▪ Culverts should be fitted with downspouts, outlet protection, or energy dissipators (energy dissipation structures include rip-rap, drop structures, and sills) to reduce the effects of streambed scour and bank erosion downstream of the culvert outlet. ▪ The culvert invert should be aligned with the channel bottom and skew angle of the stream. ▪ The culvert design slope will be based on surveyed measurements of the existing culvert and the channel profile survey. If the culvert is relocated, the final culvert slopes will align with the existing topography based on the profile survey of the stream course. ▪ Wildwood Road will need to be raised approximately 2.5 feet above its existing grade at Post Mile 5.34 (Gemmil Gulch) and 3.5 feet at Post Mile 11.67 (Gurley Gulch), if the project crosses these gulches, to maintain adequate cover over the drainage structure and to ensure that headwater and flow capacity criteria are met. ▪ The culverts near Post Mile 10.5 (subwatershed 7) will be replaced with 60-inch culverts with a riser and trash rack, or similar engineered solution, on the inlet of the primary culvert crossing of Wildwood Road. The secondary culvert will need to exit below the existing irrigation pipeline. ▪ Drainage structures at Post Miles 6.62 (subwatershed 3), 7.27 (subwatershed 4), and 9.05 (subwatershed 6) will include appropriately sized culverts (48-inch at 6.62, 60-inch at 7.27, and 72-inch at 9.05) with risers and trash racks or similar devices to deter debris jams and additional cross-road drains (e.g., ditch relief culverts) on either side of the crossings to prevent sedimentation from ditch runoff and stream flow diversion. 	

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
Geology and Soils		
Impact GS-1: Construction activities would expose soils to increased erosion.	None necessary, but Mitigation Measures HW-1a and HW-1b reduce impacts (<i>construction measures as part of the project would minimize impacts</i>)	Less than significant
Impact GS-2: Construction activities could disturb unique geologic features or paleontological resources.	None necessary	No impact
Impact GS-3: The proposed project could trigger landslides along Wildwood Road.	<p>Mitigation Measure GS-3: Incorporate slope protection measures into the project design.</p> <p>During design of each segment, the County will hire a Professional Geologist or Geotechnical Engineer to prepare a landslide mitigation plan that describes the types and locations of slope repairs, surface and subsurface drainage measures, and instrumentation and monitoring requirements. The slope repairs and monitoring will be based on a detailed subsurface exploration that defines the lateral and vertical extents of each landslide that would be disturbed and the probable grading limits.</p> <p>Landslide stabilization methods fall into three categories:</p> <ul style="list-style-type: none"> ▪ geometric methods where the geometry of the hillside is changed; ▪ hydrogeological methods where the groundwater level is lowered or water is diverted; and ▪ mechanical methods where the shear strength of the unstable mass is increased using active external forces (e.g., anchors, rock, or ground nailing) or passive techniques (e.g., structural walls or reinforced ground). <p>Stabilization methods for landslides in the project area that could be incorporated into the mitigation plan include, but are not limited to:</p> <ul style="list-style-type: none"> ▪ minimize cut into unstable or potentially unstable slopes; ▪ grade cutslope to slope; ▪ minimize side-cast on fill slope and end haul excess fill; ▪ grade slope geometry to stable shape and install mechanical slope treatments, as needed; ▪ use hydromulch with tackifier to cover cut and fill slopes; ▪ construct sediment basins on downslope end of inboard ditch before first water crossing; ▪ design culverts in locations of active, semi-active, or potentially unstable landslides to convey landslide debris, as necessary; and ▪ create benches along steep slopes, where appropriate. 	Less than significant with mitigation
Impact GS-4: The proposed project could expose people or structures to hazards from seismic activity.	None necessary	Less than significant

Table ES-1. Summary of Impacts and Mitigation Measures

IMPACT STATEMENT	PROPOSED MITIGATION MEASURES	FINAL LEVEL OF SIGNIFICANCE
Hazards and Hazardous Materials		
<p>Impact HM-1: Construction activities could introduce hazardous materials into the environment and potentially contaminate Hayfork Creek.</p>	<p>Mitigation Measure HM-1: Implement spill containment measures in the event of a hazardous materials spill. The contractor shall exercise every reasonable precaution to protect streams from pollution resulting from fuels, oils, and other harmful materials. The contractor will be required to have adequate spill containment equipment on hand at all times. All waste petroleum products and empty petroleum product containers will be disposed of properly at a recycling or disposal site legally authorized to accept that type of waste. The Trinity County Environmental Health Department, North Coast RWQCB, and California Emergency Management Agency (CalEMA 800-852-7550) must be notified immediately in the event of a release of significant quantities of hazardous materials. In the event of a release into Hayfork Creek, CDFW must also be notified.</p>	<p>Less than significant with mitigation</p>
<p>Impact HM-2: Construction activities could increase the risk of fire hazards along Wildwood Road.</p>	<p>Mitigation Measure HM-2: Implement fire safety and response plans during construction. The contractor will be required to prepare and implement a fire safety plan for construction operations to prevent and respond to fire. Construction equipment will also be equipped with fire prevention devices (e.g., spark arrestors) pursuant to Public Resources Code 4442. Water and firefighting tools (e.g. shovels, axes, fire extinguishers) will be maintained on site at all times. The County will coordinate closely with emergency service providers before and during construction. A fire response plan will be developed in coordination with the Forest Service, Hayfork volunteer fire district, Trinity County Sheriff's Office, and others as appropriate. The plan shall establish lines of communication so that the construction crew receives notification of the need to open the road prior to the arrival of emergency vehicles at the work area, if possible. Procedures will also be established to keep emergency service providers advised of the location of construction crews, the activities going on at the time, and the estimated time to clear the road for each activity in each segment. The emergency service providers will use this information to determine the fastest way to reach an emergency site under the circumstances occurring at the time of an emergency.</p>	<p>Less than significant with mitigation</p>
<p>Impact HM-3: The proposed project could increase traffic hazards along Wildwood Road.</p>	<p>None necessary</p>	<p>Less than significant (beneficial)</p>