Attachment 2

California Environmental Quality Act Findings for Potentially Significant Impacts to Water Quality related to California Department of Transportation Highway 101, Willits Bypass Project WDID No. 1B10019WNME

As a Responsible Agency, the Regional Water Quality Control Board, North Coast Region (Regional Water Board), complies with the California Environmental Quality Act (CEQA) by considering the Environmental Impact Report (EIR) prepared by the Lead Agency (California Department of Transportation) and making its own findings regarding significant impacts within its regulatory purview and jurisdiction. (Cal. Code Regs, tit. 14, §§15091, 15096.) These findings are set forth below.

The Final Environmental Impacts Statement / Environmental Impact Report for the Willits Bypass project (FEIS/EIR - State Clearing House No. 1990030006), certified by the California Department of Transportation (Caltrans) on October 25, 2006 and Supplemental Environmental Impact Report certified by Caltrans on May 19, 2010 (SEIR State Clearing House No. 1990030006), identifies the following potentially significant impacts to water quality from the project:

1. Increases in Water Temperature (FEIS/EIR, § 3.5.1)
2. Impacts to Sensitive Plant Communities and Habitats (FEIS/EIR, § 3.7.1, SEIR, § 4.1.)
3. Direct and Indirect Impacts to Special-Status Plants (FEIS/EIR, §§ 3.7.3, 3.17.2)
4. Direct and Indirect Impacts to Special-Status Fish (FEIS/EIR, §§ 3.7.7, 3.17.1)
5. Direct and Indirect Impacts to Wetlands and Waters of the U.S. (FEIS/EIR, §§ 3.7.4, 3.17.3)
6. Impacts to Special Status Wildlife (FEIS/EIR, § 3.7.5)

Based on its own independent review of the FEIS/EIR and SEIR, the Regional Water Board finds that with the implementation of the mitigation measures identified in the FEIS/EIR and SEIR and conditions of the Water Quality Certification, all potentially significant impacts to water quality will be reduced to levels which are less than significant. This conclusion is supported by the findings below.

Potentially Significant Impact to Water Quality – Increases in Stream Temperature (FEIS/EIR, § 3.5.1):

Impact Description:

The proposed project would span the following surface waters: Haehl Creek, Baechtel Creek, Broaddus Creek, Mill Creek, and Upp Creek, all of which are tributaries to Outlet Creek. Construction of the bypass at these stream crossings would result in the removal of riparian habitat in order to accommodate the construction of bridges, culverts, and the viaduct structure. This would result in 10.12 acres of temporary impacts (6,693 linear feet) and 10.88 acres of permanent impacts (8,535 linear feet) of

riparian areas.[1] The removal of this vegetation and loss of canopy cover could affect water quality by elevating stream water temperatures at these locations. The FEIS/EIR has identified this as a potentially significant impact.

Finding:

Pursuant to Public Resources Code Section 21081(a) and CEQA Guidelines Section 15091(a), the Regional Water Board finds that changes or alterations have been required in, or incorporated into, the project that would avoid or substantially lessen the significant environmental effect to a less than significant level. The Regional Water Board finds that mitigation measures and conditions listed below are feasible to offset the impact to stream temperature and are, therefore, incorporated as conditions of the Water Quality Certification and associated Monitoring and Reporting Program (MRP).

Facts that Support the Finding:

FEIS/FEIR Mitigation Measures:

WQ-3: Revegetation: Where vegetation is removed or severely trimmed back, Caltrans will plant replacement vegetation for shading of creeks to reduce temperature related impacts to water quality. Local native plant species would be used for the revegetation of impacted riparian areas along salmonid streams, within the project limits as well as off-site mitigation areas. Mitigation would be in-kind and plant propagules would be collected in Little Lake Valley. Planting methods would include the installation of stem (pole) cuttings from plants such as willows, cottonwood, thimbleberry, coyote bush, or other species capable of easy rooting from cuttings. Pole cuttings would also be used to revegetate areas where Rock Slope Protection (RSP) is required on the stream banks. In mitigation areas where some riparian vegetation is already present, additional vegetation would be planted. Revegetation of unvegetated stream banks would be considered creation.

BIO-9: Riparian Woodland: Caltrans/Federal Highway Administration (FHWA) will mitigate for impacts to riparian forest habitat through creation and restoration or

[1] Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects waterbodies with their adjacent uplands, and are considered "waters of the State." Protection of riparian areas adjacent to streams, lakes, and estuarine-marine shorelines is essential to the protection of the beneficial uses of the waterbodies. As collectively agreed to by the resource agencies with jurisdiction over this project, riparian areas are: 1) Category I Riparian Corridors, which include areas of salmonid streams and adjacent riparian areas extending 100 feet from each bank laterally from the Ordinary High Water Mark; 2) Category II Riparian Corridors, which include tributaries of Category I Riparian Corridors that are within 1,000 feet of the confluence with a Category I Stream, and extending 50 feet from the OHWM on each bank; and 3) Category III Riparian Corridors, which include tributaries of Category I Riparian Corridors that are more than 1,000 feet upstream of the confluence with the Category I Stream, extending 25 feet from the OHWM on each bank.

enhancement (including expansion) of existing degraded riparian habitat at a ratio agreed upon in consultation with California Department of Fish and Game (CDFG), United States Fish and Wildlife Services (USFWS), National Marine Fisheries Service (NMFS), and United States Environmental Protection Agency (USEPA). Caltrans/FHWA will protect riparian forest mitigation areas in perpetuity through conservation easements, deed restrictions or other equivalent measures. The primary goal of the Mitigation and Monitoring Plan for riparian communities will be to ensure that no permanent loss of habitat values occurs as a result of the project and that the temporal loss of habitat is adequately mitigated.

Additional Conditions:

Revegetation: Where removal of vegetation is required, protection of riparian woodland, and riparian creation and enhancement are proposed to offset potential impacts related to loss of canopy and elevated stream temperature. Where riparian woodland vegetation must be removed, mitigation for all affected riparian woodlands would be implemented through creation/restoration, enhancement, and preservation within Little Lake Valley as required by the Monitoring and Reporting Program (MRP) and MMP. Section 3.0. of the MRP requires the conversion of baseline information into site-specific performance standards that will measure success and ensure that long-term impacts resulting from the loss of canopy and the corresponding potential increases in stream water temperature are reduced to a less than significant level or avoided.

Protection of Riparian Woodland: Potential impacts to riparian woodlands would first be minimized. Minimization measures during construction shall include: removing the minimum amount of vegetation necessary; installing environmental sensitive area (ESA) fencing and enforcing protection of riparian vegetation located within established protected areas; implementation of appropriate Best Management Practices (BMPs); and pre-construction training sessions to inform contractors and construction workers of the status of sensitive habitats and special-status species and the requirements for avoidance of protected areas.

Riparian Creation and Enhancement: In addition to minimizing impacts and mitigating all removed riparian vegetation, the project will also revegetate unvegetated stream banks (which would be considered creation) and provide additional vegetation along some sparsely vegetated areas (which would be considered enhancement). Approximately 1,700 linear feet of riparian plantings will be placed along the east bank of Baechtel Creek between where the viaduct will cross Baechtel Creek and where East Commercial Street presently crosses the creek, and along approximately 1,400 linear feet of the north bank of Mill Creek before Mill Creek passes under the Western Pacific railroad tracks, which will further improve surface water temperatures within the watershed. Approximately, six miles (measured along both sides of the stream banks) of riparian habitat will be created or enhanced along Category I, II, and III streams within the offsite mitigation parcels. Long stream reaches that would benefit from riparian

plantings are present along both Davis and Outlet Creeks, and will be required as a condition of the Water Quality Certification and MRP.

Monitoring and Reporting Program: As stated in Section 1.0. of the MRP, Caltrans is required to conduct bioassessment (benthic macroinvertebrate sampling) as well as chemical, physical, and biological monitoring components. Chemical monitoring includes parameters such as dissolved oxygen, temperature, turbidity, total dissolved solids, oil and grease, and several other constituents. Physical monitoring includes hydrology, geomorphic conditions (i.e., cross sectional water depth, wetted channel width, bankfull width, substrate characteristics, canopy cover, gradient, sinuosity, large woody debris) and other parameters. Biological monitoring includes wetland plant coverage, invasive species coverage, riparian canopy coverage, benthic macro-invertebrates surveys, as well as other parameters. Regional Water Board staff worked closely with the USEPA, United States Army Corps of Engineers (USACE), and Caltrans to develop the MRP and to ensure that impacts to stream temperatures are fully mitigated.

Section 3.0. of the MRP details the schedule (including the frequency of monitoring), the locations, and the evaluation of data to adequate develop the short term work plans, grazing management plan, and mitigation success criteria. The requirements for baseline assessments, monitoring during construction, procedures for enhancement verification, and long term monitoring requirements as also detailed in Section 3.0.

Section 4.0. of the MRP requires that Caltrans monitor impacts to stream temperatures associated with the construction of the bypass and Section 5.0. requires Caltrans to measure the success of the mitigation measures (revegetation) and ensure the project does not result in a significant increase in stream temperatures in the long term. Additionally, the Water Quality Certification and MRP require Caltrans to plant riparian vegetation in all areas within the bypass alignment and mitigation lands to provide the maximum site potential shade to streams within the project area. Section 3.0 of the MRP also require Caltrans to include additional and robust success criteria within the Mitigation and Monitoring Proposal (MMP) for measuring effectiveness of riparian mitigation measures that incorporate percent canopy cover and percent effective shade requirements which measure the effectiveness of riparian creation and enhancement actions for mitigating impacts to streams.

Potentially Significant Impact - Impacts to Sensitive Plant Communities and Habitats (FEIS/EIR, § 3.7.1; SEIR, § 4.1.)

Impact Description:

Baker's meadowfoam is a federal species of concern, a state-listed rare species, and a California Native Plant Society (CNPS) List 1B species. Modified Alternative J1T would permanently impact approximately 33.5 acres of potentially suitable Baker's meadowfoam habitat. Additionally, the project may impact North Coast Semaphore

Grass, as discussed in the SEIR. North Coast semaphore grass (*Pleuropogon hooverianus*) is listed by the State of California as a threatened species and is a federal species of concern. It is also a CNPS List 1B.1 species (Plants Rare, Threatened, or Endangered in California or Elsewhere). An essential element of the Regional Water Board's Water Quality Control Plan (Basin Plan) is to adopt and ensure the protection of beneficial uses. While rare, threatened, and endangered species (RARE) is an existing beneficial use which the Regional Water Board is designated to protect, the primary mitigation authorities for special status plants are CDFG and USFWS. The FEIS/EIR and SEIR have identified these impacts as potentially significant.

Finding:

Pursuant to Public Resources Code Section 21081(a) and CEQA Guidelines Section 15091(a), the Regional Water Board finds that changes or alterations have been required in, or incorporated into the project such that it would avoid or substantially lessen the significant environmental effect to a less than significant level. The Regional Water Board further finds that mitigation measures and conditions listed below (including those pertaining to impacts to wetlands and waters of the U.S.) are feasible to offset the impacts and are, therefore, incorporated as conditions of the Water Quality Certification and associated MRP.

Facts that Support the Finding:

FEIS/EIR Mitigation Measures:

BIO-11: Special Status Plants: Impacts to Baker's meadowfoam would be mitigated by off-site preservation of existing populations and habitat, as well as by creation/enhancement of new habitat for populations occurring on upland sites and on wetland sites. Portions of temporarily impacted Baker's meadowfoam habitat could be restored where feasible. Baker's meadowfoam habitats occurring within jurisdictional wetlands would be mitigated by a combination of creation/restoration at the same ratios as jurisdictional wetlands, and preservation. Baker's meadowfoam creation/restoration parameters would be based on specific hydrologic and soil conditions specified and described for the species in a formerly prepared study titled "Hydrologic and Soil-Geomorphic Conditions Associated with Baker's Meadowfoam in Little Lake Valley, Mendocino County, California" (Balance Hydrologics, Inc. 1993). The mitigation strategy allows for the creation, restoration, enhancement, protection and preservation of approximately 1,157 acres of potential Baker's meadowfoam habitat. The Baker's meadowfoam preserves would be maintained in perpetuity within Little Lake Valley.

SEIR Mitigation Measures:

Impacts to NCSG will be mitigated, as with Baker's meadowfoam, primarily through off-site preservation and enhancement of existing populations and habitat population and to protect and restore the remaining portions of the population within the right-of-way.

However, measures will also be taken to minimize direct and indirect impacts to the affected. Mitigation measures will be taken to minimize and fully mitigate project impacts. As part of avoidance and minimization measures, North Coast semaphore grass seed and rhizomes will be salvaged from the impact area prior to project construction and transplanted within the bypass alignment to an unaffected area. In addition, Caltrans is coordinating with CDFG and USFWS on a 2-year study to characterize hydrology (i.e., groundwater), soils (i.e., moisture and temperature), and cultural (i.e., land use) conditions at Arkelian, Frost, Goss, Lusher, and MGC Plasma North offsite mitigation parcels and the Huffman impact parcel for use in determining the potential to actively expand these occurrences. Data collected relating to the soil dry down curve at the occurrence sites will be of particular interest. Based on qualitative observations made during March 2010 abundance surveys, expansion at the occurrences seem possible as there appears to be unoccupied habitat available at the boundaries of the occurrences that could accommodate expansion. Land management practices, such as low intensity livestock grazing and limited mowing, also may allow expansion of North Coast semaphore grass.

As part of mitigation efforts, five existing North Coast semaphore grass populations in Little Lake Valley that occur at the Arkelian, Frost, Goss, Lusher, and MGC Plasma North offsite mitigation parcels will be placed in preserves as part of project mitigation. A total of 5.094 acres of occupied habitat has been identified at these preserves. The soil and hydrologic conditions favored by north coast semaphore grass are currently being evaluated to better understand the groundwater, soil moisture, soil temperature, soil profile, and soil density conditions under which NCSG grows. The evaluation is also intended to provide an understanding of the characteristics of areas adjacent to NCSG populations that may be used for implementing minimization measures (e.g., transplantation and seeding) for NCSG impacts at and for determining expansion potential at existing NCSG populations that will be preserved. Caltrans has developed a work plan in coordination with the CDFG and USFWS)to provide supplemental data for NCSG. During March 11—26, 2010, NCSG populations were identified, mapped, stratified (into stands), and surveyed for abundance. Simultaneously, 69 shallow soil pits were excavated within and adjacent to NCSG stands at five separate occurrences in Little Lake Valley as part of general habitat characterization efforts. Soil, hydrologic, and other site characteristics were documented at each of the pit sites. These data have been used to develop monitoring methods to collect more detailed soils and hydrology data. In addition to the soil and hydrologic data collected during general habitat characterization surveys, data were also collected on NCSG rooting depth. Knowledge of the root zone will help define the depth at which soil moisture and soil temperature monitoring sensors will be installed. The results of the detailed soil and hydrologic monitoring will be presented in annual monitoring reports to be submitted to the resource agencies for review in September 2010 and September 2011.

Potentially Significant Impact - Direct and Indirect Impacts to Special-Status Plants (FEIS/EIR, §§ 3.7.3, 3.17.2)

Impact Description:

The project study area for the Modified Alternative J1T alignment, as well as the designated borrow site at Oil Well Hill, together comprise 270 acres of land. Within the project study limits, permanent impacts to sensitive plant communities and habitats are estimated at approximately 108 acres, and temporary impacts are estimated at 28 acres. In considering the impacts and mitigation to various biological resources, it was recognized that some resources occur together as components of the same habitat or community (e.g., Baker's meadowfoam occurs within jurisdictional wetlands, oak trees occur within riparian zones, etc.).

The FEIS/EIR identifies these impacts as potentially significant.

Finding:

Pursuant to Public Resources Code Section 21081(a) and CEQA Guidelines Section 15091(a), the Regional Water Board finds that changes or alterations have either been required in or incorporated into the project such that it would avoid or substantially lessen the significant environmental effect to a less than significant level. The Regional Water Board further finds that mitigation measures and conditions identified below are feasible to offset the impact and are, therefore, incorporated as conditions of the Water Quality Certification and associated MRP.

Facts that Support the Finding:

FEIS/EIR Mitigation Measures:

BIO-11: Special Status Plants: Modified Alternative J1T would temporarily and permanently affect two populations of Baker's meadowfoam, one in the central portion of the project (in the area of the Colli Ranch) and one in the northern portion of the project, in the vicinity of the Quail Meadows Interchange. The project would avoid most of the central population of Baker's meadowfoam, but would impact the majority of the northern population.

Impacts to Baker's meadowfoam plants would be mitigated by off-site preservation of existing populations and habitat, as well as by creation/enhancement of new habitat for populations occurring on upland sites and on wetland sites. Portions of temporarily impacted Baker's meadowfoam habitat could be restored where feasible. Baker's meadowfoam habitats occurring within jurisdictional wetlands would be mitigated by a combination of creation/restoration at the same ratios as jurisdictional wetlands, and preservation. Baker's meadowfoam creation/restoration parameters would be based on specific hydrologic and soil conditions specified and described for the species in a

formerly prepared study titled “Hydrologic and Soil-Geomorphic Conditions Associated with Baker’s Meadowfoam in Little Lake Valley, Mendocino County, California” (Balance Hydrologics, Inc. 1993). Baker’s meadowfoam preservation sites would be acquired within Little Lake Valley. Additionally, funds would be necessary in order to set up a long-term management and maintenance program. The Baker’s meadowfoam preserves would be maintained in perpetuity and their management could be transferred to CDFG or a mitigation bank (refer to the Conceptual Mitigation Plan, Appendix L).

Other Conditions:

Condition 10 of the Water Quality Certification requires Caltrans to adhere to the MRP issued by the Regional Water Board. The MRP is designed to collect data and provide reports that assess the biological, chemical, physical characteristics and conditions of resources within the jurisdiction of the Regional Water Board for both the bypass alignment and the associated mitigation lands. The baseline assessment of wetlands within the bypass alignment and the off-site mitigation parcels includes:

- Hydrology [i.e., ground water level fluctuation (discharge and recharge), inundation (depth, duration and frequency), soil saturation, drainage patterns, erosion and deposition]
- Absolute percent coverage of wetland plants
- Absolute percent cover of native plant species
- Species richness
- Absolute percent coverage of invasive species
- CRAM score.

Additionally, the mitigation measures identified above for impacts to wetlands are applicable to Baker’s Meadowfoam habitat which occurs within wetlands.
The information gathered above will provide Caltrans with data on the presence of Baker’s Meadowfoam and which locations it appears to be flourishing in.

Potentially Significant Impact – Direct and Indirect Impacts to Special Status Fish (FEIS/EIR, §§ 3.7.3, 3.17.2):

Impact Description:

Impacts to special status fish could result from sedimentation in streams, temperature increases due to loss of canopy, and/or potential noise affects related to pile driving activities near streams. The Modified Alternative J1T would require stream crossings that would directly affect the upper, middle, and lower reaches of Haehl Creek, as well as the lower reaches of Baechtel, Broaddus, Mill, and Upp creeks, which contain habitat for three listed salmonids (Northern California steelhead, Southern Oregon/Northern California coho salmon, and California Coastal chinook salmon). An essential element of the Regional Water Board’s Basin Plan is to adopt and ensure the protection of

beneficial uses. While rare, threatened, and endangered species (RARE) is an existing beneficial use which the Regional Water Board is designated to protect, the primary mitigation authorities for special status fish are CDFG and NMFS. The FEIS/EIR identifies these impacts as potentially significant.

Finding:

Pursuant to Public Resources Code Section 21081(a) and CEQA Guidelines Section 15091(a), the Regional Water Board finds that changes or alterations have either been required in or incorporated into the project such that it would avoid or substantially lessen the significant environmental effect to a less than significant level. The Regional Water Board further finds that mitigation measures and conditions identified below are feasible to offset the impact and are, therefore, incorporated as conditions of the Water Quality Certification and associated MRP.

Facts that Support the Finding:

FEIS/EIR Mitigation Measures:

BIO-1: Mitigation and monitoring. The Modified Alternative J1T project will comply with terms and conditions provided by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), in their Biological Opinions. Caltrans will also comply with conditions of the permits issued by all of the resources agencies, and will implement mitigation and monitoring measures provided in the Final MMP, dated June 2010, includes measures that would compensate for impacts to wetlands and other waters; riparian woodlands, oak woodlands, listed salmonids; northern spotted owl and Pacific fisher; Baker's meadowfoam and non-listed special-status species.

BIO-2: Compensatory mitigation. Compensatory mitigation would include the creation, restoration, enhancement, and/or preservation of sensitive habitats affected by the project. The U.S. EPA, U.S. FWS, U.S. ACE, NMFS, CDFG, Mendocino County Resource Conservation District (MCRCD), Willits Environmental Center (WEC) and Regional Water Board collectively agreed to and developed an ecologically based watershed approach designed to ensure no net loss of ecological functions and values. The watershed approach would provide significant improvements to the ecological functions and values of wetlands off-site of the project, but still within the Little Lake Valley[2]. (The project is planned in the west-central portion of the Little Lake Valley.) The resource agencies agreed that the mitigation should be focused within Little Lake Valley because it hosts a variety of unique ecological features, including the presence of several rare, threatened, and endangered species (e.g. anadromous fish and Baker's

[2] During the Willits Bypass Mitigation Development Team meetings, it was collectively agreed between the U.S. EPA, U.S. ACE, U.S. FWS, CDFG, NMFS, WEC, Caltrans, and the Regional Water Board that the most appropriate use of the mitigation funds would be a watershed approach within Little Lake Valley. The resource agencies believe, that in this case, a watershed based approach will be superior to an approach relying on wetland creation/establishment ratios..

Meadowfoam). Caltrans proposed that 1,011.13 acres of existing wetlands would be enhanced and in combination with the 24.33 acres created and 53.44 acres preserved, for a total of 1,088.90 acres of wetlands secured in perpetuity. In addition, an off-site fish passage project at Ryan Creek will be implanted to provide salmonids with access to previously blocked habitat.

BIO-3: Avoidance and Minimization: During the final design phase of the Modified Alternative J1T project, Caltrans biologists, Caltrans design engineers, and the resource agencies have worked together on construction scenarios, BMPs, work windows and project monitoring strategy that will avoid and/or minimize impacts to sensitive biological resources.

BIO-4: Environmentally Sensitive Areas: Caltrans will establish and delineate Environmentally Sensitive Areas (ESAs) on project plans and specifications to protect sensitive biological resources adjacent to the construction corridor by prohibiting construction activities in those areas.

BIO-5: Training: Caltrans will develop and implement an environmental awareness and training program that informs the contractor and construction workers of the environmental regulations that Caltrans is committed to comply with, and measures established for the project to minimize and avoid sensitive habitats and species.

BIO-6: Monitoring: Qualified biologists would monitor construction activities in sensitive biological resource areas to ensure permit conditions and mitigation requirements are adhered to.

BIO-7: Construction in Streams: Caltrans will avoid working in live stream channels. Construction associated with stream crossings (bridges, viaduct and culvert) will conform to the work window of June 15 though October 15 of each year for work associated with bridge, viaduct, and culvert construction over salmonid bearing streams.

BIO-9: Riparian Woodland: Riparian woodlands within the project corridor are divided into three categories (Final MMP). Category I riparian woodlands are associated with salmonid bearing streams, and Category II and III riparian woodlands are other riparian woodlands that are not associated with salmonid streams.
Minimization measures that would occur during construction would include: removing the minimum amount of vegetation necessary; installing ESA fencing and enforcing protection of riparian vegetation located within established protected areas; implementation of appropriate BMP's; and pre-construction training sessions to inform contractors and construction workers of the status of sensitive habitats and special-status species and the requirements for avoidance of protected areas.

BIO-13: Wetlands and Other Waters: The goal is not net loss of wetland habitat functions and values. Mitigation would consist of a combination of measures, including the creation of wetlands and other waters, and the restoration, enhancement and

preservation of existing wetlands and other waters in Little Lake Valley. Wetland enhancement actions include: filling in man-made drainage ditches to increase the residence time of surface waters within the wetland area; implementing a grazing management plan to reduce the impacts from cattle; and removing invasive species to promote the health and natural recruitment of native wetland species. The enhancement of wetlands will be verified through a robust monitoring and reporting program (per Condition 10) that requires Caltrans to use the California Rapid Assessment Method (CRAM) for wetlands, as well as additional hydrology, vegetation, and surface water sampling and analysis methods to verify the enhancement of wetland functions and values. The mitigation site preservation and site protection instruments would be a combination of fee title purchase, conservation easement, or other deed restriction.

BIO-22: Aquatic Resources: In addition to requiring the contractor to prepare a Storm Water Pollution Prevention Plan (SWPPP), Caltrans will implement the following measures to minimize disturbances to aquatic resources. In addition, mitigation measures WQ-1 through WQ-3 and WQ-6 through WQ-8 will also reduce impacts to aquatic resources.

- All construction-related materials shall be stored in designated staging areas at least 150 feet from perennial waterways and drainages.

- Refueling and vehicle maintenance shall be performed at least 150 feet from creeks and other water bodies.

- Operation of heavy equipment shall be minimized in perennial creeks (to the greatest extent possible). If equipment must access perennial creeks, this will occur during the late summer months when the stream flows are low, or when no water is in the channels. If water is flowing, the channels will be appropriately dewatered.

- Temporary sedimentation barriers, such as gravel bags or siltation fencing, shall be installed to minimize the amount of silt entering the creeks and any ephemeral drainages with water present in the channel. The location of these barriers shall be determined by the resident engineer and environmental monitor, and shall be clearly marked in the field before construction activities begin.

- All imported fill material shall be clean and free of pollutants and shall be imported from a source that has the appropriate environmental clearances and permits. The reuse of low level contaminated solids as fill on-site shall be performed in accordance with all State and Federal policies and established guidelines and must be submitted to the Regional Water Board for review and concurrence.

- Only clean washed spawning gravel (0.5” – 4”) with a cleanliness value of at least 85, using the Cleanness Value Test Method for California Test No. 227 will be placed in the streams. Gravel bag fabric shall be nonwoven polypropylene geotextile (or comparable polymer) and shall conform to the following requirements: Mass per unit area, grams per square meter, min ASTM Designation: D 5261 – 270; Grab tensile strength (25-mm grip), kilonewtons, min. ASTM Designation: D4632* 0.89; Ultraviolet stability, percent tensile strength retained after 500 hours, ASTM Designation: D4355, xenon arc lamp method 70 or appropriate test method for specific polymer; Gravel bags shall be between 600 mm and 800 mm in length, and between 400 mm and 500 mm in width. Yarn used in construction of the gravel bags shall be as recommended by the manufacturer or bag supplier and shall be of a contrasting color. Gravel shall be between 10 mm and 20 mm in diameter, and shall be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags shall be secured to prevent gravel from escaping. Gravel-filled bags shall be between 13 kg and 22 kg in mass.

- Caltrans shall submit to the Regional Water Board in writing the name, qualifications, and contact information for the designated water quality monitor(s). The water quality monitor(s) shall be knowledgeable of and have experience with the Regional Water Board’s Basin Plan, which includes beneficial uses and water quality objectives, and surface water monitoring procedures, protocols, quality assurance, and quality control protocols. The water quality monitor(s) shall be responsible for monitoring project activities and/or channel- ground- or vegetation disturbing activities that result in or have the potential to result in a discharge to waters of the state. The water quality monitor shall make requests and provide recommendations to the Caltrans Resident Engineer, Construction Storm Water Coordinator, and Environmental Construction Liaison.

- Caltrans, in conjunction with the water quality monitor(s), shall establish effluent, upstream (background) and downstream monitoring locations to demonstrate compliance with all applicable water quality objectives as detailed in the Basin Plan. The downstream location shall be no more than 50 feet from the effluent location. Field measurements shall be taken from each location four times daily for flow, pH, temperature, dissolved oxygen, total dissolved solids, turbidity and specific conductance. In addition, visual observations shall be made four times daily and include the appearance of the discharge including color, turbidity, floating or suspended matter or debris, appearance of the receiving water at the point of discharge (occurrence of erosion and scouring, turbidity, solids deposition, unusual aquatic growth, etc), and observations about the receiving water, such as the presence of aquatic life. Measurements shall be collected from each sampling location four times daily while work is being conducted within waters of the state.

- Caltrans shall submit, subject to approval by the Regional Water Board staff, a dewatering and/or diversion plan that appropriately describe the dewatered or diverted areas and how those areas will be handled during construction. The diversion/dewatering plans shall be submitted no later than 30 days prior to conducting the proposed activity. Information submitted shall include the area or work to be diverted or dewatered and method of the proposed activity. All diversion or dewatering activities shall be designed as to minimize the impact to waters of the state and maintain natural flows upstream and downstream. All dewatering or diversion structures shall be installed in a manner that does not cause sedimentation, siltation or erosion upstream or downstream. All dewatering or diversion structures shall be removed immediately upon completion of project activities. The in-channel work within fish bearing streams will only be conducted between June 15th and October 15th. This project is not authorized to draft surface waters.

WQ-1: Soil Stabilization, Sediment Control, and Storm Water Pollution Prevention. To address potential water quality impacts during construction, Caltrans will require the contractor to use a combination of BMPs to control potential erosion and sedimentation from the project site. Caltrans has developed a suite of construction site BMPs that will be implemented on the proposed project. The construction site BMP manual can be downloaded at: http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.htm
The Plans, Specifications and Estimates (PS&E) developed for the project will require the contractor to prepare and implement SWPPP, and other project specific construction BMPs, which will effectively reduce potential pollutants of concern in storm water discharges. The SWPPP will be reviewed and approved by the Caltrans Resident Engineer to ensure all the necessary BMPs are incorporated. The SWPPP will also include a final Revegetation Plan to be implemented at the end of construction activities.

WQ-2: Oil, Grease, and Chemical Control: Caltrans SSPs will prohibit the contractor from discharging oils, greases, chemicals, or spillage of concrete and grout into receiving waters. For example, on this project, equipment operating in water bodies will be required to be steam cleaned prior to arrival on site, and be maintained in a clean condition during the length of activities.

WQ-3: Revegetation. Where vegetation along streams is removed or severely trimmed back, Caltrans will plant replacement vegetation for shading of creeks to reduce temperature related impacts to water quality. Mitigation measure BIO-9 will also reduce impacts associated with vegetation removal along riparian corridors.

WQ-6: Revegetation and Soil/Slope Stabilization. Following the construction process, the contractor will stabilize disturbed soil areas through permanent re-vegetation or other means. The Storm Water Quality Handbook, Project Planning and Design Guide (revised July 2005), provides detailed procedures for design of permanent slope stabilization controls, design pollution prevention, and permanent treatment BMPs. The procedures are intended to ensure that an appropriate design is developed that will

allow all finished slopes to achieve stabilization, even under severe conditions, and also provide erosion control BMPs at all point source discharges of storm water runoff. Treatment BMPs, such as biofiltration, will be incorporated where feasible.

WQ-8: Hazardous Waste Spill Control. As part of standard operation and maintenance procedures, Caltrans has developed a standard Hazardous Waste and Spill Response Plan (HW&SRP), which Caltrans will ensure is implemented during the project. These BMPs address water quality issues associated with accidental spills.

Other Conditions:

NMFS' Biological Opinion: The Biological Opinion issued by NMFS states that the project is not likely to jeopardize the continued existence of Northern California steelhead, Southern Oregon/Northern California coho salmon, and California Coastal Chinook salmon. Mitigation measures to reduce impacts to Special Status fish such as fish migration/fish passage and habitat creation and repair, as well as minimization measures for protecting aquatic resources are presented in Appendix A of the FIES/EIR and in Chapter 6 of the MMP. Construction and maintenance BMPs and compliance with the Caltrans statewide NPDES permit (Order No. 99 – 06 – DWQ) would also reduce impacts to fish species. Caltrans will implement the terms and conditions of the NMFS Biological Opinion, as well as mitigation measures and conditions listed above and below to minimize impacts to salmonids.

Fish Migration/Passage: Stabilization of both creek channels that pass through the interchange areas (Haehl and Upp Creeks) will consist of grade control structures located downstream of the culvert, at appropriate heights and intervals, for the distance necessary to stabilize the natural stream gradient. Fish passage design elements will comply with guidelines established by the NMFS and the CDFG. The removal of the Upcreek culvert along existing 101 and the stabilization of stream channel at the Haehl Creek interchange would likely reduce sediment input into the creeks as well as improve the beneficial use of the creeks for migration by anadromous salmonids. Regional Water Board staff recognizes that the Upp Creek and Haehl Creek interchanges were primarily designed with the bypass structure in mind; however, they will benefit salmonids because they were designed in accordance with NMFS and CDFG requirements and help fish passage and control sediment discharge. In addition, Caltrans worked closely with NMFS, CDFG, and Regional Water Board staff at these locations to ensure that all concerns raised by the agencies were addressed. As for the Ryan Creek passage barrier, Regional Water Board staff is satisfied that this is an appropriate mitigation for impacts to listed salmonids, especially when considered in conjunction with the cumulative benefits of additional barrier removal (located further upstream) which is being planned by Mendocino County.

Caltrans has designed the project to minimize the number of permanent structures that will be constructed in creek channels. Bent 24, which is associated with the viaduct structure at the confluence of Baechtel and Broaddus Creeks, will be the only

permanent bridge piling that will be constructed in the creek channel during Phase 1. All other creek crossings will consist of clear-span bridges, precluding the need for the construction and placement of permanent bridge piers within creek channels at these crossings. During construction of both project phases, a number of temporary piles to support trestles for the temporary access road and falsework construction also will be needed during project construction; however, these will be removed following construction of each phase of the project. The permanent and temporary piles that will be placed in the creek channels during construction of Phases 1 and 2 will not affect the migration pathway for upstream and downstream migrants.

In addition to enhancement and preservation of habitat on off-site mitigation parcels, Caltrans will implement stream restoration and fish passage improvements on Haehl and Upp Creeks where they cross the project footprint. Caltrans has also committed as part of its mitigation plan to providing the design for the North and South Fork locations of the Ryan Creek fish passage project, as well as constructing the South Fork location to mitigate impacts on salmonids and jurisdictional waters of the United States. These fish passage improvements on Ryan and Upp Creeks will improve access to upstream spawning and rearing habitat for coho and Chinook salmon and steelhead relative to current conditions. Improvements to fish passage will help offset the temporary effects associated with project construction by potentially increasing the productivity of listed salmonids in these creeks through increased spawning success.

There is general agreement among CDFG's Northern Region staff that Ryan Creek is a high priority for fish passage improvement. Ryan Creek was also identified as the Number 1 priority for passage improvement in Mendocino County in an inventory of road crossings on the State Highway system in Caltrans District 1 (Lang 2005). Ryan Creek ranked as the Number 2 priority within all of District 1. Ryan Creek is the first Outlet Creek tributary located immediately downstream from Little Lake Valley. Providing access to spawning and rearing habitat that is currently obstructed on Ryan Creek will directly benefit coho salmon populations in the Middle-Upper Eel River Recovery Unit and the Outlet Creek HSA. Identifying and treating passage barriers is consistent with the Recovery Strategy for California Coho Salmon and is identified as a Level D task (will directly contribute to recovery of coho salmon) for the Outlet Creek HSA.

Habitat Creation and Enhancement: Fish migration habitat will be further improved by the inclusion of approximately 1,700 linear feet of riparian plantings along the east bank of Baechtel Creek between where the viaduct would cross Baechtel Creek and where East Commercial Street currently crosses the creek, and along approximately 1,400 linear feet of the north bank of Mill Creek before Mill Creek passes under the Western Pacific railroad tracks. Approximately, six miles (measured along both sides of the stream banks) of riparian habitat will be created or enhanced along Category I, II, and III streams within the offsite mitigation parcels. There are long stream reaches along both Davis and Outlet Creeks that would benefit from riparian plantings. Consultations with Craig Martz and Scott Harris of CDFG and Tom Daugherty of NMFS on April 18, 2008,

indicated a preference for Category I riparian mitigation to occur on Outlet Creek, as it supports populations of all three listed fish species (salmonid and steelhead) potentially affected by the bypass project. Therefore, Caltrans has proposed approximately 10,000 linear feet of riparian vegetation to provide shade on Outlet Creek.

Additional mitigation includes restoration to areas along Outlet Creek and Berry that are undergoing bank erosion or that have large headcuts. These areas were identified in an erosion assessment conducted in May 2010. The erosion assessment consists of an inventory of sediment contributing sites within the mitigation parcels and a prioritization of those restoration efforts. The recommended treatments for these sites include bio-engineered bank stabilization efforts to reduce sediment input, reconnect the streams with their adjacent floodplains, and further improve fish habitat.

Monitoring of Pile Driving Noise near Streams*:* During pile driving activities below the top-of-bank and within 15 m (50 feet) of salmonid bearing streams, Caltrans will dewater the stream (including relocating fish), and a qualified fisheries biologist will monitor underwater noise levels both upstream and downstream of the dewatered area. If noise levels exceed 187 dB (sound exposure levels (SEL) or 208 dB peak, Caltrans will cease pile driving at this location and immediately contact NMFS to discuss further reasonable and prudent measures to minimize potential impacts to fish, which could include additional fish relocation and dewatering. Dewatering could be required for six weeks or more at some stream crossings as explained more fully in the NMFS' Biological Opinion.

Monitoring and Reporting Program: As stated in Section 1.0. of the MRP, Caltrans is required to conduct bioassessment (benthic macroinvertebrate sampling) as well as chemical, physical, and biological monitoring components. Chemical monitoring includes parameters such as dissolved oxygen, temperature, turbidity, total dissolved solids, oil and grease, and several other constituents. Physical monitoring includes hydrology, geomorphic conditions (i.e., cross sectional water depth, wetted channel width, bankfull width, substrate characteristics, canopy cover, gradient, sinuosity, large woody debris) and other parameters. Biological monitoring includes wetland plant coverage, invasive species coverage, riparian canopy coverage, benthic macro-invertebrates surveys, as well as other parameters. Regional Water Board staff worked closely with the U.S. EPA, U.S. ACE, and Caltrans to develop the MRP and to ensure that impacts to stream temperatures are fully mitigated.

Section 3.0. of the MRP details the schedule (including the frequency of monitoring), the locations, and the evaluation of data to adequate develop the short term work plans, grazing management plan, and mitigation success criteria. The requirements for baseline assessments, monitoring during construction, procedures for enhancement verification, and long term monitoring requirements as also detailed in Section 3.0.

Section 4.0. of the MRP requires that Caltrans monitor impacts to stream temperatures associated with the construction of the bypass and Section 5.0. requires Caltrans to

measure the success of the mitigation measures (revegetation) and ensure the project does not result in a significant increase in stream temperatures in the long term. Additionally, the Water Quality Certification and MRP require Caltrans to plant riparian vegetation in all areas within the bypass alignment and mitigation lands to provide the maximum site potential shade to streams within the project area. Section 3.0 of the MRP also require Caltrans to include additional and robust success criteria within the MMP for measuring effectiveness of riparian mitigation measures that incorporate percent canopy cover and percent effective shade requirements which measure the effectiveness of riparian creation and enhancement actions for mitigating impacts to streams.

Potentially Significant Impact - Direct and Indirect Impacts to Wetlands and Waters of the U.S. (FEIS/EIR, §§ 3.7.3, 3.17.2):

Impact Description:

The project will result in impacts to wetlands and surface waters within the Outlet Creek HSA, including Haehl Creek, Baechtel Creek, Broaddus Creek, Mill Creek, Outlet Creek, Upp Creek, Ryan Creek and two ponds (Rutledge and Niesen). Caltrans has determined that the project would directly impact a total of 89.27 acres of waters of the U.S[3]., including 83.77 acres of impacts to wetlands and 5.5 acres (12,416 linear feet) to streams and ponds also identified as waters of the U.S. The project would temporarily impact 29.88 acres of wetlands and 3.16 acres (9,255 linear feet) of streams and ponds identified as waters of the U.S[4]. In addition, the project would result in permanent impacts to 53.89 acres of wetlands and to 2.34 acres (3,161 linear feet) of streams and ponds that are waters of the U.S.[5] The FEIS/EIR has identified this as a potentially significant impact.

Finding:

Pursuant to Public Resources Code Section 21081(a) and CEQA Guidelines Section 15091(a), the Regional Water Board finds that changes or alterations have been

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[3] Waters of the U.S. is defined in section 232.2 of Title 40 of the Code of Federal Regulations and includes "all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. All interstate waters, including interstate wetlands. All other waters including intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflates, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which would or could affect interstate or foreign commerce… and wetlands adjacent to waters (other than waters that are themselves wetlands) …"

[4] A temporary impact is the short term impact that occurs during the placement of fill within wetlands for access roads, or the removal of trees and vegetation along streams to construct false work and structures.

[5] A permanent impact is the placement of fill within areas for the purpose of a permanent structure such as the roadway embankments for the new highway, bridge footings, or culverts within streams.

required in, or incorporated into, the project that would avoid or substantially lessen the significant environmental effect to a less than significant level. The Regional Water Board further finds that mitigation measures and conditions identified below are feasible to offset the impact and are, therefore, incorporated as conditions of the Water Quality Certification and MRP.

Facts that Support the Finding:

FEIS/EIR Mitigation Measures:

BIO-1: Mitigation and monitoring: The Modified Alternative J1T project will comply with terms and conditions provided by the U.S. FWS and NMFS, in their Biological Opinions. Caltrans will also comply with conditions of the permits issued by all of the resources agencies, and will implement mitigation and monitoring measures provided in the MMP.

BIO-2: Compensatory Mitigation: Compensatory mitigation would include the creation, restoration, enhancement, and/or preservation of sensitive habitats affected by the project. Compensatory rations shall be developed through coordination with U.S. ACE, U.S. FWS, NMFS, U.S. EPA, and CDFG. See Other Conditions section below for more detailed information.

BIO-3: Avoidance and Minimization: During the final design phase of the Modified Alternative J1T project, Caltrans biologists, Caltrans design engineers, and resource agencies will work together on additional design solutions that will avoid or minimize impacts to sensitive biological resources.

BIO-4: Environmental Sensitive Area: Caltrans will establish and delineate ESAs on project plans and specifications to protect sensitive biological resources adjacent to the construction corridor by prohibiting construction activities in those areas.

BIO-5: Training: Caltrans will develop and implement an environmental awareness and training program that informs the contractor and construction workers of the environmental regulations that Caltrans is committed to comply with, and measures established for the project to minimize and avoid sensitive habitats and species.

BIO-6: Monitoring: Qualified biologists and water quality monitors would monitor construction activities in sensitive biological resource areas to ensure permit conditions and mitigation requirements are adhered to.

BIO-7: Construction In Streams: Caltrans would avoid working in live stream channels to the extent feasible. Construction associated with stream crossings (bridges, viaduct and culvert) would conform to the work window of June 15 though October 15 of each year for work associated with bridge, viaduct, and culvert construction over salmonid bearing streams.

BIO-13: Wetlands and Other Waters: Caltrans will mitigate for impacts to wetlands and other waters of the U.S. by implementing the mitigation measures that are set forth in the Final MMP, The mitigation will consist of a combination of measures, including the creation of wetlands and other waters, and the restoration, enhancement and preservation of existing wetlands and other waters in Little Lake Valley.

FP-1: Structure Design: According to FEMA, the floodway is "the area of the floodplain that should be reserved (kept free of obstructions) to allow floodwaters to move downstream." For each valley alternative, the Floodway Viaduct (bridge) spans the floodway. The only encroachments in the floodway are the columns supporting the structure. In addition, the structure designs have relatively long spans, in the range of 30 m (100 ft). These structure design features limit the impacts on the floodplain by minimizing the actual footprint of the impacts and obstructions to flow.

FP-2: Drainage Philosophy: The valley alternatives include equalizing culverts at periodic points along the embankments, which should minimize the redirection of flows, maintaining the existing flood patterns. The culverts will not be included, however, if detailed hydraulic studies indicate the culverts would cause other problems with flood patterns.

FP-3: Design Cross-Sections: The cross sectional design of the facility, the side slopes, median, pavement widths, and so forth, has been established to limit impacts to floodplains as well as other resources. The median width, at 13.8 m (45 ft), is 4.8 m (16 ft) less than Caltrans' current design standard. This median width reduces the footprint of impact along the entire alignment, including the floodplain. Sideslopes are the slopes connecting the roadbed with the existing ground. When the embankment is low, the sideslopes can be constructed at relatively low angles without extending an unreasonable distance from the roadbed. But as embankments increase in height, sideslopes constructed at the same angles would cover much wider areas and add to the volume of earth to be placed. To reduce the earthwork and footprint of higher embankments, sideslopes are constructed at steeper angles. In the floodplain, the higher embankments occur at bridge approaches, and the steeper sideslopes constructed in connection with these higher embankments limit the impacted areas.

FP-4: Geometric Design: The use of tight diamond interchanges rather than spread diamonds reduces the footprint of impacts on the floodplain.

Other Conditions:

Wetlands and Other Waters: Wetlands subject to Regional Water Board jurisdiction would be permanently and temporarily affected by the project. Other waters (streams and ponds) would also be permanently and temporarily affected by the project, and consist of: 1) two ponds (one on the Colli Ranch and one in the Niesen Ranch); 2) approximately 2,500 feet of an ephemeral stream south of East Hill Road; 3) the culvert crossing over Upp Creek at the north end of the project corridor; and 4) potential temporary dewatering of perennial streams (if needed) to minimize pile driving-related noise impacts to listed salmonids.

Compensatory Mitigation: Compensatory mitigation would include the creation, restoration, enhancement, and/or preservation of sensitive habitats affected by the project. The Water Quality Certification by the Regional Water Board will be conditioned upon Caltrans obtaining control of all of the area necessary for the creation of the 24 acres of wetlands, as proposed in its mitigation and monitoring proposal. Off-site mitigation actions for wetlands creation will require site preparation, including grading uplands and modifying local hydrology; seeding graded areas; planting wetlands species; and monitoring for successful wetland establishment.

After the creation of approximately 24 acres of wetlands, the project would still result in a loss of 29 acres of wetlands. After several years of meetings and planning with Caltrans, the U.S. EPA, U.S. FWS, U.S. ACE, NMFS, CDFG, MCRCD, WEC and Regional Water Board collectively agreed to an ecologically designed watershed approach to mitigate for the loss of 29 acres of wetlands. The watershed approach would involve providing a significant improvement to the ecological functions and values of wetlands off-site of the project, but still within the Little Lake Valley. (The project is planned in the west-central portion of the Little Lake Valley.) The resource agencies collectively agreed that the mitigation should be focused within Little Lake Valley, because it hosts a variety of unique ecological features, including the presence of several rare, threatened, and endangered species (e.g. anadromous fish and Baker's Meadowfoam).

This watershed approach mitigation strategy would combine habitat creation, restoration, enhancement, and preservation, which is consistent with the U.S. EPA and U.S. ACE new Compensatory Mitigation Rule released on April 10, 2008. The watershed approach is discussed in the Code of Federal Regulations [33 CFR Part 332.3(h)] which details the applicability, considerations, information needed, and watershed scale. As stated in the Federal Mitigation Rule, "If a functional or condition assessment of other suitable metric is not used, a minimum of one-to-one acreage or linear foot compensation ratio must be used." With Caltrans unable to provide the required acreage for wetlands establishment (creation) they proposed mitigating through the watershed approach. Approximately 1,011 acres of existing wetlands would be enhanced and in combination with the 24 acres created, and the 54 acres preserved, for a total of approximately 1,088 acres of wetlands to be secured and managed in perpetuity. Wetland enhancement actions include: filling in man-made drainage ditches to increase the residence time of surface waters within the wetland area; implementing a grazing management plan to reduce the impacts from cattle; and removing invasive species to promote the health and natural recruitment of native wetland species. The mitigation site preservation and site protection instruments would be a combination of fee title purchase, conservation easement, or other deed restriction. The Water Quality Certification (Condition 8) will be conditioned upon Caltrans obtaining control of all of the area necessary for the enhancement and preservation of wetlands, as identified in their mitigation plan.

The Federal Mitigation Rule (33 CFR Part 332.3) discusses the considerations for the watershed mitigation approach which include water quality and watershed impairments. The Eel River watershed is listed on the Clean Water Act section 303(d) list as impaired for sediment and temperature. In 2004, the U.S. EPA established sediment and temperature total maximum daily loads (TMDLs) for the Upper Main Eel River and tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury). Therefore, to fully develop a watershed approach the mitigation must include a nexus to address the temperature and sediments impairments.

The nexus relates how the proposed mitigation will implement additional measures to reduce stream temperatures and excessive sediment inputs into the watershed. For sediment, Caltrans has prepared an assessment of all the erosion sites located within the off-site mitigation lands, which includes the inventory, prescription, and prioritization of restoration actions that will reduce erosion and sediment delivery within the watershed. In addition, the bypass structure has been designed reduce erosion and sediment delivery to the maximum extent practicable (MEP). For temperature impairment, the most practical way to reduce stream temperatures is to provide riparian vegetation in all areas feasible within the project limits, including bypass alignment and off-site mitigation lands (maximum site potential shade). In addition, baseline surveys will be conducted to find all areas that benefit from riparian plantings to achieve maximum site potential shade, and percent effective shade (shade on water). Additionally, the current land management practices of stream alteration and cattle grazing have potentially negative side effects on water. Therefore, the proposed grazing management plan, which is geared towards the enhancement and protection of natural resources, will be implemented to improve the overall health of the watershed.

Monitoring and Reporting Program: To compensate for the impacts to wetlands Caltrans proposes a watershed approach to achieve an increase in functions and values within the selected mitigation area. The MRP is intended to provide the data necessary to validate that proposal. The MRP is designed to collect data and provide reports that assess the biological, chemical, physical characteristics and conditions of resources within the jurisdiction of the Regional Water Board for both the bypass alignment and the associated mitigation lands. It is necessary to establish baseline conditions of surface waters to verify the establishment and enhancement of wetlands, riparian areas, and waters of the U.S. and State within the mitigation lands.

The primary objectives of the MRP include, but are not limited to:

A. Assessing the biological, chemical, and physical environmental characteristics within the bypass alignment, and within the mitigation lands;
B. Assessing the overall health and evaluating trends in receiving water quality;
C. Assessing the potential biological, chemical, physical impacts, both during and after construction, of the bypass alignment;

D. Determining and revising site specific performance standards and success criteria for the biological, chemical, and physical environmental characteristics within the bypass alignment, and within the mitigation lands;
E. Evaluating the effectiveness of BMPs, mitigation measures, and avoidance measures;
F. Evaluating activities that results in or may result in violations of MRP and the Water Quality Certification that may warrant additional BMPs or stop work orders;
G. Identifying sources of pollutants;
H. Assessing compliance with water quality objectives and TMDLs;
I. Measuring and assessing the reductions or prevention in pollutant loads; and
J. Verifying and successful repair within the bypass alignment and enhancement of the mitigation lands.

The MRP is designed to collect data and provide reports that assess the biological, chemical, physical characteristics and conditions of resources within the jurisdiction of the Regional Water Board for both the bypass alignment and the associated mitigation lands. The baseline assessment of wetlands within the bypass alignment and the off-site mitigation parcels includes:

- Hydrology [i.e., ground water level fluctuation (discharge and recharge), inundation (depth, duration and frequency), soil saturation, drainage patterns, erosion and deposition]
- Absolute percent coverage of wetland plants
- Absolute percent cover of native plant species
- Species richness
- Absolute percent coverage of invasive species
- CRAM score.

Potentially Significant Impact-Impacts to Special-Status Wildlife (FEIS/EIR, § 3.7.5)

Impact Description:

Construction of Modified Alternative J1T could affect Northern spotted owl (a federally listed threatened species) by removing suitable habitat that could be used by this species at the optional borrow site (Oil Well Hill). Using Oil Well Hill for borrow material could also affect Pacific fisher (a federal candidate for listing as threatened or endangered), as well as red tree vole (a non-listed state special-status species), by removing suitable habitat.

Modified Alternative J1T would remove riparian woodland and scrub habitat (within all three categories) along streams that provide nesting and foraging habitat for white-tailed kite, a California fully protected species, and Cooper's hawk, yellow-breasted chat, and California yellow warbler, which are California special-status species. In addition,

Modified J1T would remove oak woodland that could provide nesting and foraging habitat for white-tailed kite, Coopers hawk, and other raptors.

Construction of the bridges and viaducts for Modified Alternative J1T could affect Northwestern pond turtle and foothill yellow-legged frog that could be present in the streams within the project corridor.

The FEIS/EIR identifies these impacts as potentially significant.

Finding:

Pursuant to Public Resources Code Section 21081(a) and CEQA Guidelines Section 15091(a), the Regional Water Board finds that changes or alterations have either been required in or incorporated into the project such that it would avoid or substantially lessen the significant environmental effect to a less than significant level. The Regional Water Board further finds that mitigation measures and conditions identified below are feasible to offset the impact and are, therefore, incorporated as conditions of the Water Quality Certification and associated MRP.

Facts that Support the Finding:

FEIS/EIR Mitigation Measures:

BIO-1: Mitigation and monitoring: The Modified Alternative J1T project will comply with terms and conditions provided by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), in their Biological Opinions. Caltrans will also comply with conditions of the permits issued by all of the resources agencies, and will implement mitigation and monitoring measures provided in the Final MMP, dated June 2010, includes measures that would compensate for impacts to wetlands and other waters; riparian woodlands, oak woodlands, listed salmonids; northern spotted owl and Pacific fisher; Baker's meadowfoam and non-listed special-status species.

BIO-2: Compensatory mitigation: Compensatory mitigation would include the creation, restoration, enhancement, and/or preservation of sensitive habitats affected by the project. The U.S. EPA, U.S. FWS, U.S. ACE, NMFS, CDFG, MCRCD, WEC and Regional Water Board collectively agreed to and developed an ecologically based watershed approach designed to ensure no net loss of ecological functions and values. The watershed approach would provide significant improvements to the ecological functions and values of wetlands off-site of the project, but still within the Little Lake Valley[6]. (The project is planned in the west-central portion of the Little Lake Valley.)

[6] During the Willits Bypass Mitigation Development Team meetings, it was collectively agreed between the U.S. EPA, U.S. ACE, U.S. FWS, CDFG, NMFS, WEC, Caltrans, and the Regional Water Board that the most appropriate use of the mitigation funds would be a watershed approach within Little Lake Valley. The resource agencies believe, that in this case, a watershed based approach will be superior to an approach relying on wetland creation/establishment ratios..

The resource agencies agreed that the mitigation should be focused within Little Lake Valley because it hosts a variety of unique ecological features, including the presence of several rare, threatened, and endangered species (e.g. anadromous fish and Baker's Meadowfoam). Caltrans proposed that 1,011.13 acres of existing wetlands would be enhanced and in combination with the 24.33 acres created and 53.44 acres preserved, for a total of 1,088.90 acres of wetlands secured in perpetuity. In addition, an off-site fish passage project at Ryan Creek will be implanted to provide salmonids with access to previously blocked habitat.

BIO-3: Avoidance and Minimization: During the final design phase of the Modified Alternative J1T project, Caltrans biologists, Caltrans design engineers, and the resource agencies have worked together on construction scenarios, BMPs, work windows and project monitoring strategy that will avoid and/or minimize impacts to sensitive biological resources.

BIO-4: Environmentally Sensitive Areas: Caltrans will establish and delineate Environmentally Sensitive Areas (ESAs) on project plans and specifications to protect sensitive biological resources adjacent to the construction corridor by prohibiting construction activities in those areas.

BIO-5: Training: Caltrans will develop and implement an environmental awareness and training program that informs the contractor and construction workers of the environmental regulations that Caltrans is committed to comply with, and measures established for the project to minimize and avoid sensitive habitats and species.

BIO-6: Monitoring: Qualified biologists would monitor construction activities in sensitive biological resource areas to ensure permit conditions and mitigation requirements are adhered to.

BIO-8: Oak Woodland: Oak woodland occurring in the project corridor consists of valley oak woodland, Oregon white oak woodland, and black oak woodland, which would be permanently affected by the Modified Alternative J1T.
Minimization efforts during construction would consist of the removal of only the minimum number of trees necessary to allow for efficient project construction. Environmentally Sensitive Area (ESA) fencing would be installed around oak woodlands adjacent to the work areas. Any encroachment beyond the ESA fencing during construction (including driving, material or equipment storage and vehicle parking) would be prohibited. The ESA fencing would be accurately depicted on the final contract drawings. Compensation for the permanent loss of oak woodland would consist of in-kind creation/restoration, enhancement and preservation of oak woodlands on newly acquired parcels. These parcels would be purchased in fee or by a conservation easement and preserved in perpetuity. On sites to where creation/restoration or enhancement is to occur, oak trees would be initially planted in these areas at the ratio of five new saplings for each oak lost with the goal of three of them surviving after a ten-year monitoring period. Other compensation options may include: 1) a monetary

contribution to the California Oak Woodlands Conservation Fund, administered by the State Wildlife Conservation Board for the purpose of purchasing oak woodland conservation easements, or; 2), if there is an established CDFG oak woodland mitigation bank, the mitigation bank could be used to fulfill the off-site compensation requirements (refer to Conceptual Mitigation Plan; Appendix L).

BIO-14: Migratory Bird Treaty Act: To comply with the provisions of the Migratory Bird Treaty Act, vegetation required for removal will be removed or trimmed during the fall and/or winter months, to the extent possible, to avoid impacts to nesting birds. If vegetation cannot be removed during the non-breeding season, Caltrans will arrange to have a qualified biologist conduct preconstruction surveys of impact areas to check for nesting activity of all bird species. If nesting activity is detected, Caltrans will, if possible, establish a buffer around the nest(s). The buffer width would be determined through consultation with USFWS and CDFG. The buffer will be maintained and construction activities will avoid nest sites until the biologist determines that the young have fledged or nesting activity has ceased.

BIO-16 (revised): Northern Spotted Owl Habitat at Oil Well Hill. Excavation at the designated borrow site at Oil Well Hill could affect a maximum of 40 acres of Northern spotted owl (NSO) foraging and dispersal habitat. Caltrans will conduct additional pre-construction protocol-level surveys to determine the status of NSO in the vicinity of the Oil Well Hill borrow site. If NSO is found nesting within 1.3 miles of the borrow site, Caltrans/FHWA will consult with the USFWS (refer to USFWS Biological Opinion (BO) for NSO, Appendix D). Caltrans/FHWA will document the results of all protocol surveys conducted for Northern spotted owls. Caltrans will implement mitigation measures provided in the USFWS BO for NSO, which include:

BIO-16A: All large trees that can reasonably be avoided at Oil Well Hill will be protected.
BIO-16B: Vegetation removal at Oil Well Hill will occur during the non-breeding season (September 15 – February 1), to the extent feasible, to minimize potential impacts to spotted owls. Vegetation will be removed incrementally (i.e., only on those portions of the site that are needed for borrow material), rather than removing all vegetation on the approximately 16 ha (40 ac) site prior to excavation.
BIO-16C: Planting the same tree species that occurred at the borrow site following excavation, if feasible, could restore vegetation at Oil Well Hill.

BIO-17: This mitigation measure is retained, but has been renamed BIO-16D (see above).
BIO-18: Non-listed Special-Status Wildlife Species: If non-listed special-status wildlife species are found nesting on or near the project site, including California yellow warbler, yellow-breasted chat, and raptors, Caltrans will establish buffers around each nest. The buffer width will be determined through consultation with CDFG. The buffer shall be maintained and construction activities shall avoid nest sites until the Caltrans biologist determines that the young have fledged or nesting activity has ceased.

For white-tailed kites and other raptors, Caltrans shall conduct a pre-construction survey during the spring or early summer (April-early July) to determine whether nesting raptors (e.g., white-tailed kites, Cooper's hawks, red-tailed hawks, red-shouldered hawks) are present on or within 0.40 km (0.25 mi) of the selected alternative. If the survey detects nesting raptors on or within 0.40 km (0.25 mi) of the selected alternative, Caltrans will maintain buffer areas and seasonal construction constraints (e.g., no work during active nesting periods) in coordination with USFWS and CDFG.

BIO-19: White-tailed kite and other raptors: Mitigation Measure BIO-19 is retained, but has been incorporated as part of BIO-18 (above). Mitigation measures for all non-listed special-status are now discussed under BIO-18.
BIO-20: Yellow-breasted chat: Mitigation Measure BIO-20 is retained, but has been incorporated as part of BIO-18 (above). Mitigation measures for all non-listed special-status are now discussed under BIO-18.
BIO-21: Wildlife Crossings: The proposed viaduct and bridge crossings would provide access for wildlife to cross under the proposed alignment. Caltrans could construct additional wildlife under-crossings, if feasible, that would be suitable for use by deer and other wildlife species. If the construction of other wildlife crossings is feasible, the location, number and design of the under-crossings would be determined through consultation with CDFG.

Other Conditions:

The project will comply with terms and conditions listed in the USFWS Biological Opinion to minimize impacts. In addition, all appropriate BMPs will be implemented to minimize impacts to Northern spotted owl and other sensitive resources in the area.

Measures implemented for salmonids would also minimize impacts to northwestern pond turtle and foothill yellow-legged frog.

Monitoring and Reporting Program: The MRP is designed to collect data and provide reports that assess the biological, chemical, physical characteristics and conditions of resources within the jurisdiction of the Regional Water Board for both the bypass alignment and the associated mitigation lands. It is necessary to establish baseline conditions of surface waters to verify the establishment and enhancement of wetlands, riparian areas, and waters of the U.S. and State within the mitigation lands.

The primary objectives of the MRP include, but are not limited to:

A. Assessing the biological, chemical, and physical environmental characteristics within the bypass alignment, and within the mitigation lands;
B. Assessing the overall health and evaluating trends in receiving water quality;
C. Assessing the potential biological, chemical, physical impacts, both during and after construction, of the bypass alignment;

D. Determining and revising site specific performance standards and success criteria for the biological, chemical, and physical environmental characteristics within the bypass alignment, and within the mitigation lands;
E. Evaluating the effectiveness of BMPs, mitigation measures, and avoidance measures;
F. Evaluating activities that results in or may result in violations of MRP and the Water Quality Certification that may warrant additional BMPs or stop work orders;
G. Identifying sources of pollutants;
H. Assessing compliance with water quality objectives and TMDLs;
I. Measuring and assessing the reductions or prevention in pollutant loads; and
J. Verifying and successful repair within the bypass alignment and enhancement of the mitigation lands.

The MRP is designed to collect data and provide reports that assess the biological, chemical, physical characteristics and conditions of resources within the jurisdiction of the Regional Water Board for both the bypass alignment and the associated mitigation lands.