

California Environmental Quality Act Findings for Potentially Significant Impacts
Prepared for the
Policy for the Implementation of the Water Quality Objectives for Temperature

Introduction

The California Environmental Quality Act (CEQA) and the State CEQA Guidelines require that a public agency consider the environmental impacts of a project before a project is approved and make specific findings for identified significant environmental effects. (Pub. Resources Code, § 21081; Cal. Code Regs., tit. 14, § 15091.) This document includes written findings for each of the significant effects identified in *Staff Report Supporting the Policy for the Implementation of the Water Quality Objectives for Temperature and Action Plan to Address Temperature Impairment in the Mattole River Watershed, Action Plan to Address Temperature Impairment in the Navarro River Watershed, and Action Plan to Address Temperature Impairment in the Eel River Watershed (Staff Report)* which is part of the Supplemental Environmental Document (SED).

The proposed project is the adoption of a Temperature Policy and Action Plans, which comprehensively address controllable factors that adversely affect stream temperatures. Controllable factors include increased exposure to solar radiation due to loss of stream shade, physical stream channel alteration in response to elevated sediment loads, engineered stream channel alteration, and alteration of hydrology resulting from impoundments, water diversions, and landscape alteration. The intent of the Temperature Policy and Action Plans is to document in one place the tools and actions available and necessary to achieve temperature water quality standards so as to protect and restore the beneficial uses of water in the North Coast Region.¹ Many of actions described in the Temperature Policy and Action Plans are already in effect and being implemented, while others will be developed in the future. The Temperature Policy and Action Plans provide a common approach to attainment of the water quality objective for temperature, and to ensure that high quality waters are also protected.

Implementation actions to meet temperature objectives are described in section 9 of the Staff Report as a range of compliance measures in the following categories:

1. Measures to Preserve and Maintain Shade
2. Measures to Control Sedimentation
3. Measures to Address Tailwater and Surface Impoundments
4. Measures to Preserve Existing Cold Water Resources
5. Measures to Address Aquatic Ecosystem Restoration
6. Measures to Restore and Maintain Stream Flows the Support Beneficial Uses

Specific compliance measures are detailed in section 9.4, along with associated impacts and mitigation measures. Further discussion of potential environmental impacts and levels of significance from implementing compliance measures is presented in section 9.5.

¹ 40 CFR § 131: water quality standards include beneficial uses, the water quality objectives to protect those uses, and the anti-degradation policy (Resolution No. 68-18).

While the compliance measures themselves are forms of mitigation to be applied in the context of the activity or factor influencing water temperatures, CEQA requires review of environmental impacts that result from measures intended to improve the environment.

Many of the projects that might be undertaken by affected persons as a result of the Policy would be subject to a project-level CEQA review conducted by the Regional Water Board or by another lead agency, which would entail project-specific identification and mitigation of any significant environmental effects. In addition, other regulatory mechanisms can be expected to provide opportunities for minimizing and avoiding significant environmental effects. Regulatory requirements and mitigation measures are described in section 9 of the Staff Report and summarized in this document. These regulatory requirements and mitigation measures are likely to reduce many, but not all, of the potential impacts of the Policy to less than significant levels. In some cases it may not be possible to mitigate the impacts of the Policy to a less-than-significant level. In addition, some actions may not require discretionary approvals or an agency with regulatory authority may not take action. Finally, some impacts may not be identified or mitigated because it is impossible to predict who will take action in response to the Policy, or what action they will take.

Potentially significant environmental impacts resulting from adoption of the proposed Policy are summarized in the tables below. Pursuant to CEQA Guidelines section 15091, the Regional Water Board must make one or more of the following findings for each potentially significant impact identified:

- (a)(1):** Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final SED.
- (a)(2):** Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- (a)(3):** Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final SED.

Measures to Preserve and Maintain Shade

The Regional Water Board has identified potentially significant impacts, including potentially significant cumulative impacts, which are less than significant with mitigation incorporated to the resources presented in Table 1A. Table 1B presents the mitigation measures that when implemented would reduce impacts to less than significant levels. Table 1C presents the resources categories that are potentially significant and unavoidable as a result of the implementation of Policy compliance measures related to shade.

Table 1A. Potentially Significant Environmental Impacts Resulting from Compliance Measures to Preserve and Maintain Shade

Environmental Issue	Potentially Significant Impact*
Aesthetics	Decrease scenic views of waterbodies through the retention of vegetation. Ponds could create a new source of glare. Increased riparian vegetation and the preservation of large woody vegetation could lead to increased fuel load for wildfires which degraded scenic views.
Agriculture and Forest Resources	Potential conflict with or conversion of prime agricultural land or land subject to the Williamson Act from implementing grazing restrictions.
Biological resources	Risk of introducing invasive species thorough pasture, hay and rangeland planting and management. Risk of conflict between site-specific potential shade and requirements of sensitive flora or fauna.
Hydrology/water quality	Reduction in stream flows due to the increase in evapotranspiration from increased riparian tree retention. Temporary sediment discharges from construction and/or restoration activities.
Transportation/traffic	Increased tree retention may conflict with transportation agencies (public roads) site distance requirements and areas designated as clear recovery zones.

*Potentially significant impacts as listed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

Table 1B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures to Preserve and Maintain Shade

Environmental Issue	Mitigation Measure*
Aesthetics	AES-1: Proper siting, constructing berms or excess freeboard around the perimeter of a pond. AES-2: Planting vegetation such as native trees, grasses, and forbs. AES-3: Fuel management measures such as understory thinning, select harvest prescriptions and firebreaks.
Agriculture or Forest Resources	AGF-1: Managed riparian areas (timber, flash grazing, mixing riparian vegetation and crops)
Biological resources	BIO-1: Use certified weed-free grass and seed mix to prevent the introduction of invasive species. BIO-2: Consult with federal, state and local agencies regarding location of rare, threatened or endangered species.
Hydrology/water quality	HWQ-1: Plant native vegetation that has evolved with the natural environment. HWQ-2: Allow for the removal or thinning of upland vegetation that has high evapotranspiration rates and increases fire risks. HWQ-3: Implement standard BMPs to control erosion and sedimentation: <ul style="list-style-type: none"> • Install straw, seed, silt fence, straw waddle, straw bales, and drip protection. • Perform vehicle cleaning and maintenance, and site inspections. • Install and maintain erosion control measures (e.g. waterbars, rolling dips, mulch, rock rip-rap) to prevent discharge of excess sediment from soil disturbing activities. • Relocate roads away from unstable and landslide prone terrain. Drain roads away from unstable areas during construction, reconstruction of maintenance activities. • Locate new roads on stable ground to the maximum extent practicable. Minimize cutbank height and avoid placement of fill on steep slopes. Use off-channel water collection features for dust abatement purposes. Install adequate number/type of road drainage features to prevent concentration of road runoff. • Seek professional (e.g. Natural Resources Conservation Service, local resource conservation district) in developing land management plans and observational techniques to ensure optimal stocking rates for

Table 1B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures to Preserve and Maintain Shade

Environmental Issue	Mitigation Measure*
	rangelands. <ul style="list-style-type: none"> • Protect drainage channels from sediment contributions with vegetated buffers, wattles or similar erosion control devices. • Plant a cover crop on exposed soil to reduce the length of time in which soil is exposed to wind and water. • Cover exposed soil that will not receive immediate planting with straw or other suitable erosion control material. • Ensure proper design, siting, and operational timing to reduce alterations of natural hydrology and adverse effects on stream and groundwater quality and quality from structural BMPs.
Transportation/traffic	TRANS-1: Strategic planning and design to avoid and minimize the placement of facilities that have site distance conflicts. TRANS-2: Case-by-case evaluations may reveal that appropriate site distance may be attained through minor vegetation trimming that does not affect water temperatures. TRANS-3: Off-site compensatory mitigation such as riparian planting or restoration within a watershed boundary may be necessary to off-set the affects.

*Mitigation measures as discussed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

CEQA Findings § 15091 (a)(1) & (a)(2)

The Regional Water Board finds that changes or alterations can be required in, or should be incorporated into, projects affected by the Policy that would avoid or substantially lessen the significant environmental effect of shade measures to a less than significant level. The mitigation measures listed above are feasible and can be implemented by the Regional Water Board or another public agency with jurisdiction over the resource to offset the impact to less than significant levels.

Table 1C. Potentially Significant and Unavoidable Environmental Impacts Resulting from Compliance Measures to Preserve and Maintain Shade

Environmental Issue	Potentially Significant and Unavoidable Impact
Agriculture and Forest Resources	Potential conflict with or conversion of prime agricultural land or land subject to the Williamson Act from implementing grazing restrictions. While avoidance and minimization measures can be used to lessen impacts, there is no mitigation for loss of land; therefore, this is potentially significant and unavoidable impact.

CEQA Findings § 15091 (a)(3)

The Regional Water Board has identified potentially significant, agricultural and forest resource impacts from implementation of riparian buffers on agricultural and forested lands as a result of reasonably foreseeable methods of compliance with the Temperature Policy and Action Plans. These impacts may occur because lands that implement new riparian protection actions or compliance measures to mitigate elevated stream temperatures could remove some portion of land out of production. The Regional Water Board has identified that these riparian buffers are not prescriptive blanket measures to be implemented throughout the region and will be applied in a case by case manner. Avoidance and minimization measures identified in Table 1B can be used, such as managed riparian areas to lessen impacts. However, there is no mitigation for removing any land from production. This impact is therefore potentially significant and unavoidable.

Measures to Control Sedimentation

The Regional Water Board has identified potentially significant impacts, including potentially significant cumulative impacts, which are less than significant with mitigation incorporated to the resources presented below Table 2A. Table 2B presents the proposed mitigation measures that when implemented will reduce impacts to less than significant levels.

Table 2A. Potentially Significant Environmental Impacts Resulting from Compliance Measures to Control Sedimentation

Environmental Issue	Potentially Significant Impact*
Aesthetics	Decrease scenic views of waterbodies through the retention of vegetation. Ponds could create a new source of glare. Increased riparian vegetation and the preservation of large woody vegetation could lead to increased fuel load for wildfires which degraded scenic views.
Agriculture and Forest Resources	Potential conflict with or conversion of prime agricultural land or land subject to the Williamson Act from implementing grazing restrictions.
Air Quality	Short term construction-related emissions could include exhaust from construction equipment and fugitive dust from land clearing, earthmoving, movement of vehicles, and wind erosion of exposed soil during reservoir construction or removal, stream and/or riparian restoration. Potential odors from stagnant water in sediment basins or ponds.
Biological resources	Short term construction, stream dewatering or diversions, turbidity discharges from construction activities or in-stream dam removal, stream and/or riparian restoration. Several species of fauna (e.g., snakes, fish, salamanders, and birds) have been entrapped or tangled in erosion control products such as the plastic casing covering straw wattles, or from the monofilament fibers from silt fences that are either in place on active construction sites or from materials that were left in place and degraded. Stream restoration actions to reduce erosion, remove sediment, and improve habitat or riparian restoration actions to increase shade may conflicts with the requirements of certain flora or fauna.
Cultural	Short term construction disturbance from earth moving.
Geology/Soils	Construction activities or poorly designed facilities could results in short term and long term erosion, and could results in soils compaction reducing soil moisture and biological functions.
Hydrology/water quality	Excessive use of rip-rap or stream stabilization structures intended to beneficially affect flow could alter conditions downstream. Work within and adjacent to waters increases the risk of leaking equipment or hazardous material spills, short term turbidity increases and/or discharges of settleable solids. Decrease stream flows and/or aquifer storage from dust abatement. Alterations of natural hydrology and increases in stream temperatures by concentrating or redirecting road runoff. Increased risk of soil or groundwater contamination with concentrated minerals, salts, or persistent pesticides. Increased risk of erosion and sedimentation from the construction of trails, stream crossings, and riparian grazing. Increase risk of groundwater contamination of petroleum hydrocarbons and metals from the infiltration of storm water runoff.
Noise	Exposure to short term construction equipment, alternative water supply operations and maintenance.
Public Services	Increased riparian vegetation and the preservation of large woody vegetation could lead to increased fuel load for wildfires which increase demand on fire protection services.
Transportation/traffic	Increased tree retention may conflict with transportation agencies (public roads) site distance requirements and areas designated as clear recovery zones.
Utilities and Service	Construction and installation of sediment catch basins or irrigation

Table 2A. Potentially Significant Environmental Impacts Resulting from Compliance Measures to Control Sedimentation

Environmental Issue	Potentially Significant Impact*
Systems	delivery/recovery systems could cause an adverse impact to the environment.

*Potentially significant impacts as listed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

Table 2B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures to Control Sedimentation

Environmental Issue	Mitigation Measure*
Aesthetics	<p>AES-1: Proper siting, constructing berms or excess freeboard around the perimeter of a pond.</p> <p>AES-2: Planting vegetation such as native trees, grasses, and forbs.</p> <p>AES-3: Fuel management measures such as understory thinning, select harvest prescriptions and firebreaks.</p>
Agriculture or Forest Resources	<p>AGF-1: Managed riparian areas (timber, flash grazing, mixing riparian vegetation and crops)</p> <p>AGF-2: Implement structural measures for irrigation water management, irrigation pipelines, conservation cover, cover crop, pond sealing or lining, field borders, stream buffers, roof runoff capture structures, and culverts for water conveyance.</p> <p>AGF-3: Implement non-structural water irrigation water management (schedule and timing of use).</p> <p>AGF-4: Coordination between project proponents, Regional Water Board staff, Division of Water Rights, other local state and federal agencies.</p>
Air Quality	<p>AIR-1: Dust control during construction.</p> <p>AIR-2: Avoid days of poor air quality, monitor levels and cease work prior to exceeding standards, , schedule work to reduce the use of high emission vehicles</p> <p>AIR-3: Retrofit equipment, use low emissions vehicles when possible.</p> <p>AIR-4: Proper design of detention basins to eliminate standing water, covers, aeration, filters, barriers, and/or odor suppressing chemical additives.</p>
Biological resources	<p>BIO-2: Consult with federal, state and local agencies regarding location of rare, threatened or endangered species.</p> <p>BIO-3: Select appropriate or alternate structural BMPs such as bio-degradable, synthetic free or earthen material BMPs.</p> <p>BIO-4: Implement non-structural BMPs such as scheduling, proper design and the removal of temporary BMPs for erosion and sediment controls after stabilization and or project completion.</p> <p>BIO-5: Developing species relocation plans or interpreting natural site vegetative conditions to include sensitive flora.</p> <p>BIO-6: Develop compensatory mitigation projects for aquatic ecosystem creation, restoration or enhancement.</p>
Cultural	<p>CUL-1: Consult with Tribes, historical societies, federal, state and local agencies regarding location of cultural resources prior to use of heavy equipment in areas with known or suspected cultural resources.</p> <p>CUL-2: Projects subject to the jurisdiction of the Water Boards will be required to comply with Public Resource Code section 21159. This is expected to ensure the implementation of necessary site specific actions to avoid, minimize and mitigate any impacts to historical, archaeological, and paleontological resources or site, or unique geologic features. All future actions must comply with the CEQA process and requirements for tribal consultation provided by Senate Bill 18 (SB 18) (State 2004, Ch 905) and Government Code section 65252.</p>
Geology/Soils	<p>GS-1: Structural erosion and sediment control compliance measures:</p> <ul style="list-style-type: none"> • Soil conservation cover straw cover, bonded fiber matrix, grass seeding, temporary plastic cover, residue tillage, heavy use area protection, strip

Table 2B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures to Control Sedimentation

Environmental Issue	Mitigation Measure*
	<p>cropping.</p> <ul style="list-style-type: none"> • Silt fence, straw waddle, straw bale, gravel check dam, gravel bag berm, stock pile cover. • Sediment control basin, pond, embankment pond. • Riparian buffer/filter strip, grassed waterway/bioswale. • Active sediment treatment system. • Culverts, stream crossings, water diversions, bridges. • Bench contouring, contour farming, terrace, vegetated windbreak/hedgerow planting. • Exclusionary fences. • Micro-irrigation systems. • Lined irrigation channels. • Rock slope protection, lined waterway/outlet, road/trail access control, underground outlet, vertical drain. • Road/trail landing closures/treatment, forest trails and landings. • Slide stabilization, soil stabilization or fill and cut slopes, removal of unstable fill. • Low impact development (LID) to maintain the predevelopment hydrograph to sustain site runoff volume and velocity to attain sediment and water discharge equilibrium within streams. • In-stream bioengineering. • In-stream and riparian planting. • Stream bank/shoreline protection. • Road surface materials, paving, chip sealing, rocking, dust abatement. Establish native or introduced forage species (grasses, forbs, legumes, shrubs, and trees) through pasture, field, orchard and rangeland planting. • Exclude animals, people, or vehicles from an area to protect, maintain, or improve the quantity and quality of riparian vegetation. • Construct animal trails to provide movement of livestock through difficult or ecologically sensitive terrain. • Stabilize stream crossings to provide controlled access across a stream for livestock and farm machinery. <p>GS-2: Non-structural erosion and sediment control compliance measures:</p> <ul style="list-style-type: none"> • Dry weather construction or harvest scheduling. • Inventory excessive sediment delivery sites, prioritize sites by threat to water quality, design and plan remediation, track and report remediation implementation success. • Road drainage design, disconnect road drainage from watercourses (drain to hill slopes), install drainage structures at intervals to prevent erosion of the inboard ditch or gull formation at the hill slope outfall, outslope roads. • Timing and intensity of road use. • Proximity of roads to watercourses. • Proximity of roads to unstable or landslide prone areas. • Develop a grazing management plan for upland and riparian management. • Calculate the number of livestock that can be maintained while maintaining adequate vegetative cover, stream corridor integrity, and water resources.
Hydrology/water quality	<p>HWQ-1: Plant native vegetation that has evolved with the natural environment.</p> <p>HWQ-2: Allow for the removal or thinning of upland vegetation that has high evapotranspiration rates and increases fire risks.</p> <p>HWQ-3: Implement standard BMPs to control erosion and sediment:</p> <ul style="list-style-type: none"> • See Table 1B for specific measures

Table 2B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures to Control Sedimentation

Environmental Issue	Mitigation Measure*
Noise	NO-1: Timing activities during hours of peak daily noise
Transportation/traffic	TRANS-4: Strategic planning and design, CEQA process and interagency coordination through existing programs, to avoid and minimize the placement of facilities that result in soil exposure.

*Mitigation measures as discussed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

CEQA Findings § 15091 (a)(1) & (a)(2)

The Regional Water Board finds that changes or alterations can be required in, or should be incorporated into, projects affected by the Policy that would avoid or substantially lessen the significant environmental effect resulting from sediment control measures to a less than significant level. The mitigation measures listed above are feasible and can be implemented by the Regional Water Board or another public agency with jurisdiction over the resource to offset the impact to less than significant levels.

Measures to Address Tailwater and Surface Water Impoundments

The Regional Water Board has identified potentially significant impacts, including potentially significant cumulative impacts, resulting from tailwater and impoundment measures which are less than significant with mitigation incorporated to the resources presented below Table 3A. Table 3B presents the proposed mitigation measures to reduce impacts to less than significant levels. Table 3C presents the resources categories that are potentially significant and unavoidable as a result of the implementation of Policy compliance measures.

Table 3A. Potentially Significant Environmental Impacts Resulting from Compliance Measures to Address Tailwater and Surface Water Impoundments

Environmental Issue	Potentially Significant Impact*
Aesthetics	Potential glare from ponds or unsightly water facilities.
Air Quality	Short term construction-related emissions could include exhaust from construction equipment and fugitive dust from land clearing, earthmoving, movement of vehicles, and wind erosion of exposed soil during pond or embankment construction.
Biological resources	Short term construction, stream dewatering or diversions, turbidity discharges from construction activities or in-stream dam removal. Loss of wetlands habitat from repair of leaky conveyance systems or alteration of irrigation practices. Switching from on-stream storage facilities to springs, seeps or groundwater as potential water sources could reduce the input of cold water and could result in impacts to areas of thermal refugia. Loss of critical habitat from sediment discharges.
Cultural	Short term construction disturbance from earth moving or reservoir drawdowns. Construction or removal of recreational, water supply or hydroelectric facilities could result in long term adverse cultural or historical impacts.
Geology/Soils	Poorly designed or operated irrigation facilities could result in short term and long term erosion. Water facility construction could result in soils compaction reducing soil moisture and biological functions.
Hydrology/water quality	Increased risk of soil or groundwater contamination with concentrated minerals, salts, nutrients or persistent pesticides from the infiltration of irrigation water. Increased risk of soil erosion from soil disturbance. Work within and adjacent to

Table 3A. Potentially Significant Environmental Impacts Resulting from Compliance Measures to Address Tailwater and Surface Water Impoundments

Environmental Issue	Potentially Significant Impact*
	waters increases the risk of leaking equipment or hazardous material spills, short term turbidity increases and/or discharges of settleable solids. The removal of dams could result in a short term violation of water quality standards as sediments and organic rich waters flow downstream. The removal of on-stream and off-stream storage facilities, dams, and construction of minimum bypass flow and fish passage structures could result in changes to hydrology in streams as well as short term violation of water quality standards. Switching from on-stream storage facilities to springs, seeps or groundwater as potential water sources could reduce the input of cold water and could results in impacts to areas of thermal refugia.
Noise	Exposure to short term construction equipment, alternative water supply operations and maintenance.
Transportation/traffic	Short term traffic increases associated construction projects and dam removals.
Utilities and Service Systems	Dam removal could lead to short term interruptions in utilities such as gas, water, electricity, phone, etc. Dam removal could lead to a temporary decrease in available water supply.

*Potentially significant impacts as listed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

Table 3B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures to Address Tailwater and Surface Water Impoundments

Environmental Issue	Mitigation Measure*
Aesthetics	AES-1: Proper siting, constructing berms or excess freeboard around the perimeter of a pond, or planting vegetation along the perimeter of a pond. AES-2: Planting vegetation such as native trees, grasses, and forbs.
Air Quality	AIR-1: Dust control during construction. AIR-2: Avoid days or poor air quality, monitor levels and cease work prior to exceeding standards, , schedule work to reduce the use of high emission vehicles AIR-3: Retrofit equipment, use low emissions vehicles when possible. AIR-4: Proper design of detention basins to eliminate standing water, covers, aeration, filters, barriers, and/or odor suppressing chemical additives.
Biological resources	BIO-2: Consult with federal, state and local agencies regarding location of rare, threatened or endangered species. BIO-3: Select appropriate or alternate structural BMPs such as bio-degradable, synthetic free or earthen material BMPs. BIO-4: Implement non-structural BMPs such as scheduling, proper design and the removal of temporary BMPs for erosion and sediment controls after stabilization and or project completion. BIO-5: Developing species relocation plans or interpreting natural site vegetative conditions to include sensitive flora. BIO-6: Develop compensatory mitigation projects for aquatic ecosystem creation, restoration or enhancement.
Cultural	CUL-1: Consult with Tribes, historical societies, federal, state and local agencies regarding location of cultural resources prior to use of heavy equipment in areas with known or suspected cultural resources. CUL-2: Projects subject to the jurisdiction of the Water Boards will be required to comply with Public Resource Code section 21159. This is expected to ensure the implementation of necessary site specific actions to avoid, minimize and mitigate any impacts to historical, archaeological, and paleontological resources or site, or unique geologic features. All future actions must comply with the CEQA process and requirements for tribal consultation provided by Senate Bill 18 (SB 18) (State

Table 3B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures to Address Tailwater and Surface Water Impoundments

Environmental Issue	Mitigation Measure*
	2004, Ch 905) and Government Code section 65252.
Geology/Soils	GS-1: Structural erosion and sediment control compliance measures: <ul style="list-style-type: none"> • See Table 2B for specific measures. GS-2: Non-structural erosion and sediment control compliance measures: <ul style="list-style-type: none"> • See Table 2B for specific measures
Greenhouse Gas Emissions	HWQ-1: Plant native vegetation that has evolved with the natural environment. HWQ-3: Implement standard BMPs to control erosion and sedimentation
Hydrology/water quality	HWQ-1: Plant native vegetation that has evolved with the natural environment. HWQ-2: Allow for the removal or thinning of upland vegetation that has high evapotranspiration rates and increases fire risks. HWQ-3: Implement standard BMPs to control erosion and sediment: <ul style="list-style-type: none"> • See Table 1B for specific measures HWQ-4: Use precision (site specific) farming techniques; HWQ-5: Monitor chemical condition of soil, water, and plant residuals carefully prior to applying fertilizers, pesticides, or water, including tailwater. Monitor ground water to ensure no salt (or other constituents) accumulate in ground water. HWQ-6: Leach soils within the root zone as necessary to prevent salt build up in that portion of the soil profile. HWQ-7: Avoid introduction of storm water into tailwater system to prevent impacts to storm water. HWQ-8: Maintain filter strips between fields and surface water to prevent discharge of tailwater directly into surface waters. HWQ-9: Install surface drainage field ditch to collect excess water. HWQ-10: Seek professional (e.g. Natural Resources Conservation Service, local resource conservation district, consultants, etc.) in developing land management plans and observational techniques to ensure efficient and effective water use. HWQ-11: Ensure proper design, siting, and operational timing to reduce alterations of natural hydrology and adverse effects on stream and groundwater quality and quality from structural compliance measures. HWQ-12: Prevent the concentration of drainage such that toxic levels of constituents are discharge to waters.
Noise	NO-1: Timing activities during hours of peak daily noise.
Transportation/traffic	TRANS-4: Strategic planning and design to avoid and minimize construction or demolition activities (e.g., traffic control plan).
Utilities and Service Systems	USS-1: Develop management plans for water conservation and water efficiency projects.

*Mitigation measures as discussed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

CEQA Findings § 15091 (a)(1) & (a)(2)

The Regional Water Board finds that changes or alterations can be required in, or should be incorporated into, projects affected by the Policy that would avoid or substantially lessen the significant environmental effect to a less than significant level. The mitigation measures listed above are feasible and can be implemented by the Regional Water Board or another public agency with jurisdiction over the resource to offset the impact to less than significant levels.

Table 3C. Potentially Significant and Unavoidable Environmental Impacts Resulting from Compliance Measures to Address Tailwater and Surface Water Impoundments

Environmental Issue	Potentially Significant and Unavoidable Impact
Cultural resources	Short term construction disturbance from earth moving or reservoir drawdowns. Construction or removal of recreational, water supply or hydroelectric facilities could result in long term adverse cultural or historical impacts.
Greenhouse Gas Emissions	In the case of dam removal, emissions from replacement power sources will likely cause a significant and unavoidable impact from GHG emissions until PacifiCorp can add new sources or renewable power to compensate for the loss of the hydroelectric facilities
Hydrology/Water Quality	Increased risk of soil or groundwater contamination with concentrated minerals, salts, nutrients or persistent pesticides from the infiltration of irrigation water. Increased risk of soil erosion from soil disturbance. Work within and adjacent to waters increases the risk of leaking equipment or hazardous material spills, short term turbidity increases and/or discharges of settleable solids. The removal of dams could result in a short term violation of water quality standards as sediments and organic rich waters flow downstream. The removal of on-stream and off-stream storage facilities, dams, and construction of minimum bypass flow and fish passage structures could result in changes to hydrology in streams as well as short term violation of water quality standards. Switching from on-stream storage facilities to springs, seeps or groundwater as potential water sources could reduce the input of cold water and could results in impacts to areas of thermal refugia.
Noise	Exposure to short term construction equipment, alternative water supply operations and maintenance.
Recreation	In the event that the Klamath River reservoirs are decommissioned, flatwater recreation users will have to use the other flatwater facilities in the region. In addition, impact to white-water recreation will be adversely affected in specific reaches of the Klamath River due to changes in flow stages at certain times of year and have been determined to be significant and unavoidable.
Utilities and Service Systems	Potential impacts associated with water supply and utilities related to dam decommissioning.

CEQA Findings § 15091 (a)(3)

The Regional Water Board has identified potentially significant, cultural resource impacts from implementation of tailwater and impoundment measures. These impacts may occur in cases where the installation of structural compliance measures may involve large scale excavation activities or the construction or demolition of a large scale infrastructure. The Regional Water Board has identified that cultural resource investigations should be conducted before any substantial disturbance. While such avoidance, minimization and mitigation measures can be used if resources are identified, the Regional Water Board cannot ensure at this time that measures will be implemented by the appropriate lead agency. Also, even with such measures incorporated and enforced, impacts may still be potentially significant and unavoidable. This impact is therefore potentially significant and unavoidable.

The Regional Water Board has identified potentially significant, GHG emission impacts from implementation of tailwater and impoundment measures. These impacts may occur in cases where the installation of structural compliance measures may involve large scale excavation activities or the construction or demolition of a large scale infrastructure. The Regional Water Board has identified that planting vegetation and controlling

anthropogenic sources of sediment can help sequester carbon. While such minimization and mitigation measures can be used if resources are identified, the Regional Water Board cannot ensure at this time that measures will be implemented by the appropriate lead agency. The Regional Water Board has identified that in most cases the Temperature Policy and Action Plans will positively address GHG emissions. However, in the case of dam removal, emissions from replacement power sources will likely cause a significant and unavoidable impact from GHG emissions until new sources or renewable power to compensate for the loss of the hydroelectric facilities. This impact is therefore potentially significant and unavoidable.

The Regional Water Board has identified potentially significant, water quality impacts from tailwater and impoundment measures in cases where the installation of structural compliance measures may involve large scale excavation activities or the construction or demolition of a large scale infrastructure. Dam decommissioning will likely result in temporary stream channel alterations from erosion and siltation, and result in increased turbidity, suspended sediment load and reduction of dissolved oxygen, which will likely exceed Basin Plan water quality objectives. Short term water quality exceedances may be acceptable in cases where long term benefits to beneficial uses outweigh short term impacts, based on detailed, site-specific information and findings. However dam removal may result in exceedances of water quality objectives and likely cause significant and unavoidable impacts. Additionally, water quality impacts from pumping groundwater instead of diverting surface water could potentially deplete groundwater resources, which could potentially result in a reduction in surface water flows, particularly summer flows, which could affect surface water flows, water temperatures and riparian areas. Avoidance, minimization and mitigation measures identified in Table 3B can be used to reduce impact significance; however, in some cases these measures will not likely reduce impact levels to less than significant. These impacts are therefore potentially significant and unavoidable.

The Regional Water Board has identified potentially significant, noise impacts from implementation of tailwater and impoundment measures. Implementation of structural compliance measures may result in localized increased noise levels that can be minimized or mitigated through timing, and are not predicted to be a significant impact. These impacts may occur in cases where the installation of structural compliance measures may involve large scale excavation activities or the construction or demolition of a large scale infrastructure. Large scale dam demolition and their associated facilities would result in significant and unavoidable impacts by exceeding local noise ordinances, exposing people to groundborne vibrations and increasing the ambient noise levels for outdoor receptors. These impacts are therefore potentially significant and unavoidable.

The Regional Water Board has identified potentially significant, recreation impacts from implementation of dam removal as a result of reasonably foreseeable methods of compliance with the Temperature Policy and Action Plans. In the event that the Klamath River reservoirs are decommissioned, flatwater recreation users will have to use the other flatwater facilities in the region. In addition, impact to white-water recreation will be adversely affected in specific reaches of the Klamath River due to changes in flow stages at certain times of year and have been determined to be significant and unavoidable. It has been determined that dam removal would have long-term beneficial effects on free-flowing

condition, water quality, scenic, wildlife, fishery, and recreation river values associated with the upstream and downstream reaches designated as Wild and Scenic. However, impacts to recreation have are potentially significant and unavoidable.

The Regional Water Board has identified potentially significant, utilities and service system impacts from implementation of dam removal as a result of reasonably foreseeable methods of compliance with the Temperature Policy and Action Plans. Several compliance measures, including but not limited to, sediment control basins, LID features, irrigation systems and tailwater management systems to reduce sediment transport to streams have the potential to cause an impact on utilities. Large scale dam demolition and their associated facilities would result in significant and unavoidable impacts by requiring the relocation of utility services or water supply facilities. Based on the wide range of potential impacts associated with water treatment and supply, and enforcement of mitigation a measure is uncertain, adverse impacts to the environment are potentially significant and unavoidable.

Measures Associated with Preserving Cold Water Resources

The Regional Water Board has identified potentially significant impacts, including potentially significant cumulative impacts, associated with measures to preserve cold water resources, which are less than significant with mitigation incorporated to the resources presented below Table 4A. Table 4B presents the proposed mitigation measures to reduce impacts to less than significant levels. Table 4C presents the resources categories that are potentially significant and unavoidable as a result of the implementation of Policy compliance measures.

Table 4A. Potentially Significant Environmental Impacts Resulting from Compliance Measures Associated with Preserving Cold Water Resources

Environmental Issue	Potentially Significant Impact*
Aesthetics	Construction activities could have short term aesthetic impacts while sitting for water facility locations could degrade or impede scenic views in the long term.
Agricultural and Forest Resources	Potential conflict with or conversion of prime agricultural land or land subject to the Williamson Act from implementing riparian buffers.
Air Quality	Construction could increase short term exhaust and particulate matter. Alternative water supplies or increased pumping could result in long term increase in greenhouse gases.
Biological resources	Construction or removal of in-stream facilities could result in short term disturbances of wetlands, special status species and sensitive natural areas. Reduction in surface flows through groundwater extraction or increased reliance on riparian rights could degrade riparian habitat. Switching from on-stream storage facilities to springs, seeps or groundwater as potential water sources could reduce the input of cold water and could results in impacts to areas of thermal refugia.
Cultural	Short term construction disturbance from earth moving or reservoir drawdowns. Construction or removal of recreational, water supply or hydroelectric facilities could result in long term adverse cultural or historical impacts.
Geology/Soils	Poorly designed or operated irrigation facilities could results in short term and long term erosion. Water facility construction could results in soils compaction reducing soil moisture and biological functions.
Hazards and Hazardous	Construction activities could result in the increase in hazardous materials used in

Table 4A. Potentially Significant Environmental Impacts Resulting from Compliance Measures Associated with Preserving Cold Water Resources

Environmental Issue	Potentially Significant Impact*
Materials	construction, and in the operation and maintenance of new or expanded facilities.
Hydrology/water quality	Excessive use of rip-rap or stream stabilization structures intended to beneficially affect flow could alter conditions downstream. Work within and adjacent to waters increases the risk of leaking equipment or hazardous material spills, short term turbidity increases and/or discharges of settleable solids. Decrease stream flows and/or aquifer storage from dust abatement. Alterations of natural hydrology and increases in stream temperatures by concentrating or redirecting road runoff or diverting stream during construction. Increased risk of erosion and sedimentation from the construction of stream crossings, and riparian fencing.
Land Use/Planning	Reliance on alternative water sources, water conservation efforts, and preservation of areas of known thermal refugia could have a conflict with local plans or ordinances that call for an increase through various water supply and/or development projects. Municipal, domestic, agricultural and industrial water supply could be impacted by certain restrictions on the extraction of water from riparian areas or areas of known thermal refugia. Construction or expansion of off-stream water storage facilities could conflict with local plans or ordinances.
Transportation/traffic	Short term traffic increases associated construction projects and dam removals.
Utilities and Service Systems	Dam removal could lead to short term interruptions in utilities such as gas, water, electricity, phone, etc. Dam removal could lead to a temporary decrease in available water supply.

*Potentially significant impacts as listed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

Table 4B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures Associated with Preserving Cold Water Resources

Environmental Issue	Mitigation Measure*
Aesthetics	AES-1: Proper siting, constructing berms or excess freeboard around the perimeter of a pond, or planting vegetation along the perimeter of a pond. AES-2: Planting vegetation such as native trees, grasses, and forbs.
Agriculture and Forest Resources	AGF-1: Managed riparian areas (timber, flash grazing, mixing riparian vegetation and crops) AGF-2: Implement structural measures for irrigation water management, irrigation pipelines, conservation cover, cover crop, pond sealing or lining, field borders, stream buffers, roof runoff capture structures, and culverts for water conveyance. AGF-3: Implement non-structural water irrigation water management (schedule and timing of use). AGF-4: Coordination between project proponents, Regional Water Board staff, Division of Water Rights, other local state and federal agencies.
Air Quality	AIR-1: Dust control during construction. AIR-2: Avoid days or poor air quality, monitor levels and cease work prior to exceeding standards, , schedule work to reduce the use of high emission vehicles AIR-3: Retrofit equipment, use low emissions vehicles when possible. AIR-4: Proper design of detention basins to eliminate standing water, covers, aeration, filters, barriers, and/or odor suppressing chemical additives. HWQ-1: Plant native vegetation that has evolved with the natural environment. HWQ-3: Implement standard BMPs to control erosion and sedimentation
Biological resources	BIO-2: Consult with federal, state and local agencies regarding location of rare, threatened or endangered species. BIO-4: Implement non-structural BMPs such as scheduling, proper design and the removal of temporary BMPs for erosion and sediment controls after stabilization

Table 4B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures Associated with Preserving Cold Water Resources

Environmental Issue	Mitigation Measure*
	and or project completion. BIO-5: Developing species relocation plans or interpreting natural site vegetative conditions to include sensitive flora. BIO-7: Perform critical habitat/species identification surveys, water diversion fish screens, velocity dissipaters, and water drafting protocols.
Cultural resources	CUL-1: Consult with Tribes, historical societies, federal, state and local agencies regarding location of cultural resources prior to use of heavy equipment in areas with known or suspected cultural resources. CUL-2: Projects subject to the jurisdiction of the Water Boards will be required to comply with Public Resource Code section 21159. This is expected to ensure the implementation of necessary site specific actions to avoid, minimize and mitigate any impacts to historical, archaeological, and paleontological resources or site, or unique geologic features. All future actions must comply with the CEQA process and requirements for tribal consultation provided by Senate Bill 18 (SB 18) (State 2004, Ch 905) and Government Code section 65252.
Geology/Soils	GS-1: Structural erosion and sediment control compliance measures: <ul style="list-style-type: none"> • See Table 2B for specific measures. GS-2: Non-structural erosion and sediment control compliance measures: <ul style="list-style-type: none"> • See Table 2B for specific measures
Hazards and Hazardous Materials	HHM-1: Develop pollution prevention plans incorporating structural and non-structural waste handling, storage and management BMPs including, but not limited to water tight containers, spill kits, and appropriate material labels.
Hydrology/water quality	HWQ-1: Plant native vegetation that has evolved with the natural environment. HWQ-3: Implement standard BMPs to control erosion and sediment: <ul style="list-style-type: none"> • See Table 1B for specific measures HWQ-8: Maintain filter strips between fields and surface water to prevent discharge of tailwater directly into surface waters. HWQ-9: Install surface drainage field ditch to collect excess water. HWQ-10: Seek professional (e.g. Natural Resources Conservation Service, local resource conservation district, consultants, etc.) in developing land management plans and observational techniques to ensure efficient and effective water use. HWQ-11: Ensure proper design, siting, and operational timing to reduce alterations of natural hydrology and adverse effects on stream and groundwater quality and quality from structural compliance measures. HHM-1: Develop pollution prevention plans incorporating structural and non-structural waste handling, storage and management BMPs including, but not limited to water tight containers, spill kits, and appropriate material labels.
Land Use/Planning	LUP-1: Consult with local, state and federal agencies for guidance and recommendations.
Transportation/traffic	TRANS-4: Strategic planning and design to avoid and minimize construction or demolition activities (e.g., traffic control plan).
Utilities and Service Systems	USS-1: Develop management plans for water conservation and water efficiency projects.

*Mitigation measures as discussed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

CEQA Findings § 15091 (a)(1) & (a)(2)

The Regional Water Board finds that changes or alterations can be required in, or should be incorporated into, projects affected by the Policy that would avoid or substantially lessen the significant environmental effect associated with cold water refugia measures to a less than significant level. The mitigation measures listed above are feasible and can be

implemented by the Regional Water Board or another public agency with jurisdiction over the resource to offset the impact to less than significant levels.

Table 4C. Potentially Significant and Unavoidable Environmental Impacts Resulting from Compliance Measures Associated with Preserving Cold Water Resources

Environmental Issue	Potentially Significant and Unavoidable Impact
Hydrology/Water Quality	Switching from on-stream storage facilities to springs, seeps or groundwater as potential water sources could reduce the input of cold water and could results in impacts to areas of thermal refugia.

CEQA Findings § 15091 (a)(3)

The Regional Water Board has identified potentially significant, water quality impacts from pumping groundwater instead of diverting surface water could potentially deplete groundwater resources, which could potentially result in a reduction in surface water flows, particularly summer flows, which could affect surface water flows, water temperatures and riparian areas. While avoidance, minimization and mitigation measures such as water management projects (conservation and efficiency) will help lessen groundwater depletion, impacts may still be potentially significant and unavoidable. These impacts are therefore potentially significant and unavoidable.

Measures Associated with Aquatic Ecosystem Restoration

The Regional Water Board has identified potentially significant impacts from aquatic ecosystem restoration measures, including potentially significant cumulative impacts, which are less than significant with mitigation incorporated to the resources presented below Table 5A. Table 5B presents the proposed mitigation measures to reduce impacts to less than significant levels.

Table 5A. Potentially Significant Environmental Impacts Resulting from Compliance Measures Associated with Aquatic Ecosystem Restoration

Environmental Issue	Potentially Significant Impact*
Aesthetics	Decrease scenic views of waterbodies through the retention of vegetation.
Agricultural and Forest Resources	Potential conflict with or conversion of prime agricultural land or land subject to the Williamson Act from implementing riparian buffers.
Air Quality	Construction could increase short term exhaust and particulate matter. Alternative water supplies or increased pumping could result in long term increase in greenhouse gases.
Biological resources	Construction or removal of in-stream facilities could result in short term disturbances of wetlands, special status species and sensitive natural areas. Reduction in surface flows through groundwater extraction or increased reliance on riparian rights could degrade riparian habitat. Switching from on-stream storage facilities to springs, seeps or groundwater as potential water sources could reduce the input of cold water and could results in impacts to areas of thermal refugia.
Cultural resources	Short term construction disturbance from earth moving or reservoir drawdowns. Construction or removal of recreational, water supply or hydroelectric facilities could result in long term adverse cultural or historical impacts.
Hydrology/water quality	Reduction in stream flows due to the increase in evapotranspiration from increased riparian tree retention. Temporary sediment discharges from construction and/or restoration activities. Excessive use of rip-rap or stream

Table 5A. Potentially Significant Environmental Impacts Resulting from Compliance Measures Associated with Aquatic Ecosystem Restoration

Environmental Issue	Potentially Significant Impact*
	stabilization structures intended to beneficially affect flow could alter conditions downstream. Work within and adjacent to waters increases the risk of leaking equipment or hazardous material spills, short term turbidity increases and/or discharges of settleable solids. Decrease stream flows and/or aquifer storage from dust abatement.
Noise	Exposure to short term construction equipment, alternative water supply operations and maintenance.
Transportation/traffic	Short term traffic increases associated construction projects and dam removals.

*Potentially significant impacts as listed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

Table 5B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures Associated with Aquatic Ecosystem Restoration

Environmental Issue	Mitigation Measure*
Aesthetics	AES-1: Proper siting, constructing berms or excess freeboard around the perimeter of a pond, or planting vegetation along the perimeter of a pond. AES-2: Planting vegetation such as native trees, grasses, and forbs.
Agriculture and Forest Resources	AGF-1: Managed riparian areas (timber, flash grazing, mixing riparian vegetation and crops) AGF-4: Coordination between project proponents, Regional Water Board staff, Division of Water Rights, other local state and federal agencies.
Air Quality	AIR-1: Dust control during construction. AIR-2: Avoid days of poor air quality, monitor levels and cease work prior to exceeding standards, , schedule work to reduce the use of high emission vehicles AIR-3: Retrofit equipment, use low emissions vehicles when possible. AIR-4: Proper design of detention basins to eliminate standing water, covers, aeration, filters, barriers, and/or odor suppressing chemical additives.
Biological resources	BIO-1: Use certified weed-free grass and seed mix to prevent the introduction of invasive species. BIO-2: Consult with federal, state and local agencies regarding location of rare, threatened or endangered species. BIO-3: Select appropriate or alternate structural BMPs such as bio-degradable, synthetic free or earthen material BMPs. BIO-4: Implement non-structural BMPs such as scheduling, proper design and the removal of temporary BMPs for erosion and sediment controls after stabilization and or project completion. BIO-5: Developing species relocation plans or interpreting natural site vegetative conditions to include sensitive flora. BIO-7: Perform critical habitat/species identification surveys, water diversion fish screens, velocity dissipaters, and water drafting protocols.
Cultural	CUL-1: Consult with Tribes, historical societies, federal, state and local agencies regarding location of cultural resources prior to use of heavy equipment in areas with known or suspected cultural resources. CUL-2: Projects subject to the jurisdiction of the Water Boards will be required to comply with Public Resource Code section 21159. This is expected to ensure the implementation of necessary site specific actions to avoid, minimize and mitigate any impacts to historical, archaeological, and paleontological resources or site, or unique geologic features. All future actions must comply with the CEQA process and requirements for tribal consultation provided by Senate Bill 18 (SB 18) (State 2004, Ch 905) and Government Code section 65252.
Hydrology/water quality	HWQ-1: Plant native vegetation that has evolved with the natural environment. HWQ-3: Implement standard BMPs to control erosion and sediment:

Table 5B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures Associated with Aquatic Ecosystem Restoration

Environmental Issue	Mitigation Measure*
	<ul style="list-style-type: none"> • See Table 1B for specific measures HWQ-8: Maintain filter strips between fields and surface water to prevent discharge of tailwater directly into surface waters. HWQ-9: Install surface drainage field ditch to collect excess water. HWQ-10: Seek professional (e.g. Natural Resources Conservation Service, local resource conservation district, consultants, etc.) in developing land management plans and observational techniques to ensure efficient and effective water use. HWQ-11: Ensure proper design, siting, and operational timing to reduce alterations of natural hydrology and adverse effects on stream and groundwater quality and quality from structural compliance measures. HMM-1: Develop pollution prevention plans incorporating structural and non-structural waste handling, storage and management BMPs including, but not limited to water tight containers, spill kits, and appropriate material labels.
Noise	NO-1: Timing activities during hours of peak daily noise.
Transportation/traffic	TRANS-4: Strategic planning and design to avoid and minimize construction or demolition activities (e.g., traffic control plan).

*Mitigation measures as discussed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

CEQA Findings § 15091 (a)(1) & (a)(2)

The Regional Water Board finds that changes or alterations can be required in, or should be incorporated into, aquatic ecosystem restoration measures that would avoid or substantially lessen the significant environmental effect to a less than significant level. The mitigation measures listed above are feasible and can be implemented by the Regional Water Board or another public agency with jurisdiction over the resource to offset the impact to less than significant levels.

Measures to Restore and Maintain Stream Flows that Support Beneficial Uses

The Regional Water Board has identified potentially significant impacts from flow measures, including potentially significant cumulative impacts, which are less than significant with mitigation incorporated to the resources presented below Table 6A. Table 6B presents the proposed mitigation measures to reduce impacts to less than significant levels. Table 6C presents the resources categories that are potentially significant and unavoidable as a result of the implementation of Policy compliance measures.

Table 6A. Potentially Significant Environmental Impacts Resulting from Compliance Measures to Restore and Maintain Stream Flows that Support Beneficial Uses

Environmental Issue	Potentially Significant Impact*
Aesthetics	Construction activities could have short term aesthetic impacts while sitting for water facility locations could degrade or impede scenic views in the long term.
Agriculture and Forest Resources	Switching from surface water diversions to groundwater pumping could lower water table, reduce soil moisture, contribute to land subsidence and reduce aquifer storage capability. Regulation on water use could lead to the conversion of agricultural lands.
Air Quality	Construction could increase short term exhaust and particulate matter. Alternative water supplies or increased pumping could result in long term increase in greenhouse gases.
Biological resources	Construction or removal of in-stream facilities could result in short term

Table 6A. Potentially Significant Environmental Impacts Resulting from Compliance Measures to Restore and Maintain Stream Flows that Support Beneficial Uses

Environmental Issue	Potentially Significant Impact*
	disturbances of wetlands, special status species and sensitive natural areas. Reduction in surface flows through groundwater extraction or increased reliance on riparian rights could degrade riparian habitat. Switching from on-stream storage facilities to springs, seeps or groundwater as potential water sources could reduce the input of cold water and could results in impacts to areas of thermal refugia
Cultural	Short term construction disturbance from earth moving or reservoir drawdowns, stream and/or riparian restoration could cause adverse impacts to cultural or historical resources. Construction or removal of recreational, water supply or hydroelectric facilities could result in long term adverse cultural or historical impacts.
Geology/Soils	Construction activities or poorly designed facilities could results in short term and long term erosion, and could results in soils compaction reducing soil moisture and biological functions.
Hazards and Hazardous Materials	The increased use of groundwater and construction of water supply facilities could result in the increase in hazardous materials used in construction, and in the operation and maintenance of new or expanded facilities.
Hydrology/water quality	Short term construction and poorly designed facilities could lead to erosion, sedimentation or hazardous materials discharges. The increase in groundwater extraction could reduce surface water flows and result in increased pollutant concentration due to less dilution. The removal of dams could result in a short term violation of water quality standards as sediments and organic rich waters flow downstream. The removal of on-stream and off-stream storage facilities, dams, and construction of minimum bypass flow and fish passage structures could result in changes to hydrology in streams as well as short term violation of water quality standards. Switching from on-stream storage facilities to springs, seeps or groundwater as potential water sources could reduce the input of cold water and could results in impacts to areas of thermal refugia.
Noise	Construction, modification or removal of facilities for the purpose of groundwater or surface water extraction, energy supply and/or recreation could result in short term and long term impacts from noise.
Recreation	Dams (for whatever purpose – hydropower, summer recreation, and drinking water extraction) could be removed to achieve flows needed to comply with temperature objectives reducing the area of water available for recreating. If dam removal is selected as a compliance measure, swimming and boating (lake skiing and whitewater boating) could be adversely affected. In addition, recreational facilities such as campgrounds and boat launches would be removed if full or partial removal of the dams is selected as a compliance measure. Additionally, recreational fishing for introduced species would be lost after dam removal eliminated their habitat and conditions favored native species.
Transportation/traffic	Increased tree retention may conflict with transportation agencies (public roads) site distance requirements and areas designated as clear recovery zones.
Utilities and Service Systems	Construction and installation of sediment catch basins or irrigation delivery/recovery systems could cause an adverse impact to the environment.

*Potentially significant impacts as listed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

Table 6B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures to Restore and Maintain Stream Flows that Support Beneficial Uses

Environmental Issue	Mitigation Measure*
Aesthetics	<p>AES-1: Proper siting, constructing berms or excess freeboard around the perimeter of a pond.</p> <p>AES-2: Planting vegetation such as native trees, grasses, and forbs.</p>
Agriculture or Forest Resources	<p>AGF-1: Managed riparian areas (timber, flash grazing, mixing riparian vegetation and crops)</p> <p>AGF-2: Implement structural measures for irrigation water management, irrigation pipelines, conservation cover, cover crop, pond sealing or lining, field borders, stream buffers, roof runoff capture structures, and culverts for water conveyance.</p> <p>AGF-3: Implement non-structural water irrigation water management (schedule and timing of use).</p> <p>AGF-4: Coordination between project proponents, Regional Water Board staff, Division of Water Rights, other local state and federal agencies.</p>
Air Quality	<p>AIR-1: Dust control during construction.</p> <p>AIR-2: Avoid days of poor air quality, monitor levels and cease work prior to exceeding standards, , schedule work to reduce the use of high emission vehicles</p> <p>AIR-3: Retrofit equipment, use low emissions vehicles when possible.</p> <p>AIR-4: Proper design of detention basins to eliminate standing water, covers, aeration, filters, barriers, and/or odor suppressing chemical additives.</p>
Biological resources	<p>BIO-2: Consult with federal, state and local agencies regarding location of rare, threatened or endangered species.</p> <p>BIO-3: Select appropriate or alternate structural BMPs such as bio-degradable, synthetic free or earthen material BMPs.</p> <p>BIO-4: Implement non-structural BMPs such as scheduling, proper design and the removal of temporary BMPs for erosion and sediment controls after stabilization and or project completion.</p> <p>BIO-5: Developing species relocation plans or interpreting natural site vegetative conditions to include sensitive flora.</p> <p>BIO-6: Develop compensatory mitigation projects for aquatic ecosystem creation, restoration or enhancement.</p>
Cultural	<p>CUL-1: Consult with Tribes, historical societies, federal, state and local agencies regarding location of cultural resources prior to use of heavy equipment in areas with known or suspected cultural resources.</p> <p>CUL-2: Projects subject to the jurisdiction of the Water Boards will be required to comply with Public Resource Code section 21159. This is expected to ensure the implementation of necessary site specific actions to avoid, minimize and mitigate any impacts to historical, archaeological, and paleontological resources or site, or unique geologic features. All future actions must comply with the CEQA process and requirements for tribal consultation provided by Senate Bill 18 (SB 18) (State 2004, Ch 905) and Government Code section 65252.</p>
Geology/Soils	<p>GS-1: Structural erosion and sediment control compliance measures:</p> <ul style="list-style-type: none"> • See Table 2B for specific measures <p>GS-2: Non-structural erosion and sediment control compliance measures:</p> <ul style="list-style-type: none"> • See Table 2B for specific measures
Hydrology/water quality	<p>HWQ-1: Plant native vegetation that has evolved with the natural environment.</p> <p>HWQ-2: Allow for the removal or thinning of upland vegetation that has high evapotranspiration rates and increases fire risks.</p> <p>HWQ-3: Implement standard BMPs to control erosion and sediment:</p> <ul style="list-style-type: none"> • See Table 1B for specific measures <p>HWQ-4: Use precision (site specific) farming techniques;</p>

Table 6B. Mitigation Measures to Reduce Potentially Significant Environmental Impacts Resulting from Compliance Measures to Restore and Maintain Stream Flows that Support Beneficial Uses

Environmental Issue	Mitigation Measure*
	HWQ-5: Monitor chemical condition of soil, water, and plant residuals carefully prior to applying fertilizers, pesticides, or water, including tailwater. Monitor ground water to ensure no salt (or other constituents) accumulate in ground water. HWQ-6: Leach soils within the root zone as necessary to prevent salt build up in that portion of the soil profile. HWQ-7: Avoid introduction of storm water into tailwater system to prevent impacts to storm water. HWQ-8: Maintain filter strips between fields and surface water to prevent discharge of tailwater directly into surface waters. HWQ-9: Install surface drainage field ditch to collect excess water. HWQ-10: Seek professional (e.g. Natural Resources Conservation Service, local resource conservation district, consultants, etc.) in developing land management plans and observational techniques to ensure efficient and effective water use. HWQ-11: Ensure proper design, siting, and operational timing to reduce alterations of natural hydrology and adverse effects on stream and groundwater quality and quality from structural compliance measures. HWQ-12: Prevent the concentration of drainage such that toxic levels of constituents are discharge to waters.
Noise	NO-1: Timing activities during hours of peak daily noise
Transportation/traffic	TRANS-4: Strategic planning and design, CEQA process and interagency coordination through existing programs, to avoid and minimize the placement of facilities that result in soil exposure.
Utilities and Service Systems	USS-1: Develop management plans for water conservation and water efficiency projects.

*Mitigation measures as discussed in section 9.4 and 9.5.2 of the Staff Report (August, 20, 2013)

CEQA Findings § 15091 (a)(1) & (a)(2)

The Regional Water Board finds that changes or alterations can be required in, or should be incorporated into, flow measures that would avoid or substantially lessen the significant environmental effect to a less than significant level. The mitigation measures listed above are feasible and can be implemented by the Regional Water Board or another public agency with jurisdiction over the resource to offset the impact to less than significant levels.

Table 6C. Potentially Significant and Unavoidable Environmental Impacts Resulting from Compliance Measures to Restore and Maintain Stream Flows that Support Beneficial Uses

Environmental Issue	Potentially Significant and Unavoidable Impact
Agriculture and Forest Resources	Switching from surface water diversions to groundwater pumping could lower water table, reduce soil moisture, and harm crops. Regulation on water use could lead to the conversion of agricultural lands.
Hydrology / Water Quality	Switching from surface water diversions to groundwater pumping could lower water table, reduce soil moisture, contribute to land subsidence and reduce aquifer storage capability.

CEQA Findings § 15091 (a)(3)

The Regional Water Board has identified potentially significant agricultural and forest resource impacts from flow measures that result in a reduction in surface water allocated through a water right, which in turn could lead to an increase use of groundwater. Significant increases in the use of groundwater could potentially lower the water table in the shallow aquifer, reduce soil moisture, harm crops and contribute to land subsidence. While avoidance, minimization and mitigation measures such as water management projects (conservation and efficiency) will help lessen groundwater depletion, impacts may still be potentially significant and unavoidable. This impact is therefore potentially significant and unavoidable.

The Regional Water Board has identified potentially significant, water quality impacts from switching from surface water diversions to groundwater pumping, which could lower water tables, reduce soil moisture, contribute to land subsidence and reduce aquifer storage capability. This could lead to a decreased assimilative capacity for pollutant and water availability. Additionally, water quality impacts from pumping groundwater instead of diverting surface water could potentially deplete groundwater resources, which could potentially result in a reduction in surface water flows, particularly summer flows, which could affect surface water flows, water temperatures and riparian areas. Mitigation measures identified above in Table 6B could greatly reduce impacts, but the Regional Water Board cannot ensure at this time that the appropriate lead agency would implement and enforce mitigation. Additionally, even with the implementation of avoidance, minimization or mitigation measures the impacts to water quality could still potentially be significant. These impacts are therefore potentially significant and unavoidable.

Cumulative Impacts

Cumulative impacts, defined in section 15355 of the CEQA Guidelines, refer to two or more individual effects, that when considered together, are considerable or that increase other environmental impacts. Cumulative impact assessment must consider not only the impacts of the proposed Basin Plan amendment, but also the impacts from other Basin Plan Amendments, municipal, and private projects, which have occurred in the past, are presently occurring, and may occur in the future, in the watershed during the period of implementation. The environmental impacts of actions taken by affected persons that are individually limited may be cumulatively considerable when viewed in conjunction with the effects of foreseeable past, current, and probable future projects in the Policy area. The Regional Water Board considered foreseeable past, current, and probable projects within the Board's permitting authority and projects under other agencies jurisdiction. The proposed Policy, in combination with these land use and water development projects, may have cumulative impacts on the environment that are similar to the Policy-related impacts discussed in the preceding sections above.

Non-structural compliance measures that may be implemented are not likely to have cumulative impacts on the environment. Impacts associated with implementation of most of the structural measures will be short-term, temporary and spatially distributed across the watershed, and will not have significant adverse effects on the environment. Compliance measures that involve substantial earth movement could have potentially significant cumulative impacts. However, many of these activities will be regulated under

existing State and Regional permits, including but not limited to state-wide Caltrans storm water permit, storm water permit for construction sites over one (1) acre, or timber harvest operations on public and private lands. The likelihood of installation of structural compliance measures on federal land is quite high as approximately 55% of the region is in federal ownership. Regional Water Board staff's engagement in these regulatory programs will provide an opportunity to limit the potential for cumulative impacts by ensuring that multiple projects proposing implementation of BMPs with the potential to cause short-term impacts are phased appropriately to limit potential cumulative impacts.

Programmatic Statement of Overriding Considerations

Based on a review of the available information, and as a result of implementing the range of foreseeable Policy compliance measures, from the preservation of shade to sediment controls and the modification of water supply to dam decommissioning, it has been determined that significant and unavoidable impacts to the environment may occur. These impacts include elevated exhaust levels, fugitive dust, vehicle and GHG emissions, turbidity, suspended sediment loads and reductions of dissolved oxygen, potential negative alteration of critical habitat for multiple fish species, groundwater resources, cultural resources, scenic quality, recreation, and noise. Most of these impacts are expected to be short term. Individual project-specific CEQA review will be necessary in those cases as appropriate. Many impacts can and will be mitigated to less than significant levels with the implementation of specific mitigation measures. However, because of the programmatic nature of this CEQA analyses, it is not possible to say with certainty that all impacts will be mitigated to less than significant levels. Identified mitigation will become enforceable in permits and other orders by the Regional Water Board, but we cannot be certain that other agencies will adopt the recommended mitigation for activities under the jurisdiction of other agencies. As a result, even impacts identified as less than significant with mitigation incorporated must also be considered unavoidable at this time.

The proposed Basin Plan amendment is designed to improve long term water quality by providing a regulatory program designed to protect and restore water quality and the beneficial uses of water in the North Coast Region. Notwithstanding the potential negative affects discussed above, it is likely that numerous long term beneficial effects will be realized on aesthetic resources, biological resources, geology and soils, GHG emissions, hydrology and water quality, and recreation from the various components and compliance measures associated with the Policy and Action Plans. The Policy and foreseeable compliance measures to implement the Policy are important for attaining temperature objectives and the beneficial uses the objective protects, and ensuring protection of existing high quality water.

Pursuant to Public Resources Code Section 21081(b) and CEQA Guidelines Section 15093, specific overriding economic, legal, social, technological or other benefits may outweigh the unavoidable adverse environmental impacts. The benefits from the Policy include improved aesthetic resources, biological resources, geology and soils, hydrology and water quality, and recreation. An important objective of the proposed Basin Plan amendment is the restoration of a healthy and viable salmonid fishery. Attaining and sustaining stream temperatures that support the cold freshwater habitat beneficial use, the beneficial use

most sensitive to temperature, is also vital to supporting the socioeconomic background of the region due to the role that cold freshwater streams play in supporting recreational, commercial and subsistence fishing. These benefits are not only supportive of several threatened and endangered species, but also of local economies, communities, and cultures throughout the North Coast. The Regional Water Board finds that the potentially significant, unavoidable environmental impacts could be acceptable in light of the benefits set forth above for the attainment and protection of beneficial uses, and that each of the benefits constitute an overriding benefit warranting approval of the Basin Plan amendment, independent of the other benefits. Of course, each site-specific activity must be evaluated on a project level to balance the factors in an individual given context.

Monitoring and Reporting

Public Resources Code, section 21081.6 and California Code of Regulations, title 14, section 15097 requires a Mitigation Monitoring and Reporting Program (MMRP) to ensure that mitigation measures identified in an EIR or negative declaration are implemented to avoid significant environmental effects. The MMRP must be adaptable according to the context, in this case, a programmatic policy with a broad range of implementation actions. As explained in the Staff Report and findings above, projects that might be undertaken as a result of the Policy would be subject to a project-level CEQA review conducted by the Regional Water Board or by another lead agency, which would entail project-specific identification and mitigation of any significant environmental effects. These projects would be subject to a project-specific MMRP. Because many actions may be taken by entities other than the Regional Water Board, it is not possible at this time to ensure the implementation of mitigation measures. The Policy does include monitoring and reporting elements appropriate for its programmatic scope, and the implementation of mitigation measures can be tracked by these mechanisms. The most appropriate reporting mechanism is the Temperature Work Plan. Monitoring the implementation of mitigation measures is most fitting in a lead agency's program of implementation. This includes specific projects both within and outside of the Regional Water Boards authority. The Temperature Work Plan will be revisited by the Regional Water Board periodically to identify priorities and track progress, and will document appropriate mitigation measures implemented to reduce significant environmental effects. Additionally, the work plan will describe the actions of the Regional Water Board and the coordinated efforts with other agencies to address all the controllable factors affecting stream temperatures. The work plan will track coordination among lead agencies to ensure mitigation, while providing discretion to each lead agency to choose its own approach to monitoring and reporting at the project level.