

Humboldt County Association of Governments

Humboldt Regional Transportation Plan 2013/14 Update

Final
**Environmental
Impact Report**
SCH# 2013102063



July 2014

**FINAL
ENVIRONMENTAL IMPACT REPORT**

**HUMBOLDT REGIONAL TRANSPORTATION PLAN
2013/14 UPDATE**

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HCAOG

Humboldt County Association of Governments

RESOLUTION 14-11

A RESOLUTION OF THE HUMBOLDT COUNTY ASSOCIATION OF GOVERNMENTS CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE HUMBOLDT REGIONAL TRANSPORTATION PLAN 2014 UPDATE

WHEREAS, the Humboldt County Association of Governments (HCAOG), acting in its official capacity as the designated Regional Transportation Planning Agency for Humboldt County, has prepared an update to the Regional Transportation Plan for its area of jurisdiction; and

WHEREAS, HCAOG has prepared a Final Program Environmental Impact Report (EIR) for the *Humboldt Regional Transportation Plan 2014 Update–Variety in Rural Options Of Mobility (Plan)* in compliance with the California Environmental Quality Act (CEQA); and

WHEREAS, HCAOG prepared and circulated a Notice of Preparation with the State Clearinghouse and the Humboldt County Clerk’s Office on October 29, 2013, with a 30-day public comment period. This EIR is identified by the State Clearinghouse No. 2013102063; and

WHEREAS, in accordance with CEQA Guidelines Section 15087 (a), a duly-noticed public hearing on the Draft EIR was held on May 15, 2014, during which all persons were provided with an opportunity for public comment on the analysis of the Draft EIR; and

WHEREAS, the Draft EIR was completed and filed with the State Clearinghouse and Humboldt County Clerk’s Office, and circulated to the public, responsible agencies, and other interested persons for their review and comment during a 45-day review period from May 23 through July 7, 2014, pursuant to CEQA Guidelines section 150287 (c); and

WHEREAS, HCAOG has reviewed all written comments received in response to the Draft EIR during the comment period. HCAOG has responded in writing as required by CEQA; and

WHEREAS, the environmental impacts of the Plan have been analyzed through the Final EIR, which is comprised of the Draft EIR, changes and revisions to the Draft EIR, the response to comments, technical appendices, and the Mitigation Monitoring and Reporting Program, and Findings of Facts; and

WHEREAS, HCAOG has considered all factors relating to the potential environmental impacts addressed in the Final EIR; and

WHEREAS, HCAOG does make and incorporate by this reference the attached CEQA Findings of Fact and Mitigation Monitoring and Reporting Program, as required by the California Environmental Quality Act Section 21081.

NOW, THEREFORE, BE IT RESOLVED, that the Humboldt County Association of Governments does hereby certify the “Humboldt Regional Transportation Plan 2013/14 Update: Final Environmental Impact Report” and declares as follows:

SECTION 1. HCAOG adopts the foregoing recitals as true and correct.

HCAOG

Humboldt County Association of Governments

SECTION 2. HCAOG hereby finds that the Final EIR reflects the independent judgment of HCAOG as Lead Agency for the *Humboldt Regional Transportation Plan 2014 Update-Variety in Rural Options of Mobility* (Plan).

SECTION 3. HCAOG hereby finds that the Final EIR has been completed in compliance with CEQA, and that HCAOG has independently reviewed and considered the Final EIR, together with all comments received during the public review process, prior to certifying the EIR.

SECTION 4. HCAOG finds that the Final EIR provides adequate assessment of the potentially significant environmental impacts of the Plan.

SECTION 5. HCAOG adopts the Findings of Fact attached hereto and incorporated by this reference, which documents and supports the conclusion that with the implementation of all feasible mitigation measures recommended in the Final EIR, the Plan will have a less-than-significant adverse impact on the environment.

SECTION 6. HCAOG adopts the Mitigation, Monitoring, and Reporting Program (attached) for the Plan.

SECTION 7. Based on the foregoing, HCAOG certifies the Final EIR.

SECTION 8. HCAOG staff is authorized and directed to cause a Notice of Determination concerning the certification of the Final EIR for the project to be filed in the office of the Humboldt County Clerk and State Clearinghouse in accordance with CEQA and the State CEQA Guidelines. HCAOG staff is further authorized and directed to take all steps necessary or convenient to proceed with the project in accordance with the Final EIR, the MMRP and the terms of this Resolution.

SECTION 11. The Executive Director or her designee(s) are directed to take such further actions as may be necessary and appropriate to carry out the intent of this Resolution.

SECTION 12. This resolution shall take effect immediately upon its adoption.

PASSED AND ADOPTED by the Humboldt County Association of Governments, in the County of Humboldt, State of California, this 21st day of August, 2014, by the following vote:

AYES:	MEMBERS:	Ornelas, Strehl, Jäger, Schapiro, Mierzwa, West
NOES:	MEMBERS:	Johnson, Sundberg
ABSENT:	MEMBERS:	None
ABSTAIN:	MEMBERS:	None


Susan Ornelas, HCAOG Chair

ATTEST:-

HCAOG Executive Assistant

HUMBOLDT REGIONAL TRANSPORTATION PLAN 2013/14 UPDATE

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- Appendix A: Notice of Preparation (NOP), NOP Comment Letters, Final Initial Study
- Appendix B: Mitigation Monitoring and Reporting Program (MMRP)



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EXECUTIVE SUMMARY

This section summarizes the characteristics of the proposed project, as well as the project's environmental impacts and recommended mitigation measures.

PROJECT SYNOPSIS

Project Applicant

The project applicant is the Humboldt County Association of Governments (HCAOG).

Humboldt County Association of Governments (HCAOG)
611 "I" Street, Suite B
Eureka, CA 95501

Project Description

The proposed project is the update of the Regional Transportation Plan (RTP) for Humboldt County. The RTP is a long-range planning document. It provides a course for future transportation investment in the region, with the objective of building and maintaining a multi-modal, safe and efficient, balanced transportation system, which also balances moving goods and people with sustaining non-renewable resources. California Government Code Section 65080 et seq. and Title 23 United States Code (USC) §134 require each Regional Transportation Planning Agency (RTPA) and Metropolitan Planning Organization (MPO) to prepare and adopt an RTP aimed at achieving a coordinated and balanced regional transportation system. The plan must be action-oriented and pragmatic, must consider both the short-term and long-term future, and shall present clear, concise policy guidance to local and state officials.

HCAOG adopted the last RTP in 2008. The RTP Update 2013/14 helps chart the course to provide *Variety in Rural Options of Mobility*. The update's short name is "VROOM." VROOM plans for: Complete Streets (covering roadway, pedestrian, and bicycle systems), Trails (commuter), Tribal Transportation, Public Transportation, Aviation, Goods Movement, Emergency Transportation, and Finance. This update reflects changes in legislative requirements, local land use policies, and resource constraints.

The RTP 2013/14 Update identifies the region's transportation needs and issues and sets forth actions, programs, and projects to address those needs and issues. In addition, the RTP adopts policies, sets goals, and identifies financial resources to encourage and promote the safe and efficient management, operation, and development of a regional intermodal transportation system that would serve the mobility needs of people and goods. The plan's overall goal is for Humboldt County to have a comprehensive, coordinated and balanced multi-modal transportation system, so that people in the region can travel and move goods safely and efficiently by the modes that best suit the individual and society at large. HCAOG's overall objective is to program all funds based on multi-modal transportation goals and objectives, and needs and priorities as established in the Regional Transportation Plan. HCAOG decides how to program transportation funds based on multi-modal goals and objectives, and needs and priorities as established in the RTP. The RTP's



policies and proposed projects pursue six main objectives/planning priorities (in alphabetical order), which the RTP applies to each mode:

- Balanced Mode Share/Complete Streets – Increase multi-modal mobility, balanced mode shares, and/or access. Mobility means having travel choices (for people and goods) with predictable trip times. A balanced mode share means all transportation modes are available in proportion to their efficiency and short-term and long-term costs and benefits. Increased access means more options for people to reach the goods, services, and activities they need.
- Economic Vitality – Support the local or regional economy by improving goods movement and transportation access, efficiency, and cost-effectiveness; by enhancing economic attractors (e.g. via walkable streets, multiuse trails, transit service); or by indirectly cutting health care costs due to more active transportation or less transportation-related pollution.
- Efficient & Viable Transportation System – Make the transportation system operate more efficiently, such as by reducing traffic congestion and using Intelligent Transportation System (ITS) management (e.g. Greater Eureka Area Travel Demand Model, Street Saver, GPS tracking on transit buses, other management programs). Make the system more financially and operationally viable such as by prioritizing cost-effective investments, pursuing stable funding, and preserving transportation assets to maximize resources and future use.
- Environmental Stewardship – Enhance the performance of the transportation system while protecting and enhancing the natural environment. Help achieve goals of California Global Warming Solutions Act of 2006 (AB 32) and Sustainable Communities and Climate Protection Act of 2008 (SB 375), protect and improve air, water, and land quality, help reduce transportation-related fuel and energy use, help reduce single-occupancy-vehicle (SOV) trips or motorized vehicle miles traveled (VMT), etc.
- Equitable & Sustainable Use of Resources – Lobby for costs and benefits (financial, environmental, health, and social) to be shared fairly. Prioritize projects based on cost effectiveness as well as need and equity for underserved populations. Coordinate transportation systems with land use for efficient, sustainable use of resources.
- Safety – Increase safety for users (one or more modes). Reduce transportation-related fatalities and serious injuries.

ALTERNATIVES

This EIR examines three alternatives to the proposed RTP 2013/14 Update (the “Proposed Project”), which includes all projects in the Financially Constrained and Financially Unconstrained project lists:

1. **No Project alternative** - HCAOG does not fund or implement new capital improvement projects after 2014.



2. **Financially Constrained Project alternative** - Only currently funded improvements (for the RTP's Financially Constrained project list, refer to Tables 2-1 through 2-6 in Section 2.0, Project Description).
3. **Top Priority Regional Complete Streets Projects Plus Transit-Related Projects alternative** - Only projects included in the RTP's "Top Priority Regional Complete Streets Projects" table (Table Streets-5 in the Draft RTP) plus any transit-related projects listed in the "Complete Streets Regional Projects" table or the "Public Transportation Proposed Regional Projects" (Tables CS-1 or Transit-4 in the Draft RTP) would be included as part of the RTP.

The No Project alternative could be considered environmentally superior overall, as it would entail the fewest new roadway projects. Consequently, it would have the fewest impacts with regard to issues most dependent on the overall magnitude of development. No other alternative scenario would be considered superior for more issues. However, the beneficial impacts of the proposed RTP's projects, including reducing idling and congestion and improving traffic flow and safety, would not occur under the No Project Alternative, and the RTP's objectives, described in Section 2.3.2, *Project Objectives*, would not be achieved.

CEQA also requires an EIR to discuss the environmentally superior alternative scenario other than "No Project." Among the other scenarios, both the Financially Constrained Project alternative and the Top Priority Regional Complete Streets Plus Transit-Related Projects alternative would reduce impacts in several issue areas compared to the proposed RTP, primarily related to a reduction in construction activity and site disturbance as these alternatives would result in fewer overall projects than the proposed RTP. Overall, the Top Priority Regional Complete Streets Plus Transit-Related Projects alternative would result in fewer impacts than the Financially Constrained Project alternative considering all of the environmental issue areas, although it may have incrementally greater impacts to air quality, greenhouse gas emissions, and transportation and circulation as fewer projects that relieve congestion and improve alternative transportation opportunities (pedestrian access, bikeways, etc.) would occur under this alternative. The Top Priority Regional Complete Streets Plus Transit-Related Projects alternative would involve the fewest number of projects, such that it would have the lowest benefit of reducing traffic congestion, air contaminant emissions, and GHG emissions. In addition, neither of these alternatives would satisfy key project objectives. Thus neither of these alternatives would be considered environmentally superior to the proposed RTP primarily because both of these alternatives would result in greater air quality, GHG emissions, and transportation impacts.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-1 includes a brief description of the identified environmental impacts, proposed mitigation measures, and the level of significance after mitigation. Impacts are categorized by classes. Class I impacts are defined as significant, unavoidable adverse impacts which require a statement of overriding considerations to be issued per Section 15093 of the *State CEQA Guidelines* if the project is approved. Class II impacts are significant adverse impacts that can be feasibly mitigated to less than significant levels and which require findings to be made under Section 15091 of the *State CEQA Guidelines*. Class III impacts are less than significant impacts. Please note that individual transportation project-specific environmental impacts may require



these mitigation measures be revised or expanded in response to site-specific conditions. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the sponsor agency will need to further analyze the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects, although specific project mitigation (if determined to be required) will be defined by the sponsor agency.



**Table ES-1 Summary of Environmental Impacts,
 Mitigation Measures, and Significance After Mitigation**

Impact	Mitigation Measures	Significance After Mitigation
AIR QUALITY		
<p>Impact AQ-1 Construction activities associated with transportation projects under the RTP 2013/14 Update would create fugitive dust and ozone precursor emissions and have the potential to result in temporary adverse impacts on air quality in Humboldt County. This is a Class II, significant but mitigable impact.</p>	<p>AQ-1(a) The RTP project sponsor shall ensure that NCUAQMD Rule 430 precautionary measures are implemented. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. NCUAQMD Rule 430 precautionary measures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • Covering trucks when used for transporting materials likely to give rise to airborne dust. • Installing and using hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, and requiring containment methods during sandblasting and other similar operations. • Using water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, and the clearing of land. • Applying asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dust. • Paving roadways and maintaining them in a clean condition. • Promptly removing earth or other material from paved streets onto which earth or other material has been transported by construction equipment, wind, water, or other means. <p>AQ-1(b) The RTP project sponsor shall ensure registration with the NCUAQMD prior to engaging in specific activities covered by the Program for Naturally Occurring Asbestos. As part of the registration process, the applicant may be required to submit a dust control plan. Notification shall be made to the NCUAQMP at least 14 days before activity begins.</p> <p>AQ-1(c) The RTP project sponsor shall ensure that fleet owners of mobile construction equipment are subject to the California Air Resources Board Regulation for In-use Off-road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, § 2449), the purpose of which is to reduce diesel particulate matter and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles. The project sponsor shall also ensure to the maximum extent feasible, that diesel construction equipment meeting the California Air Resources Board Tier 2 or higher emission standards for off-road heavy-duty diesel engines is used. If using Tier 2 equipment it not feasible, diesel construction equipment meeting Tier 1 emission standards shall be used. These measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections.</p>	<p>With proposed mitigation measures, impacts would be less than significant.</p>



**Table ES-1 Summary of Environmental Impacts,
 Mitigation Measures, and Significance After Mitigation**

Impact	Mitigation Measures	Significance After Mitigation
	<p>AQ-1(d) The project sponsor shall ensure that, to the extent possible, construction activity utilizes electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.</p> <p>AQ-1(e) The project sponsor shall ensure that removing underground storage tanks and other project excavation is a permitted activity in accordance with NCUAQMD rules and regulations. This shall be accomplished through issuing NCUAQMD permits to the project sponsor prior to issuing a grading permit.</p>	
<p>Impact AQ-2 Implementation of the RTP 2013/14 Update would result in an overall reduction of on-road vehicle emissions when compared to baseline conditions as defined by the RTP 2013/14 Update baseline or the PM10 Attainment Plan, and would not result in an increase in criteria pollutants as compared to the future “no project scenario.” This is a Class III, less than significant impact.</p>	<p>None required.</p>	<p>Impacts would be less than significant without mitigation.</p>
<p>Impact AQ-3 The transportation improvement projects included in the RTP 2013/14 Update may facilitate increased exposure of sensitive receptors to hazardous air pollutants that may cause health risks. Implementation of the RTP 2013/14 Update would not result in a regional increase in toxic air emissions. This is a Class III, less than significant impact.</p>	<p>None required.</p>	<p>Impacts would be less than significant without mitigation.</p>
<p>Impact AQ-4 Re-entrained dust has the potential to increase airborne PM10 and PM2.5 levels in Humboldt County. The increase in growth expected through the RTP 2013/14 Update planning horizon would result in additional vehicle miles traveled, which would add to the PM10 and PM2.5 levels in the area. However, re-entrained dust levels would be lower with the RTP 2013/14 Update than 2013 baseline levels. In addition, implementation of planned Humboldt County control measures would further reduce such emissions. This is a Class III, less than significant impact.</p>	<p>None required.</p>	<p>Impacts would be less than significant without mitigation.</p>



**Table ES-1 Summary of Environmental Impacts,
 Mitigation Measures, and Significance After Mitigation**

Impact	Mitigation Measures	Significance After Mitigation
<p>Impact AQ-5 The proposed RTP 2013/14 Update would be consistent with the PM10 Attainment Plan. This is a Class III, less than significant impact.</p>	<p>None required.</p>	<p>Impacts would be less than significant without mitigation.</p>
<p>BIOLOGICAL RESOURCES</p>		
<p>Impact B-1 Implementing transportation projects proposed by the RTP 2013/14 Update may result in impacts to special status plant and animal species. The overall impact to special status plant and animal species is Class II, significant but mitigable.</p>	<p>B-1(a) Biological Resources Screening and Assessment. On a project-by-project basis, when final design is completed, a preliminary biological resource screening shall be performed as part of the environmental review process; the screening shall determine whether the project has any potential to impact biological resources. If it is determined that the project has no potential to impact biological resources, no further action will be required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a biological resources assessment (BRA) or similar type of study to (1) document the existing biological resources within the project footprint plus a buffer, and (2) determine the potential impacts to those resources. The BRA shall evaluate the potential for impacts to all biological resources including, but not limited to special status species, nesting birds, wildlife movement, sensitive plant communities/critical habitat, and other resources judged to be sensitive by local, state, and/or federal agencies. The results of the BRA may determine that design alterations, further technical studies (i.e. protocol surveys) and/or consultations with the USFWS, CDFW and/or other local, state, and federal agencies may be required.</p> <p>The following mitigation measures [B-1(b) through B-1(k)] shall be incorporated, only as applicable, into the BRA for projects where specific resources are present or may be present and impacted by the project. Note that specific surveys described in the mitigation measures below may be completed as part of the BRA where suitable habitat is present.</p> <p>B-1(b) Special Status Plant Species Surveys. If the project-specific BRA determines that special status plant species may occur on-site, surveys for special status plants shall be completed prior to removing vegetation, grubbing, or other construction activity of each segment (including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the target species identified in the project-specific BRA. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency, and shall be conducted no more than two years before initial ground disturbance. All special status plant species identified on site shall be mapped onto a site-specific aerial photograph and topographic map. Surveys shall be conducted according to the most current protocols established by the CDFW, USFWS,</p>	<p>With proposed mitigation measures, impacts would be less than significant.</p>



**Table ES-1 Summary of Environmental Impacts,
 Mitigation Measures, and Significance After Mitigation**

Impact	Mitigation Measures	Significance After Mitigation
	<p>and the local jurisdictions if said protocols exist. A report of the survey results shall be submitted to the implementing agency, and the CDFW and/or USFWS, as appropriate, for them to review and approve.</p> <p>B-1(c) Special Status Plant Species Avoidance, Minimization, and Mitigation. If State listed or California Rare Plant List 1B species are found during special status plant surveys [pursuant to mitigation measure B-1(b)], then the project shall be re-designed to avoid impacting these plant species, if feasible. Rare plant occurrences that are not within the immediate disturbance footprint, but are located within 50 ft of disturbance limits, shall have bright orange protective fencing installed to protect them from harm. Fencing shall be installed at least 30 ft beyond their extent, or other distance as approved by a qualified biologist.</p> <p>B-1(d) Restoration and Monitoring. If special status plants species cannot be avoided and will be impacted by a project implemented under the RTP, all impacts shall be mitigated by habitat restoration at a minimum ratio of 1:1 to 4:1 or higher as applied on a case-by-case project basis by local jurisdictions in consultation with appropriate resource agencies of 2:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species. A restoration plan shall be submitted to and approved by the jurisdiction overseeing the project. (Note: if a State listed plant species will be impacted, the restoration plan shall be submitted to the CDFW for approval). The restoration plan shall include, at a minimum, the following components:</p> <ul style="list-style-type: none"> • Description of the project/impact site (location, responsible parties, areas to be impacted by habitat type); • Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved]; • Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values); • Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan); • Maintenance activities during the monitoring period, including weed removal as appropriate (activities, responsible parties, schedule); • Monitoring plan for the compensatory mitigation site, including a no less than quarterly monitoring for the first year schedule 	



**Table ES-1 Summary of Environmental Impacts,
 Mitigation Measures, and Significance After Mitigation**

Impact	Mitigation Measures	Significance After Mitigation
	<p><u>to be determined by the sponsoring agency implementing the individual transportation project</u> (performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports);</p> <ul style="list-style-type: none"> • Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type; • An adaptive management program and remedial measures to address any shortcomings in meeting success criteria; • Notification of completion of compensatory mitigation and agency confirmation; and • Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism). <p>B-1(e) Endangered/Threatened Species Habitat Assessment and Protocol Surveys. Specific habitat assessment and survey protocol surveys are established for several federally and State Endangered or Threatened species. If the results of the BRA determine that suitable habitat may be present any such species, protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or USFWS protocols prior to issuance of any construction permits. If through consultation with the CDFW and/or USFWS it is determined that protocol habitat assessments/surveys are not required, said consultation shall be documented prior to issuance of any construction permits. Each protocol has different survey and timing requirements. The applicants for each project shall be responsible for ensuring they understand the protocol requirements.</p> <p>B-1(f) Endangered/Threatened Species Avoidance and Minimization. The habitat requirements of endangered and threatened species throughout Humboldt County are highly variable. The potential impacts from any given project implemented under the RTP 2013/14 Update are likewise highly variable. However, there are several avoidance and minimization measures which can be applied for a variety of species to reduce the potential for impact, with the final goal of no net loss of the species. The following measures may be applied to aquatic and/or terrestrial species. Project sponsors shall select from these measures as appropriate.</p> <ul style="list-style-type: none"> • Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern 	



**Table ES-1 Summary of Environmental Impacts,
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Impact	Mitigation Measures	Significance After Mitigation
	<p>within or adjacent to the limits of disturbance shall have highly visible orange construction fencing installed between said area and the limits of disturbance.</p> <ul style="list-style-type: none"> • All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed between April 1 and October 31, if feasible, to avoid impacts to sensitive aquatic species. • All projects occurring within or adjacent to sensitive habitats that may support federally and/or state Endangered/ Threatened species shall have a CDFW and/or USFWS-approved biologist present during all initial ground disturbing/vegetation clearing activities. Once initial ground disturbing/vegetation clearing activities have been completed, said biologist shall conduct daily pre-activity clearance surveys for Endangered/Threatened species. Alternatively, and upon approval of the CDFW and/or USFWS, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are begin fully implemented. • No Endangered/Threatened species shall be captured and relocated without expressed permission from the CDFW and/or USFWS. • If at any time during construction of the project an Endangered/Threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. A CDFW/USFWS-approved biologist shall document the occurrence and consult with the CDFW and/or USFWS as appropriate. • For all projects occurring in areas where Endangered/ Threatened species may be present and are at risk of entering the project site during construction, exclusion fencing shall be placed along the project boundaries prior to start of construction (including staging and mobilization). The placement of the fence shall be at the discretion of the CDFW/USFWS-approved biologist. This fence shall consist of solid silt fencing placed at a minimum of 3 feet above grade and 2 feet below grade and shall be attached to wooden stakes placed at intervals of not more than 5 feet. The fence shall be inspected weekly and following rain events and high wind events and shall be maintained in good working condition until all construction activities are complete. • All vehicle maintenance/fueling/staging shall occur not less than 100 feet from any riparian habitat or water body. Suitable containment 	



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	<p>procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian habitat or water bodies.</p> <ul style="list-style-type: none"> • No equipment shall be permitted to enter wetted portions of any affected drainage channel. • All equipment operating within streams shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access. • If project activities could degrade water quality, water quality sampling shall be implemented to identify the pre-project baseline, and to monitor during construction for comparison to the baseline. • If water is to be diverted around work sites, a diversion plan shall be submitted (depending upon the species that may be present) to the CDFW, RWQCB, USFWS, and/or NMFS for their review and approval prior to the start of any construction activities (including staging and mobilization). If pumps are used, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system. • At the end of each work day, excavations shall be secured with cover or a ramp provided to prevent wildlife entrapment. • All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling. • The CDFW/USFWS-approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic habitat whenever observed and shall dispatch them in a humane manner and dispose of properly. • If any federally and/or state protected species are harmed, the CDFW/USFWS-approved biologist shall document the circumstances that led to harm and shall determine if project activities should cease or be altered in an effort to avoid additional harm to these species. Dead or injured special status species shall be disposed of at the discretion of the CDFW and USFWS. All incidences of harm shall be reported to the CDFW and USFWS within 48 hours. • Considering the potential for projects to impact Federal and State listed species and their habitat, HCAOG shall contact the CDFW and USFWS to identify mitigation 	



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Impact	Mitigation Measures	Significance After Mitigation
	<p>banks within Humboldt County during development of the RTP. Upon implementation of projects included in the RTP, but on a project-by-project basis, if the results of the BRA determines that impacts to Federal and State threatened or endangered species habitat are expected, HCAOG and sponsor agencies shall explore species-appropriate mitigation bank(s) in the County for purchase of mitigation credits.</p> <p>B-1(g) Non-Listed Special Status Animal Species Avoidance and Minimization. Depending on the species identified in the BRA, several of the measures identified under B-1(f) shall be applicable to the project. In addition, <u>the following measures shall be recommended to be selected by sponsor agencies if it is necessary from among the following to reduce the potential for impacts to non-listed special status animal species that would result from individual transportation projects:</u></p> <ul style="list-style-type: none"> • For non-listed special-status terrestrial amphibians and reptiles, coverboard surveys shall be completed within three months of the start of construction. The coverboards shall be at least four feet by four feet (4' x 4'), constructed of untreated plywood, and placed flat on the ground. The coverboards shall be checked by a qualified biologist once per week for each week after placement up until the start of vegetation removal. All non-listed special status and common animals found under the coverboards shall be captured and placed in five-gallon buckets for transport to relocation sites. All relocation sites shall be reviewed by the project sponsor and shall consist of suitable habitat. Relocation sites shall be as close to the capture site as possible but far enough away to ensure the animal(s) is not harmed by construction of the project. Relocation shall occur on the same day as capture. CNDDDB Field Survey Forms shall be submitted to the CFDW for all special status animal species observed. • Pre-construction clearance surveys shall be conducted within 14 days of 	



**Table ES-1 Summary of Environmental Impacts,
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Impact	Mitigation Measures	Significance After Mitigation
	<p>the start of construction (including staging and mobilization). The surveys shall cover the entire disturbance footprint plus a minimum 200 foot buffer, if feasible, and shall identify all special status animal species that may occur on-site. All non-listed special status species shall be relocated from the site either through direct capture or through passive exclusion (e.g., American badger). A report of the pre-construction survey shall be submitted to HCAOG and/or the local jurisdiction for their review and approval prior to the start of construction.</p> <ul style="list-style-type: none"> • A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal to recover special status animal species unearthed by construction activities. • Upon completion of the project, a qualified biologist shall prepare a Final Compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project. • If special status bat species may be present and impacted by the project, a qualified biologist shall conduct presence/absence surveys for special status bats where suitable roosting habitat is present. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may roost. Surveys shall be conducted within 30 days of the start of construction and in consultation with the CDFW. If active roosts are located, exclusion devices such as netting shall be installed to discourage bats from occupying the site. If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the 	



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	<p>size of the hibernaculum and shall be determined through consultations with the CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until a qualified biologist determines that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.</p> <p>B-1(h) Preconstruction Surveys for Nesting Birds. For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the California Fish and Game Code and the Migratory Bird Treaty Act shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal. The surveys shall include the entire segment disturbance area plus a 200 ft buffer around the site. If active nests are located, the qualified biologist shall determine an appropriate buffer zone from the nest, and all construction work shall be conducted outside the buffer zone. The buffer shall be a minimum of 50 feet for non-raptor bird species and at least 150 ft for raptor species. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer zone(s) shall be closed to all construction personnel and equipment until the adult and young birds are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removing the buffer. A report of these preconstruction nesting bird surveys shall be submitted to HCAOG and/or the local jurisdiction.</p> <p>B-1(i) Worker Environmental Awareness Program (WEAP). Prior to initiating construction activities (including staging and mobilization) <u>for individual transportation projects determined to have potentially significant impacts to biological resources</u>, all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the project area. The specifics of this program shall include identifying sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and a review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to other personnel involved with constructing the project.</p>	



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Impact	Mitigation Measures	Significance After Mitigation
	<p>All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them. <u>To document compliance, the form shall be submitted to HCAOG and/or the local jurisdiction overseeing the transportation project to document compliance.</u></p> <p>B-1(j) Tree Protection. If it is determined that construction may impact trees, including their root systems, protected by local agencies, the project sponsor shall procure all necessary tree removal permits. A tree protection and replacement plan shall be developed by a certified arborist as appropriate. The plan shall include, but would not be limited to, an inventory of trees to within the construction site, setbacks from trees and protective fencing, restrictions regarding grading and paving near trees, direction regarding pruning and digging within root zone of trees, and requirements for replacing and maintaining trees. If protected trees will be removed, replacement tree plantings of like species in accordance with local agency standards, but at a minimum ratio of 2:1 (trees planted to trees impacted). Replacement trees shall be installed on-site or at an approved off-site location. A restoration and monitoring program shall be developed in accordance with B-1(d) and shall be implemented for a minimum of seven years or until stasis has been determined by a certified arborist. If a protected tree shall be encroached upon but not removed, a certified arborist shall be present to oversee all trimming of roots and branches.</p>	
<p>Impact B-2 Implementing transportation projects proposed by the RTP 2013/14 Update may impact sensitive habitats, including federally protected wetlands. This is a Class II, significant but mitigable impact.</p>	<p>B-2(a) Jurisdictional Delineation. If projects implemented under the RTP 2013/14 Update occur within or adjacent to wetland, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the CDFW, USACE, and/or RWQCB, <u>California Coastal Commission, and/or local governments with regulatory authority granted by the Coastal Act,</u> a qualified biologist shall complete a jurisdictional delineation. The jurisdictional delineation shall determine the extent of the jurisdiction for each of these agencies and shall be conducted according to requirements set forth by each agency. The result shall be a preliminary jurisdictional delineation report that shall be submitted to the implementing agency, USACE, RWQCB, and CDFW, <u>California Coastal Commission, and delegated local governments</u> as appropriate, for review and approval. If jurisdictional areas are expected to be impacted, then the RWQCB would require a Waste Discharge Requirements (WDR) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature falls under federal jurisdiction). If CDFW asserts its jurisdictional authority, then a Streambed Alteration Agreement pursuant to Section 1600 <i>et seq.</i> of the California Fish and Game Code would also be required prior to construction within the areas of</p>	<p>With proposed mitigation measures, impacts would be less than significant.</p>



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	<p>CDFW jurisdiction. If the USACE asserts its authority, then a permit pursuant to Section 404 of the Clean Water Act would likely be required.</p> <p>B-2(b) Wetland and Riparian Habitat Restored. Impacts to jurisdictional wetland and riparian habitat shall be mitigated at a <u>ratio of 1:1 to 4:1 or higher (acres of habitat restored to acres impacted) as applied on a case-by-case project basis by local jurisdictions in consultation with appropriate resource agencies minimum ratio of 2:1 (acres of habitat restored to acres impacted)</u>, and shall occur on-site or as close to the impacted habitat as possible. A mitigation and monitoring plan shall be developed by a qualified biologist in accordance with mitigation measure B-1(d) above and shall be implemented for no less than five years after construction of the segment, or until the HCAOG/local jurisdiction and/or the permitting authority (e.g., CDFW or USACE) has determined that restoration has been successful.</p> <p>B-2(c) Landscaping Plan. If landscaping is proposed for a specific project, a qualified biologist/landscape architect shall prepare a landscape plan for that project. This plan shall indicate the locations and species of plants to be installed. Drought tolerant, locally native plant species shall be used. The plan shall prohibit planting noxious, invasive, and/or non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List, and/or California Invasive Plant Council Lists 1, 2, and 4. Species selected for planting shall be similar to those species found in adjacent native habitats.</p> <p>B-2(d) Invasive Weed Prevention and Management Program. Prior to starting construction for each project, a qualified biologist shall <u>evaluate the potential for introduction or spreading of invasive weeds, and if warranted</u> develop an Invasive Weed Prevention and Management Program to prevent invasion of native habitat by non-native plant species. A list of target species shall be included, along with measures for early detection and eradication. All disturbed areas shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding shall occur where no construction activities have occurred within six (6) weeks since ground disturbing activities ceased. If exotic species invade these areas prior to hydroseeding, weed removal shall occur in consultation with a qualified biologist and in accordance with the restoration plan.</p>	



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Impact	Mitigation Measures	Significance After Mitigation
<p>Impact B-3 Implementing transportation projects proposed by the RTP 2013/14 Update may impact wildlife movement, including fish migration, and/or impede the use of a native wildlife nursery. This is a Class II, significant and unavoidable but mitigable impact.</p>	<p>B-3(a) Fence and Lighting Design. All projects that include long segments (<u>approximately ¼ mile or greater in length</u>) of fencing and lighting shall be designed to minimize impacts to wildlife. Fencing shall not block wildlife movement through riparian or other natural habitat. Where fencing is required for public safety concerns, the fence shall be designed to permit wildlife movement by incorporating design features such as:</p> <ul style="list-style-type: none"> • A minimum 16 inches between the ground and the bottom of the fence to provide clearance for small animals; • A minimum 12 inches between the top two wires, or top the fence with a wooden rail, mesh, or chain link instead of wire to prevent animals from becoming entangled; and • If privacy fencing is required near open space areas, openings at the bottom of the fence measure at least 16 inches shall be installed at reasonable intervals to allow wildlife movement. <p>If fencing must be designed in such a manner that wildlife passage would not be permitted, wildlife crossing structures shall be incorporated into the project design as appropriate.</p> <p>Similarly, lighting installed as part of any project shall be designed to disrupt wildlife as little as feasible. This may be accomplished by using hoods to direct light away from natural habitat, using low intensity lighting, and using as few lights as necessary to achieve the goals of the project.</p> <p>B-3(b) Construction Best Management Practices. The following construction Best Management Practices (BMPs) shall be incorporated into all grading and construction plans. <u>BMPs developed for individual projects could consult the handbooks from the California Stormwater Quality Association.:</u></p> <ul style="list-style-type: none"> • Designate a 20 mile-per-hour speed limit in all construction areas. • All vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas. Clearing vegetation for vehicle access shall be avoided to the greatest extent feasible. • The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the goal of the project. • Locate equipment washout and fueling areas within the limits of grading at a minimum of 100 feet from waters, wetlands, or other 	<p>With implementation of the above mitigation measures, potential impacts to wildlife movement and nursery sites would be reduced <u>to a less than significant level</u>, but disruption to wildlife movement is still anticipated. Thus, this impact would remain Class I, significant and unavoidable.</p>



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	sensitive resources as identified by a qualified biologist. Washout areas shall be designed to fully contain polluted water and materials to be removed subsequently from the site. <ul style="list-style-type: none"> • Daily construction work schedules should be limited to daylight hours only. • Mufflers shall be used on all construction equipment and vehicles shall be in good operating condition. • Drip pans shall be placed under all stationary vehicles and mechanical equipment. • All trash shall be placed in sealed containers and shall be removed from the project site a minimum of once per week. • No pets are permitted on project site during construction. 	
Impact B-4 Implementing transportation projects proposed by the RTP 2013/14 Update may impact wildlife movement, including fish migration, and/or impede the use of a native wildlife nursery. This is a Class II, significant but mitigable impact.	B-4(a) Habitat Conservation Plan Screening and Compliance. On a project-by-project basis upon completion of final design, a screening analysis shall be performed as part of the environmental review process to determine whether the project is located within an area covered by an adopted HCP. If it is determined that the proposed project is a covered activity under the HCP, HCOAG and sponsor agencies shall ensure that the project complies with the adopted HCP.	Implementation of the measure would reduce potential impacts to a less than significant level.
ENVIRONMENTAL JUSTICE		
Impact EJ-1 Implementation of the RTP 2013/14 Update would proportionately impact EJ communities and non-EJ communities. Impacts are therefore Class III, less than significant.	None required.	Impacts would be less than significant without mitigation.
Impact EJ-2 The mobility benefits derived from the RTP 2013/14 Update would be proportional in EJ and non-EJ areas, impacts are Class III, less than significant.	None required.	Impacts would be less than significant without mitigation.
GEOLOGY AND SOILS		
Impact GEO-1 Future seismic events could produce ground shaking throughout Humboldt County as well as surface rupture in some areas. Ground shaking and surface rupture could damage structures and/or create adverse safety effects. However, compliance with local policies, in combination with the requirements of the California Uniform Building Code and Alquist-Priolo legislation, would reduce the risk associated with ground shaking and surface rupture to Class III, less than significant.	Any new development within the Special Studies Zones would have to be evaluated by a professional geologist and would have to include appropriate design features and setbacks. All public transportation improvements are engineered, and new non-transportation development within the Plan Area would conform to the Alquist-Priolo Earthquake Fault Zoning Act, California Building Code (CBC), and local grading ordinance.	Compliance with existing regulations adequately addresses potential impacts relating to surface rupture and ground shaking and would ensure that impacts are less than significant.



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<p>Impact GEO-2 Future seismic events could result in liquefaction of soils in portions of the Plan Area. Development in certain areas within the Plan Area could be subject to liquefaction hazards. This impact is considered Class II, potentially significant but mitigable.</p>	<p>GEO-2(a) If an RTP 2013/14 Update project is located in an area of moderate to high liquefaction potential, the local jurisdiction in which this project is located shall ensure that the project is designed based upon appropriate geology, soils and earthquake engineering studies. Possible design measures include deep foundations, removal of liquefiable materials and dewatering.</p>	<p>Implementation of the mitigation measure would reduce potential impacts to a less than significant level.</p>
<p>Impact GEO-3 Transportation projects in the RTP 2013/14 Update may be located in areas with expansive soils and/or landslide hazards that could damage structures and present safety risks. This impact is considered Class II, potentially significant but mitigable.</p>	<p>GEO-3(a) If an RTP 2013/14 Update project involves cut slopes over 15 feet in height, the local jurisdiction in which the project is located shall ensure that specific slope stabilization studies are conducted. Possible stabilization methods include buttresses, retaining walls and soldier piles.</p> <p>GEO-3(b) If an RTP 2013/14 Update project is located in an area of expansive soils, the local jurisdiction in which the project is located shall ensure that a site-specific geotechnical investigation is conducted. The investigation will identify hazardous conditions and recommend appropriate design factors to minimize hazards. Such measures could include concrete slabs on grade with increased steel reinforcement, removal of highly expansive material and replacement with non-expansive import fill material, or chemical treatment with hydrated lime to reduce the expansion characteristics of the soils.</p>	<p>Implementation of the mitigation measures would reduce potential impacts to a less than significant level.</p>
GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE		
<p>Impact GHG-1 Construction of the transportation improvement projects included in the RTP Update 2013/14 would generate temporary short-term GHG emissions. Such impacts would be Class II, significant but mitigable.</p>	<p>GHG-1 The project sponsor shall ensure that applicable GHG-reducing diesel particulate and NOx emissions measures for off-road construction vehicles are implemented during construction. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. Applicable GHG-reducing measures include the following:</p> <ul style="list-style-type: none"> • Using diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and complying with the State Off-Road Regulation; • Using on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and complying with the State On-Road Regulation; • All on and off-road diesel equipment shall not idle for more than 5 minutes at any one time. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the 5 minute idling limit; • Using electric equipment when feasible; • Substituting gasoline-powered in place of diesel-powered equipment, where feasible; and 	<p>Implementation of the measure would reduce potential impacts to a less than significant level.</p>



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	<ul style="list-style-type: none"> Using alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel. 	
<p>Impact GHG-2 Implementing the RTP Update 2013/14 would decrease GHG emissions compared to both the 2013 baseline and future "no project scenario." Impacts would be Class III, less than significant.</p>	None required.	Impacts would be less than significant without mitigation.
<p>Impact GHG-3 Implementing the RTP would be consistent with the goals of applicable GHG reduction plans and policies, including the adopted GHG Reduction Plan for the City of Arcata, as well as AB 32. Impacts would be Class III, less than significant.</p>	None required.	Impacts would be less than significant without mitigation.
<p>HYDROLOGY AND WATER QUALITY</p>		
<p>Impact W-1 Construction and maintenance of RTP 2013/14 Update projects may introduce impervious surfaces in undeveloped areas, which could result in increased surface runoff that has the potential to affect surface water quantity, result in changes to absorption rates or discharge, <u>and degraded surface water and nearby coastal water</u> quality. In addition, projects could result in erosion and contaminants in runoff. Operational pollutant discharges due to RTP 2013/14 Update transportation improvements could result in adverse impacts on water quality. This impact would be Class II, <i>significant but mitigable</i>.</p>	<p>W-1(a) The sponsor of an RTP project <u>that contains or would implement landscaping and that would need the use of fertilizers or pesticides</u> shall ensure that fertilizer/pesticide application plans for any new right-of-way landscaping are prepared to minimize deep percolation of contaminants. The plans shall specify the use of products that are safe for use in and around aquatic environments.</p> <p>W-1(b) The sponsor of an RTP widening or roadway extension project shall ensure that the improvement directs runoff <u>in a manner that would allow into subsurface percolation basins and traps which would allow</u> for the removal of urban pollutants, fertilizers, pesticides, and other chemicals <u>and shall implement best management practices (BMPs) for erosion control and runoff management of drainage into nearby bodies of water including but not limited to creeks, rivers, wetland and/or coastal waters. BMPs developed for individual projects could consult the handbooks from the California Stormwater Quality Association.</u></p>	Implementation of the measures would reduce potential impacts to a less than significant level.
<p>Impact W-2 Construction and maintenance of RTP 2013/14 Update projects would incrementally increase countywide water demand that may impact groundwater supplies. In addition, new development may result in additional impermeable surface throughout the county that would reduce groundwater recharge potential. Such impacts would be Class II, significant but mitigable.</p>	<p>W-2(a) The sponsor of an RTP 2013/14 Update project shall ensure that, where economically feasible and available, reclaimed water is used for dust suppression during construction activities. This measure shall be noted on construction plans and shall be spot checked by the local jurisdiction.</p> <p>W-2(b) The sponsor of an RTP 2013/14 Update project shall ensure that low-water-use landscaping (i.e., drought tolerant plants and drip irrigation) is installed. When feasible, native plant species shall be used.</p>	Implementation of the measures would reduce potential impacts to a less than significant level.



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	<p>W-2(c) The sponsor of an RTP 2013/14 Update project shall ensure that, if feasible, landscaping associated with proposed improvements is maintained using reclaimed water.</p> <p>W-2(d) The sponsor of an RTP 2013/14 Update project shall ensure that porous pavement materials are utilized, where feasible, to allow for groundwater percolation. Rural bicycle trails shall be left unpaved where appropriate.</p> <p>W-2(e) The sponsor of an RTP 2013/14 Update project that requires potable water service should coordinate with water supply system operators to ensure that the existing water supply systems have the capacity to handle the increase. If the current infrastructure servicing the project site is found to be inadequate, infrastructure improvements for the appropriate public service or utility should be provided by the project sponsor. In addition, wherever feasible, reclaimed water should be used for landscaping purposes instead of potable water.</p>	
<p>Impact W-3 Proposed RTP 2013/14 Update improvements could be subject to flood hazards due to storm events and/or dam failure. In addition, future tsunami events could temporarily inundate coastal transportation facilities. Such impacts would be Class II, significant but mitigable.</p>	<p>W-3(a) If an RTP project is located in an area with high flooding potential due a storm event or dam inundation, the project sponsor shall analyze the flood risk and ensure that the project complies with the applicable local ordinance for flood risk reduction. <u>The potential for flooding shall be analyzed considering potential impacts from sea level rise.</u></p> <p>W-3(b) In areas subject to potential tsunami effects, the project sponsor shall ensure that RTP projects involving new transportation infrastructure are located outside the tsunami hazard area or are designed to resist tsunami forces, consistent with Designing for Tsunamis (NOAA et al, 2001; or subsequent revisions). <u>The area of potential tsunami inundation shall be analyzed considering potential impacts from sea level rise.</u></p>	<p>Implementation of the measures would reduce potential impacts to a less than significant level.</p>
NOISE		
<p>Impact N-1 Construction activity associated with transportation improvement projects envisioned by the RTP 2013/14 Update would create temporary noise level increases in discrete locations throughout the County. Such impacts would be Class II, significant but mitigable.</p>	<p>N-1(a) Project sponsors of RTP 2013/14 Update projects shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites, appropriate measures are implemented to ensure consistency with local noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restricting construction timing, using sound blankets on construction equipment, and using temporary walls and noise barriers to block and deflect noise.</p> <p>N-1(b) If a particular project within 800 feet of sensitive receptors requires pile driving, the local jurisdiction in which this project is located shall require the use of pile drilling techniques instead, where feasible. This shall be accomplished by placing</p>	<p>Implementation of the measures would reduce potential impacts to a less than significant level.</p>



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 Mitigation Measures, and Significance After Mitigation**

Impact	Mitigation Measures	Significance After Mitigation
	<p>conditions on the project during its individual environmental review.</p> <p>N-1(c) Project sponsors shall ensure that equipment and trucks used for project construction utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds).</p> <p>N-1(d) Project sponsors shall ensure that impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, using an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can reduce noise 5 dBA. Whenever feasible, quieter procedures shall be used, such as drilling rather than operating impact equipment.</p> <p>N-1(e) Locate stationary noise sources as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors will be adequately muffled.</p>	
<p>Impact N-2 Implementation of the RTP 2013/14 Update would increase traffic-generated noise levels in the County of Humboldt on highways, roadways and railways which could expose sensitive receptors to noise in excess of normally acceptable levels. This is a Class II, significant but mitigable impact.</p>	<p>N-2(a) If an RTP 2013/14 Update project is located within 1,000 feet of sensitive uses, the project sponsor shall ensure that a noise survey is conducted to determine potential alternate alignments which allow greater distance from, or greater buffering of, noise-sensitive areas. The noise survey shall be sufficient to indicate existing and projected noise levels, which shall be used to determine how much to attenuate noise to reach an exterior noise level of 65 dBA or less for sensitive uses. This survey shall be accomplished during the project's individual environmental review pursuant to the regulations of the applicable agency.</p> <p>N-2(b) Where new or expanded roadways are found to expose receptors to noise exceeding normally acceptable levels, the project sponsor shall consider various sound attenuation techniques. The preferred methods for mitigating noise impacts will be to use appropriate setbacks and sound attenuating building design, including retrofitting existing structures with sound attenuating building materials where feasible. In instances where using these techniques is not feasible, using sound barriers (earthen berms, sound walls, or some combination of the two) will be considered. Long expanses of walls or fences should be interrupted with offsets and enhanced with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements should</p>	<p>Implementation of the measures would reduce potential impacts to a less than significant level.</p>



**Table ES-1 Summary of Environmental Impacts,
 Mitigation Measures, and Significance After Mitigation**

Impact	Mitigation Measures	Significance After Mitigation
	be used, including solid fences, walls, and landscaped berms. Appropriate noise attenuation measures will be assessed on a case-by-case basis during a project's individual environmental review, pursuant to the regulations of the applicable agency.	
TRANSPORTATION AND CIRCULATION		
<p>Impact T-1 With implementation of the RTP 2013/14 Update, total vehicle miles traveled on freeways and roadways in 2035 would increase compared to existing (2013) baseline conditions. However, implementation of the RTP 2013/14 Update would reduce overall VMT and VHT, and per capita VMT when compared to the year 2035 conditions without the RTP 2013/14 Update. Thus, impacts would be Class III, less than significant.</p>	None required.	Impacts would be less than significant without mitigation.
<p>Impact T-2 The RTP 2013/14 Update would be consistent with applicable alternative transportation plans and policies. This is a Class III, less than significant impact.</p>	None required.	Impacts would be less than significant without mitigation.

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1.0 INTRODUCTION

This document is an Environmental Impact Report (EIR) that evaluates the potential environmental effects associated with implementation of the *Humboldt Regional Transportation Plan Update 2013/14 (RTP): Variety in Rural Options of Mobility (VROOM)*. The RTP 2013/14 Update is the long-range planning, policy, action, and financial document for the Humboldt County Region. The plan covers an approximately 20-year period through the year 2035. The RTP identifies the region's transportation needs and issues and sets forth actions, programs, and projects to address those needs and issues. In addition, the RTP adopts policies, sets goals, and identifies financial resources to encourage and promote the safe and efficient management, operation, and development of a regional intermodal transportation system that would serve the mobility needs of people and goods.

This section: (1) provides an overview of the background behind the existing and proposed RTP; (2) describes the purpose and legal authority of the EIR document; (3) summarizes the scope and content of the EIR; (4) lists lead, responsible, and trustee agencies for the EIR; (5) describes the intended uses of the EIR; and (6) provides a synopsis of the environmental review process required under CEQA.

The contents of other EIR sections are as follows:

- *Section 2.0, Project Description, provides a detailed discussion of the RTP 2013/14 Update.*
- *Section 3.0, Environmental Setting, describes the general environmental setting for Humboldt County.*
- *Section 4.0, Environmental Impact Analysis, describes the potential environmental effects associated with implementation of the RTP 2013/14 Update.*
- *Section 5.0, Other CEQA Requirements, discusses issues such as growth inducement and significant irreversible environmental effects.*
- *Section 6.0, Alternatives, discusses alternatives to the RTP 2013/14 Update, including the CEQA-required "no project" alternative.*
- *Section 7.0, References and Preparers, lists informational sources for the EIR and persons involved in the preparation of the document.*

1.1 PROJECT BACKGROUND

Under its authority as the Regional Transportation Planning Agency for Humboldt County, HCAOG is updating its Regional Transportation Plan, in conformance with the California Transportation Commission's adopted RTP Guidelines, and pursuant to Government Code §65080 et seq. of Chapter 2.5, federal legislation; U.S. Code, Title 23, §134 and §135 et seq. HCAOG has developed the RTP 2013/14 Update in coordination with the County of Humboldt and the cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad, Caltrans District 1, Federal Highways Administration, Federal Transit Administration, HCAOG committees, and other stakeholders including but not limited to, Native American tribes, local transit authorities, local social service providers, residents, and business interests.



The RTP 2013/14 Update is a continuation of Humboldt County's transportation planning process which is updated every five years in accordance with state and federal legislation. The most recent prior update to the RTP occurred in 2008.

1.2 STATEMENT OF PURPOSE AND LEGAL AUTHORITY

This EIR identifies and describes potential environmental impacts associated with implementation of the RTP 2013/14 Update proposed by HCAOG.

Section 21000 of the California Government Code, commonly referred to as the California Environmental Quality Act of 1970 (CEQA), requires the evaluation of environmental impacts associated with all planning programs or development projects proposed. As such, this EIR is an informational document for use by HCAOG, other agencies, and the general public in their consideration and evaluation of the environmental consequences of implementing of the proposed RTP.

In accordance with Section 15121 (a) of the *State CEQA Guidelines* (California Code of Regulations, Title 14, Division 6, Chapter 3), the purpose of an EIR is to:

Inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This EIR fulfills the requirements for a Program EIR. Although the legally required contents of a Program EIR are the same as those of a Project EIR, Program EIRs are typically more conceptual and may contain a more general discussion of impacts, alternatives, and mitigation measures than a Project EIR. As provided in Section 15168 of the CEQA Guidelines, a Program EIR may be prepared on a series of actions that may be characterized as one large project. Use of a Program EIR provides HCAOG (as Lead Agency) with the opportunity to consider broad policy alternatives and program-wide mitigation measures and provides HCAOG with greater flexibility to address environmental issues and/or cumulative impacts on a comprehensive basis. Agencies generally prepare Program EIRs for programs or a series of related actions that are linked geographically, are logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program, or are individual activities carried out under the same authority and having generally similar environmental effects that can be mitigated in similar ways. By its nature, a Program EIR considers the “macro” effects associated with implementing a program (such as a General Plan) and does not, and is not intended to examine the specific environmental effects associated with individual projects that may be implemented pursuant to the RTP 2013/14 Update.

Once a Program EIR has been prepared, subsequent activities within the program must be evaluated to determine what, if any, additional CEQA documentation needs to be prepared. If the Program EIR addresses the program’s effects as specifically and comprehensively as possible, many subsequent activities could be found to be within the Program EIR scope and additional environmental documents may not be required (CEQA Guidelines Section 15168(c)). When a Program EIR is relied on for a subsequent activity, the Lead Agency must incorporate feasible mitigation measures and alternatives developed in the Program EIR into the



subsequent activities (CEQA Guidelines Section 15168(c)(3)). If a subsequent activity would have effects not within the scope of the Program EIR, the Lead Agency must prepare a new Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or a project level EIR. In this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis. The CEQA Guidelines (Section 15168(h)) encourage the use of Program EIRs, citing five advantages:

1. *Provision of a more exhaustive consideration of impacts and alternatives than would be practical in an individual EIR;*
2. *Focus on cumulative impacts that might be slighted in a case-by-case analysis;*
3. *Avoidance of continual reconsideration of recurring policy issues;*
4. *Consideration of broad policy alternatives and programmatic mitigation measures at an early stage when the agency has greater flexibility to deal with them; and*
5. *Reduction of paperwork by encouraging the reuse of data (through tiering).*

It should be noted that as a program level environmental document, the RTP EIR uses appropriately programmatic thresholds as compared to the project-level thresholds that might be used for an EIR on a specific development project. It should not be assumed that impacts determined not to be significant at a program level would not be significant at a project level. In other words, determination that implementation of the RTP as a “program” would not have a significant environmental effect does not necessarily mean that an individual project would not have significant effects based on project-level CEQA thresholds, even if the project is consistent with the RTP. Conversely, it may be possible for certain impacts identified as significant at the program level to be less than significant for certain individual projects, depending on the nature of the project, and the associated mitigation measures identified in the RTP EIR would not be applicable required. Where subsequent environmental review is required, such review would focus on project-specific significant effects (and if necessary project-specific mitigation measures) specific to the project, or its site, that have not been considered in this program EIR.

1.3 SCOPE AND CONTENT OF THE EIR

In accordance with the CEQA Guidelines, a Notice of Preparation (NOP) of a Draft EIR was circulated to the public on October 29, 2013. The NOP and Initial Study, included in Appendix A, indicated that the following issues would be further evaluated in the EIR. These include:

- *Air Quality*
- *Biological Resources*
- *Environmental Justice*
- *Geology and Soils*
- *Greenhouse Gas Emissions*
- *Hydrology and Water Quality*
- *Noise*
- *Transportation*

This EIR document includes discussions of environmental impacts related to several issue areas. The analysis of environmental impacts identifies impacts by category: significant and unavoidable (Class I), significant but mitigable (Class II), adverse but less than significant (Class III), and beneficial (Class IV). It proposes mitigation measures, where feasible, for identified significant environmental impacts.

The CEQA Guidelines also require the analysis of the cumulative effects of a project in combination with other foreseeable development in the area. Section 15130 of the State CEQA



Guidelines prescribes two methods for analyzing cumulative impacts: (1) use of a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts; or (2) use of a summary of projections contained in an adopted general plan or related planning document. However, this document is a Program EIR that analyzes the effects of cumulative buildout of the RTP. The proposed RTP considers the past, present, and future projects described in method 1 above and proposes a range of specific land use and transportation projects designed to meet the plan goals and current and projected future needs. The project also constitutes the cumulative scenario described in method 2. Therefore, the cumulative effects of all circulation system improvements in the region are included in the analysis of the proposed project’s impacts. The analysis of project impacts contained in this “first tier” environmental review document will form the basis for the cumulative analysis contained in any subsequent environmental documentation for specific projects proposed under the RTP.

HCAOG received two responses to the NOP. The letters, included in Appendix A, are addressed as appropriate in the analysis contained in the various subsections of Section 4.0, *Environmental Impact Analysis* and/or in the Initial Study (see Appendix A). A summary of the environmental topics of concern discussed in the comment letters and at the public scoping session follows in Table 1-1. HCAOG also held an EIR scoping meeting on November 21, 2013, at the HCAOG offices located at 611 “I” Street, Suite B, Eureka, CA 95501. Input from that meeting is also reflected in the EIR analysis and a summary of the verbal comments received is included in Appendix A.

**Table 1-1
 Environmental Scoping Comments Received – Areas of Concern/Controversy**

Subject	Where Subject is Addressed in EIR
Aesthetics – Visual Resources	Initial Study (EIR Appendix A)
Agricultural Resources – Trails in proximity to agricultural lands	Initial Study (EIR Appendix A)
Biological Resources	Section 4. 3 Biological Resources
Cultural Resources	Initial Study (EIR Appendix A)
Geology	Section 4.4 Geology and Soils
Hazardous Materials/Water Quality during construction	4.5 Hydrology and Water Quality
Land Use and Planning – consistency with plans and policies, land use compatibility	Initial Study (EIR Appendix A)
Traffic – construction and operational traffic	Section 4.8 Traffic and Circulation

1.4 EIR BASELINE AND APPROACH FOR IMPACT ANALYSIS

Section 15125 of the CEQA Guidelines states that an EIR “must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation [NOP] is published.” Section 15125 states that this approach “normally constitute[s] the baseline physical conditions by which a lead agency determines whether an impact is significant.” In certain instances, the lead agency has the discretion to use a baseline other than existing conditions at the time of the release of the NOP based on the information available at the time the analysis is being performed.



This EIR evaluates potential impacts against existing conditions at the time of the release of the NOP (October 2013), where information is available, for issue areas that would not be substantially influenced by future regional growth that would occur with or without implementation of the RTP. It was determined that for these issues a comparison to current, existing baseline conditions would provide the most relevant information for the public, responsible agencies, and HCAOG decision-makers. These issue areas include:

- Aesthetics
- Biological Resources
- Cultural Resources
- Energy
- Environmental Justice
- Geology
- Hydrology
- Land Use

For the air quality, greenhouse gas emissions, noise, and traffic environmental impacts due to the Project, this EIR evaluates potential impacts against both (1) a forecast future baseline condition and (2) current, existing baseline conditions, controlling for impacts caused by population growth and other factors that would occur whether or not the RTP is adopted. The RTP is a long-term, approximately 20-year plan that proposes transportation projects to the year 2035. It is important to emphasize that population growth, urbanization and volume of average daily traffic generated in the HCAOG region will increase by 2035, with or without implementation of the RTP, as a result of a range of demographic and economic factors independent of policy and land use decisions by HCAOG and its member agencies. This EIR evaluates potential impacts against both a future baseline and a current baseline standard.

An analysis that attributed physical environmental impacts solely to the RTP that are in fact due to future regional growth that would occur in the absence of the RTP would overstate the impacts caused by the RTP. For this reason, certain environmental issues analyzed in the EIR compare future conditions including the RTP with the expected future conditions without the RTP (the “future baseline”) as well as to the current baseline, controlling for future regional growth that would occur independently of the RTP. These comparisons isolate environmental effects potentially resulting from the RTP from those caused by future growth that would occur regardless of the RTP, as compared to existing baseline conditions in October 2013.

Identification of potential impacts and mitigation measures for these environmental issue areas is therefore based on the increment of physical change due to the RTP, rather than the future regional growth that would occur regardless of whether or not the plan is adopted and implemented. The environmental issue areas for which this approach is used include the following:

- Air Quality
- Greenhouse Gases Emissions/Climate Change
- Noise
- Transportation and Circulation



1.5 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

HCAOG is the lead Agency under CEQA for this EIR because it has discretionary authority to determine whether or how to approve the RTP 2013/14 Update.

“Responsible Agencies,” are other agencies that are responsible for carrying out or implementing a specific component of the RTP or for approving a project included in the RTP or that implements the goals and policies of the RTP. Section 15381 of the State CEQA Guidelines defines a “responsible agency” as:

A public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For purposes of CEQA, responsible agencies include all public agencies other than the lead agency that have discretionary approval authority over the project.

It should be noted that additional environmental review may be required by the responsible agency for individual projects contained within the RTP. Future approvals for individual transportation projects identified in the RTP would have to be completed by the following agencies:

- HCAOG
- California Department of Transportation (Caltrans)
- California Public Utilities Commission’s Rail Crossings Engineering Section (RCES)
- Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad
- County of Humboldt
- U.S. Department of Transportation, Federal Highways (FHWA) or Federal Transit (FTA) Administrations

Trustee agencies have jurisdiction over certain resources held in trust for the people of California but do not have a legal authority over approving or carrying out the project. CEQA Guidelines Section 15386 designates four agencies as potential Trustee Agencies for projects subject to CEQA: The California Department of Fish and Wildlife (CDFW) with regard to fish and wildlife, native plants designated as rare or endangered, game refuges, and ecological reserves; the California State Lands Commission, with regard to state-owned “sovereign” lands, such as the beds of navigable waters and state school lands; the California Department of Parks and Recreation, with regard to units of the state park system; and the University of California with regard to sites within the Natural Land and Water Reserves System.

1.6 INTENDED USES OF THE EIR

This EIR discloses the possible environmental consequences associated with the proposed RTP 2013/14 Update. The information and analysis in this EIR will be used by HCAOG, responsible and trustee agencies, and the general public.



The purpose of this EIR is to:

- *Provide information about the RTP for consideration by the lead agency in its selection of an alternative or a combination of various elements from each alternative for approval;*
- *Review and evaluate the potentially significant environmental impacts that could occur as a result of development envisioned in the RTP;*
- *Identify feasible mitigation measures that may be incorporated into the project in order to reduce or eliminate potentially significant effects;*
- *Disclose any potential growth-inducing and/or cumulative impacts associated with the RTP; and*
- *Examine a reasonable range of alternative growth scenarios that could feasibly attain the basic “project” objectives, while eliminating and/or reducing some or all of the potentially significant adverse environmental effects.*

Analysis of site-specific impacts of individual projects is not the intended use of a program EIR. Many specific projects in the RTP 2013/14 Update are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each project will be undertaken as necessary by the appropriate implementing agency prior to each project being considered for approval at the local level. This program EIR serves as a first-tier environmental document under CEQA supporting second-tier environmental documents for:

- Transportation projects developed during the engineering design process.

Project sponsors implementing transportation projects would undertake future environmental review for projects in the proposed RTP 2013/14 Update. These Sponsor (or implementing) agencies would include the cities within Humboldt County as well as Humboldt County, Caltrans, and public transit agencies. In sponsoring individual projects, local agencies may choose to take advantage of the streamlining benefits of the Program EIR, or to engage in their own environmental review without use or reference to the Program EIR. If they so choose, these agencies would be able to prepare subsequent environmental documents that incorporate by reference the appropriate information from this Program EIR regarding secondary effects, cumulative impacts, broad alternatives, and other relevant factors. If the lead agency finds that implementation of a later activity would have no new effects and that no new mitigation measures would be required, that activity would require no additional CEQA review. Where subsequent environmental review is required, such review would focus on project-specific significant effects (and if necessary project-specific mitigation measures) specific to the project, or its site, that have not been considered in this program EIR.

Additional environmental review for individual transportation projects by the project sponsors may also require National Environmental Policy Act (NEPA) review if a transportation project would utilize federal funds in addition to any California state funding mechanisms.

1.7 EIR PROCESS

The environmental review process, as required under CEQA, is summarized below.

1. **NOP.** After deciding that an EIR is required, the lead agency must file an NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties



previously requesting notice in writing (CEQA Guidelines Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the County Clerk's office for 30 days. For projects of regional significance, the lead agency holds a scoping meeting during the 30-day NOP review period.

2. **Draft EIR.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) a discussion of alternatives; g) mitigation measures; and h) discussion of irreversible changes.
3. **Notice of Completion.** Upon completion of a Draft EIR, the lead agency must file a Notice of Completion with the State Clearinghouse and prepare a Public Notice of Availability of a Draft EIR. The lead agency must place the Notice in the County Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the Notice to anyone requesting it (CEQA Guidelines Section 15087). In addition, public notice of the availability of the Draft EIR must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off of the project site; or c) direct mailing to owners and occupants of contiguous properties and others who have requested such notification. The lead agency must solicit comments from the public and respond in writing to all written comments received (Public Resources Code Sections 21104 and 21253). The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days (Public Resources Code Section 21091).
4. **Final EIR.** Following the close of the Draft EIR review period, a Final EIR is prepared. The Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) a list of persons and entities commenting; and d) responses to comments.
5. **Final EIR Certification.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving the project (CEQA Guidelines Section 15090).
6. **Lead Agency Project Decision.** Upon certification of an EIR, the lead agency makes a decision on the project analyzed in the EIR. A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (CEQA Guidelines Sections 15042 and 15043).
7. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project



alternatives infeasible (CEQA Guidelines Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision and explains why the project's benefits outweigh the significant environmental effects.

8. **Mitigation Monitoring/Reporting Program.** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

1.8 INCORPORATION BY REFERENCE

Consistent with CEQA Guidelines Section 15150, this EIR incorporates by reference documents which are a matter of public record and generally available to the public. These documents include:

- Draft RTP 2013/14 Update prepared by HCAOG (Prepared September 2013; revised May 2014)
- Performance Metrics and Traffic modeling data related to the RTP performed by the California Department of Transportation (Caltrans) and Cambridge Systematics, Inc. (May 2014)
- Methodology Report for the Emissions Analysis of the 2013 Regional Transportation Plan Update and the Emissions Results performed by the Redwood Coast Energy Authority (May 2014).

As noted in CEQA Guidelines Section 15150, where all or part of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the text of the EIR. These documents are discussed and utilized in the setting and impact analysis of this EIR as they related to traffic, air quality, environmental justice, and greenhouse gas emissions and thus are discussed in Sections 4.1, *Air Quality*, 4.3, *Environmental Justice*, 4.5, *Greenhouse/Climate Change*, and 4.8, *Transportation and Circulation*. These documents are listed in the references section in Section 7.0, *References and Report Preparers*, and each document incorporated by reference is available for public review by contacting Oona Smith, Senior Planner at the HCAOG offices located at 611 "I" Street, Suite B, Eureka, CA 95501.

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2.0 PROJECT DESCRIPTION

2.1 PROJECT APPLICANT

Humboldt County Association of Governments (HCAOG)
611 "I" Street, Suite B
Eureka, CA 95501

2.2 PROJECT LOCATION

The Humboldt Regional Transportation Plan (RTP) 2013/14 Update encompasses areas throughout Humboldt County, covering the seven incorporated cities, the unincorporated county, tribal lands, and state highways (as shown on Figure 2-1). Capital improvement projects identified in the RTP are located on state highways, tribal lands, county roads, and locally owned streets (as shown on Figure 2-2).

2.3 PROJECT CHARACTERISTICS




The proposed project is the update of the Regional Transportation Plan (RTP) for Humboldt County. The RTP is a long-range planning document and is a programmatic document in that the act of adopting the RTP would not, in itself, result in the implementation of transportation system improvement projects or programs identified in this document. Rather, the RTP provides a course for future transportation investment in the region, with the objective of building and maintaining a multi-modal, safe and efficient, balanced transportation system, which also balances moving goods and people with sustaining non-renewable resources. California Government Code Section 65080 et seq. and Title 23 United States Code (USC) §134 require each Regional Transportation Planning Agency (RTPA) and Metropolitan Planning Organization (MPO) to prepare and adopt an RTP aimed at achieving a coordinated and balanced regional transportation system. The plan must be action-oriented and pragmatic, must consider both the short-term and long-term future, and shall present clear, concise policy guidance to local and state officials.

The plan's overall goal is for Humboldt County to have a comprehensive, coordinated and balanced multi-modal transportation system, so that people in the region can travel and move goods safely and efficiently by the modes that best suit the individual or business/industry, and society at large. HCAOG's overall objective is to program all funds based on multi-modal transportation goals and objectives, and needs and priorities as established in the Regional Transportation Plan. HCAOG will work towards this goal by pursuing six main objectives/planning priorities as described in detail in Section 2.3.3 below.

HCAOG adopted the last RTP in 2008. The RTP 2013/14 Update helps chart the course to provide *Variety in Rural Options of Mobility*. The update's short name is "VROOM." VROOM plans for: Complete Streets (covering roadway, pedestrian, and bicycle systems), Trails (commuter), Tribal Transportation, Public Transportation, Aviation, Goods Movement, Emergency Transportation, and Finance. This update reflects changes in legislative requirements, local land use policies, and resource constraints.





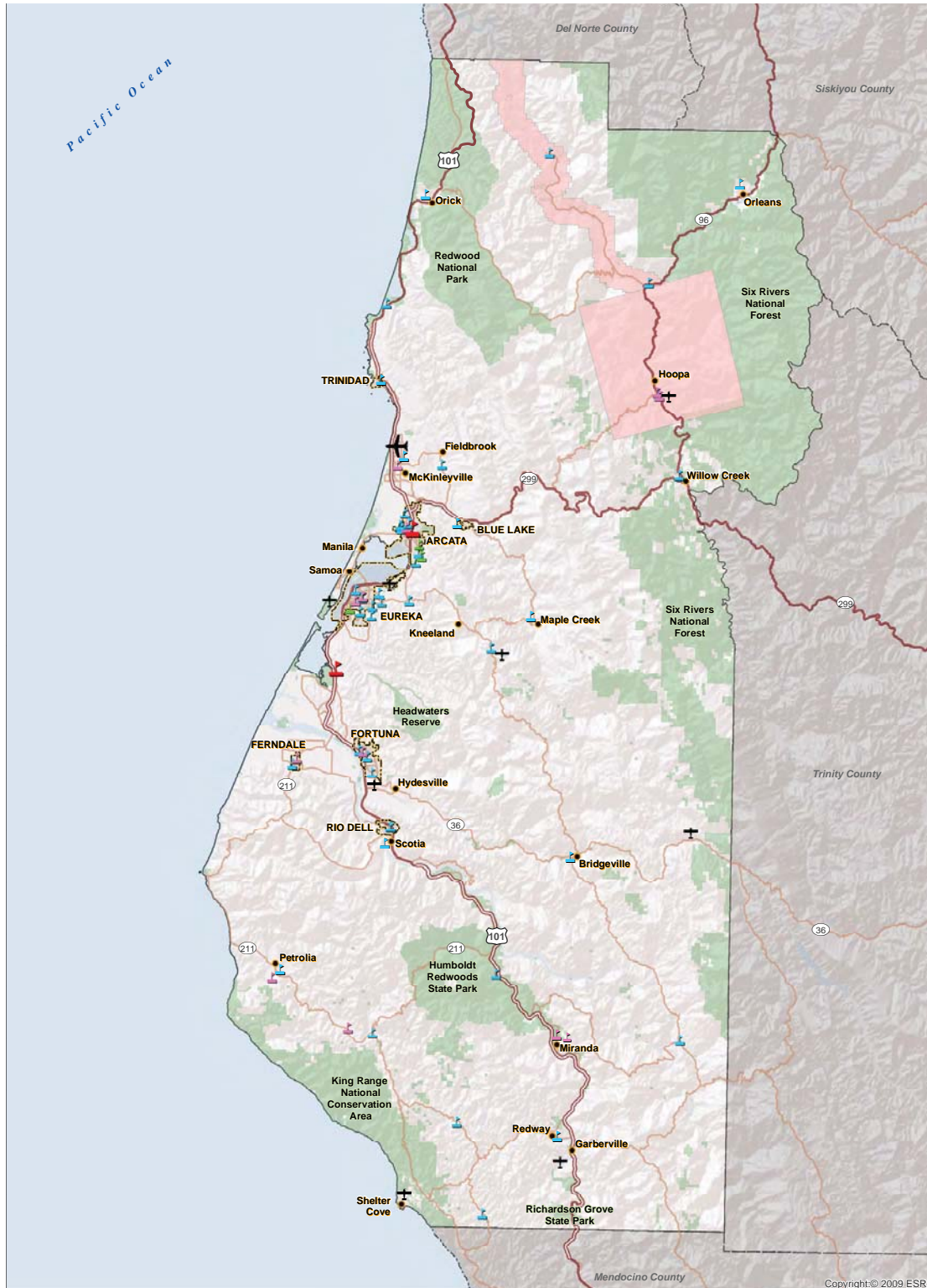
-  Freeway
-  Highway
-  California Counties
- Eureka** City/Town



This map is not a Transportation Route Guide
 This map is for illustrative and general planning purposes only, and though care has been taken to ensure that the data is accurate, maps and data are provided without warranty of any kind. Data source: HCAOG; Humboldt County GIS; ESRI. Map created by: amshows

Regional Location

Figure 2-1



- Unincorporated Town
- Incorporated City
- Elementary School
- Middle School
- High School
- College/University
- General Aviation Airport
- Commercial Airport
- Freeway
- Highway
- Major Road
- Native American Reservation/Rancheria
- Open Space/Park
- California Counties



0 10 10
 Kilometers
 0 10 10
 Miles

This map is not a Transportation Route Guide
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 and though care has been taken to ensure that the data is
 accurate, maps and data are provided without warranty of any kind.
 Data source: HCAOG; Humboldt County GIS; ESRI.
 Map created by: amshows

Project Location

Figure 2-2

The RTP identifies the region's transportation needs and issues and sets forth actions, programs, and projects to address those needs and issues. In addition, the RTP adopts policies, sets goals, and identifies financial resources to encourage and promote the safe and efficient management, operation, and development of a regional intermodal transportation system that would serve the mobility needs of people and goods.

2.3.1 Legislative Requirements

State and federal laws require RTPAs located in air quality nonattainment and maintenance areas to update and adopt an RTP every four years. RTPAs located in federally designated air quality attainment areas, or that do not contain an urbanized area, may optionally adopt an RTP every five years.

Pursuant to Title 23 CFR Part 450.322 et seq., the Federal Highway Administration (FHWA) describes the development and contents of RTPs as follows:

"The transportation plan is the statement of the ways the region plans to invest in the transportation system. The plan shall "include both long-range and short-range program strategies/actions that lead to the development of an integrated intermodal transportation system that facilitates the efficient movement of people and goods." The plan has several elements, for example: Identify policies, strategies, and projects for the future; Determine project demand for transportation services over 20 years; Focus at the systems level, including roadways, transit, non-motorized transportation, and intermodal connections; Articulate regional land use, development, housing, and employment goals and plans; Estimate costs and identify reasonably available financial sources for operation, maintenance, and capital investments); Determine ways to preserve existing roads and facilities and make efficient use of the existing system; Be consistent with the statewide transportation plan; and Be updated every five years or four years in air quality nonattainment and maintenance areas. MPOs should make special efforts to engage interested parties in the development of the plan. In cases where a metropolitan area is designated as a nonattainment or maintenance area, the plan must conform to the SIP for air quality."

The most recent federal transportation legislation, the Moving Ahead for Progress in the 21st Century Act (MAP-21), was enacted in 2012. MAP-21 encourages HCAOG to, through the RTP development process:

Consult with officials responsible for other types of planning activities that are affected by transportation in the area (including State and local planned growth, economic development, environmental protection, airport operations, and freight movements) or to coordinate its planning process, to the maximum extent practicable, with such planning activities.¹

¹ 23 U.S.C. §134(g)(3)(A).



Specifically, MAP-21 requires that the RTP planning process:

Provide for consideration of projects and strategies that will:

- (A) *support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;*
- (B) *increase the safety of the transportation system for motorized and non-motorized users;*
- (C) *increase the security of the transportation system for motorized and non-motorized users;*
- (D) *increase the accessibility and mobility of people and for freight;*
- (E) *protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;*
- (F) *enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;*
- (G) *promote efficient system management and operation; and*
- (H) *emphasize the preservation of the existing transportation system.²*

The Draft RTP 2013/14 Update discusses in detail how these requirements are met. Other federal requirements include consistency with the 1990 Clean Air Act Amendments and consistency with the Federal Transportation Improvement Program (FTIP). Specific requirements of these two programs are described in the Draft RTP 2013/14 Update, which is available for review at HCAOG and at www.hcaog.net.

2.3.2 Project Objectives

Under its authority as the Regional Transportation Planning Agency for Humboldt County, HCAOG is updating its Regional Transportation Plan, VROOM, in conformance with the California Transportation Commission's adopted RTP Guidelines, and pursuant to Government Code §65080 et seq. of Chapter 2.5, federal legislation; U.S. Code, Title 23, §134 and §135 et seq. The intent of the proposed RTP's projects include reducing idling and congestion and improving traffic flow and safety.

The RTP 2013/14 Update is intended to fulfill these objectives:

- Adopt RTP policies that will guide the development of an efficient, coordinated, balanced regional transportation system, and to improve the mobility of Humboldt County residents, visitors, and goods.
- Assess the current modes of transportation and the potential of new travel and goods movement options within the region;
- Identify and document specific actions necessary to address the region's needs for mobility, accessibility, and goods movement for the next 20 years.
- Identify objective criteria for measuring the performance of the transportation system;

² 23 U.S.C. §134(h)(1).



- Identify and document public policy decisions by local, regional, state and federal officials regarding transportation expenditures and financing;
- Identify needed transportation improvements in sufficient detail to serve as a foundation for:
 - Developing the Federal Transportation Improvement Program (FTIP), the Regional Transportation Improvement Program (RTIP) and the Interregional Transportation Improvement Program (ITIP);
 - Facilitating National Environmental Protection Act (NEPA)/404 integration process decisions;
 - Identifying project purpose and needs; and
 - Developing an estimate of emissions impacts for demonstrating conformity with the air quality standards identified in the State Implementation Plan (SIP).
- Promote consistency between the California Transportation Plan, the regional transportation plan and other transportation plans developed by cities, counties, districts, private organizations, tribal governments, and state and federal agencies;
- Provide a forum for: (1) participation and cooperation, and, (2) facilitating partnerships that reconcile transportation issues which transcend regional boundaries and;
- Involve the public, federal, State and local agencies, and local elected officials early in the transportation planning process by including them in dialogue and decisions on the social, economic, air quality and environmental issues related to transportation.

2.3.3 Contents of RTP

HCAOG decides how to program transportation funds based on multi-modal goals and objectives, and needs and priorities as established in the RTP. The RTP's policies and proposed projects pursue six main objectives/planning priorities (in alphabetical order), which the RTP applies to each mode:

- Balanced Mode Share/Complete Streets – Increase multi-modal mobility, balanced mode shares, and/or access. Mobility means having travel choices (for people and goods) with predictable trip times. A balanced mode share means all transportation modes are available in proportion to their efficiency and short-term and long-term costs and benefits. Increased access means more options for people to reach the goods, services, and activities they need.
- Economic Vitality – Support the local or regional economy by improving goods movement and transportation access, efficiency, and cost-effectiveness; by enhancing economic attractors (e.g. via walkable streets, multiuse trails, transit service); by indirectly cutting health care costs due to more active transportation or less transportation-related pollution; and by reducing consumption of foreign energy resources.
- Efficient & Viable Transportation System – Make the transportation system operate more efficiently, such as by reducing traffic congestion and using Intelligent Transportation System (ITS) management (e.g. Greater Eureka Area Travel Demand Model, Street Saver, GPS tracking on transit buses, other management programs). Make the system more financially and operationally viable such as by prioritizing cost-



effective investments, pursuing stable funding, and preserving transportation assets to maximize resources and future use.

- Environmental Stewardship – Enhance the performance of the transportation system while protecting and enhancing the natural environment. Strive to achieve goals of California Global Warming Solutions Act of 2006 (AB 32) and Sustainable Communities and Climate Protection Act of 2008 (SB 375), protect and improve air, water, and land quality, help reduce transportation-related fuel and energy use, help reduce single-occupancy-vehicle (SOV) trips and motorized vehicle miles traveled (VMT), etc.
- Equitable & Sustainable Use of Resources – Advocate for transportation costs and benefits (financial, environmental, health, and social) to be shared fairly. Prioritize projects based on cost effectiveness as well as need and equity for underserved populations. Coordinate transportation systems with land use to use resources efficiently and to minimize the consumption of finite resources (e.g., fossil fuels).
- Safety – Increase safety for users (one or more modes). Reduce transportation-related fatalities and serious injuries.

The RTP includes a Needs Assessment and an Action Plan in the Complete Streets, Public Transportation, Aviation, and Goods Movement Elements (required per CTC Guidelines). These Action Plans consist of projects proposed by HCAOG’s member jurisdictions (the County of Humboldt and the cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad) and standing committees, as well as tribal governments. Additionally, the Goods Movement Action Plan includes projects from the Humboldt Bay Harbor, Recreation and Conservation District. The Public Transportation Element Action Plan includes projects from the Humboldt Transit Authority as well as from local public transportation providers. Some short-term projects (0-10 years) have already been fully funded; others are partially funded and/or await being programmed or planned. Many projects are long-term (11 to 20 years) with no secured funding. With the current state of federal transportation funding (e.g., the Federal Highway Trust Fund and the State Highway Account are at risk of chronic shortfalls or insolvency), proposed projects that are for the longer term and have no funding can be considered speculative at the moment.

The RTP 2013/14 Update’s proposed Complete Streets regional projects are listed in Table 2-1 on the following page. Table 2-2 provides a list of regional trails projects. Table 2-3 includes a list of regional public transportation projects. Table 2-4 provides a list of regional projects related to goods movements. Table 2-5 provides a list of regional aviation projects. And Table 2-6 provides a list of regional emergency transportation projects. The environmental impact analysis in this EIR includes a programmatic review of the projects contained in Tables 2-1 through 2-6. HCAOG programmatically reviewed these projects, some of which could have significant impacts, and identified relevant mitigation measures that could be used by local agencies to mitigate impacts to a less than significant level. However, as discussed in Section 1.6, individual specific environmental analysis of each project will be undertaken, as necessary, by the appropriate implementing agency prior to each project being considered for approval {by whom} the local agency. Each mitigation measure identified in the RTP EIR may not be applicable for a specific project, and measures may need to be adapted or adjusted in response to site-specific conditions. In sponsoring individual projects, local agencies may choose to take



advantage of the streamlining benefits of the Program EIR, including ~~the use of~~ using any suggested mitigation measures, or they may choose to engage in their own environmental review without ~~using or reference~~ referring to the Program EIR. ~~Where subsequent~~ When environmental review is required subsequent to the Program EIR, such review would focus on project-specific significant effects (and, if necessary, project-specific mitigation measures) peculiar to the project, or its site, that have not been considered in this program EIR. Further, the EIR analysis does not apply to projects (including any Caltrans or Harbor District related projects) for which funding is not programmed through HCAOG.



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Agency: City of Arcata											
Old Arcata Road Buttermilk to Jacoby Creek Rd	ST	X	X	X	X	X	X	Rehab, ped-bike and calming improvements, gateway at Jacoby Creek Road	Measure G	2014-16	\$950
Residential streets citywide	ST				X	X	X	Annual residential streets improvement program (see City's PMP)	Measure G	2014-24	\$2,500
Valley East and Valley West Improvement project	ST	X	X	X	X	X	X	Roadway rehab with improvements for bike, ped transit, landscaping and gateway	Not funded Measure G match	2016	\$1,000
Hwy 255 at 101 Roundabouts	ST	X	X	X	X		X	Convert clover leaf intersection to 2 roundabouts, ped-bike access across bridge (non-existent), add transit park-and-ride, remove 1 mile paved roadway (mitigation)	Not funded	2018-20	\$2,000
Hwy 101 at Sunset and L.K Wood Blvd Roundabout	ST	X			X	X	X	Convert 5-way intersection to roundabout and create safer segregated bike/ped facilities	Not funded City match	2018-20	\$650
Guintoli Lane-Hwy 299 intersections, Valley West and Valley East to West End Rd	ST	X	X			X	X	Rehab, restripe and improve LOS (roundabouts or channelization). Potential bus park-and-ride at Wymore Road	Measure G, apply for grant funds*	2018-22	\$2,200
Annual Roadway Improvements Project (based on city pavement management program)	ST			X	X	X	X	Principally on city bus routes; arterial and collectors (refer to City PMP)	Measure G, apply for grant funds*	2014-24	\$8,000
								*Assumes 50% Measure G match + 50% grant funds	<i>Arcata ST Subtotal</i>		17,300
									<i>Arcata LT Subtotal</i>		\$ -
¹ Short-term (ST) is the next 1 to 10 years; long-term (LT) is the next 11 to 20 years. ² Assume 3% annual inflation.											



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Agency: City of Blue Lake											
South Railroad Ave from Chartin Way to Broderick Ln	ST	X	X	X		X	X	Repave and add pedestrian improvements "Annie and Mary" Trail, rehab and reconstruction	Not funded	2018/19	\$2,000
Greenwood Rd/Railroad Ave/Hatchery Rd, from Blue Lake Blvd to Mad River Bridge	ST	X	X			X	X	Overlay and pedestrian improvements, rehab and reconstruction	Not funded	2016/17	\$3,000
Hartman Lane/G Street, from Blue Lake Blvd. to Railroad Ave.	ST	X	X			X	X	Rehab and reconstruct with ped improvements	Not funded	2020/21	\$1,400
I Street, from Blue Lake Blvd. to First Avenue	LT	X	X			X	X	Rehab and reconstruct with ped improvements	Not funded	2023/24	\$1,200
Annie and Mary Trail, from Chartin Road to City Limits	LT	X	X	X			X	Rail/Trail	Not funded	2023/24	\$1,500
									<i>Blue Lake ST Subtotal</i>		\$6,400
									<i>Blue Lake LT Subtotal</i>		\$ 2,700
Agency: City of Eureka											
Harrison Ave from Harris St to Myrtle Ave	ST	X	X	X	X	X	X	TWLTL, Bike lanes, bus pullouts	Not funded		\$2,000
Harris St from H St to J St	LT		X		X	X	X	Signalization and signalization modifications	Not funded		\$700
Henderson St from I St to S St	LT	X	X	X	X	X	X	Convert to one-way street, install bike facility, bus pullout	Not funded		\$500
Myrtle Ave from 5 th St to Harrison Ave	LT	X	X	X	X	X	X	Congestion relief, ADA, bike facility	Not funded		\$500
South Gateway of Eureka	ST		X	X			X	Beautification and traffic calming	Not funded		\$1,688



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Waterfront Dr from G St to J St	ST	X	X		X		X	Connection Phase 2	STIP	2015/16	\$4,059
Eureka Waterfront Trail from Del Norte to Truesdale St (Phase A)	ST		X	X			X	Class I multi-use trail	Non-Freeway Funds (ENFY)	2015/16	\$1,450
Waterfront Trail from Del Norte to C St (Phase B)	ST		X	X			X	Class I multi-use trail	Partially funded, TE reserve	2015/16	\$100
Waterfront Trail Adorni to Tydd (Phase C)	STY		X	X			X	Class I multi-use trail	Partially funded, TE reserve		
Hawthorn St from Broadway to Felt, Felt St from Hawthorn to Del Norte, and 14th St from M St to West Ave	ST	X	X			X	X	Road rehabilitation, ADA, bicycle facility	STIP	2014/15	\$400
Highland Ave from Broadway to Utah St and Koster St from Del Norte to Washington St	ST		X			X	X	Road rehabilitation, ADA	STIP	2014/15	\$400
3rd St from L St to R St and Glen St from Harris St to Allard St	ST	X	X			X	X	Road rehabilitation, ADA, bicycle facility	Not funded		\$200
6 th St from I St to Myrtle Ave, and 7 th St from Broadway to J St	ST	X	X	X	X	X	X	Road rehabilitation, ADA, bike lanes, bus pullouts	Not funded		\$500
H St from 7 th St to Harris St	ST	X	X	X	X	X	X	Road rehab, ADA and bus pullouts	Not funded		\$700
City-wide	LT				X	X	X	Improve transit stop pullouts	Not funded		\$500
Walnut Dr at Hemlock St	LT				X	X	X	Traffic signalization	Not funded		\$300
Eureka TBD	LT	X	X	X	X	X		Eureka Intermodal Transit Center	Not funded		\$14,000



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
City-wide	LT			X	X	X	X	Bicycle facilities per Humboldt Regional Bicycle Plan 2012	Not funded		\$3,239
6th, 7th, and Henderson Streets	LT		X	X		X	X	Pedestrian improvements per Humboldt Regional Pedestrian Plan 2008	Not funded		\$165
									<i>Eureka ST Subtotal</i>		\$11,397,497
									<i>Eureka LT Subtotal</i>		\$ 495,904
Agency: Hoopa Valley Tribal Roads Department											
SR 96	ST	X	X		X		X	Downtown traffic calming & safety enhancements	Partially funded	2013-16	\$4,400
SR 96	ST					X	X	Reservation-wide safety enhancements; SR2S & pedestrian walkways	Not funded	2014-20	\$12,500
SR96, Trinity River Bridge	ST	X	X				X	Safety enhancement; cantilevered walkway	Not funded	2015-25	\$12,500
Bair Ranch Road, Humboldt County Road	ST				X	X		Reconstruction of roadway for emergency access	Not funded	2015-20	\$750
On SR96 at Blue Slide	LT		X		X	X		New bridge crossing the Trinity River to K'ima:w Medical Center	Not funded	2020-35	\$45,000
Tish Tang Road from SR 96 to Medical Center & Hoopa Airport	LT		X		X	X	X	Reconstruct Tish-tang(county road)	Not funded	2020-35	\$6,500
									<i>Hoopa ST Subtotal</i>		\$30,150
									<i>Hoopa LT Subtotal</i>		\$51,500
Agency: City of Ferndale											
Rose Ave/Herbert St - East City limits to Main St	ST	X					X	Class II bike path	Not funded	2019	\$24.0
5th St - Van Ness Ave to Ocean Ave	ST	X					X	Class II bike path	Not funded	2019	\$14.415



Table 2-1
Complete Streets Proposed Regional Projects
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Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Arlington Ave - 5th St to Main St	ST	X					X	Class II bike path	Not funded	2019	\$19.8 <u>20</u>
Ocean Ave - West City limits to East City limits	ST	X					X	Class II bike path	Not funded	2019	\$21.6 <u>22</u>
Wildcat Rd - Ocean Ave to south City limits	ST	X					X	Class III bike path	Not funded	2017	\$0.5 <u>1</u>
Main St - Ocean Ave to north City limits	ST	X					X	Class III bike path	Not funded	2017	\$38.0
Van Ness Ave - 5th St to Main St	ST	X					X	Class III bike path	Not funded	2017	\$0.6 <u>1</u>
Shaw Ave - Ocean Ave to Berding St	ST	X					X	Class III bike path	Not funded	2017	\$ 37.0
Ocean Ave - Strawberry Ln heading east towards trailhead	ST	X	X				X	Multipurpose trail (Class 1 bike path)	Not funded	2018	\$36.0
5th St - Van Ness Ave to Ocean Ave	ST	X	X				X	Multipurpose trail (Class 1 bike path)	Not funded	2018	\$174.0
Lincoln St - Grant Ave to East City limits	ST	X	X				X	Multipurpose trail (Class 1 bike path)	Not funded	2018	\$12.0
Ocean Ave - Craig St to Russ Park trailhead	ST	X	X				X	New sidewalk	Not funded	2016	\$97.5 <u>98</u>
5th St - Arlington Ave to Fairview North and piece on Arlington Ave	ST	X	X				X	Curb and gutter and new sidewalk	Not funded	2015	\$54.0
Berding St-Rose Ave to Lewis St	ST	X	X				X	New sidewalk (Ped 2)	STIP/TE	2013	\$50.0
Rose Ave - Berding to Herbert St	ST	X	X				X	New sidewalk (Ped 2)	STIP/TE	2013	\$147.0
Main St - North City limits to Arlington Ave; citywide	ST	X	X				X	Misc. ADA improvements	Not funded	2015	\$150.0
Main St - Arlington Ave to Ocean Ave (Caltrans)	ST	X	X				X	Misc. ADA improvements		2014	\$600.0



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Francis St - Ocean Ave to Ferndale Public Works Bldg	ST	X	X			X		Roadway rehabilitation	Not funded	2016	\$80-0
Berding St - Herbert St to Eugene	ST	X	X			X		Roadway rehabilitation	Not funded	2015	\$1,400-0
Deferred Maintenance	LT					X		Misc. roadway maintenance	Not funded		\$3,290-51
										<i>Ferndale ST Subtotal</i>	\$ 29596-4
										<i>Ferndale LT Subtotal</i>	\$ 3,2910-5
Agency: City of Fortuna											
Ross Hill Road, Kenmar to School Street	ST	X	X	X	X		X	Pedestrian and Bike Safety improvements	Not funded	2015/16	\$800
Rohnerville Road, Redwood Way to Jordan Street	ST	X	X	X	X	X	X	Reconstruct w/sidewalk and bike lanes	STIP	2014/15	\$1,041
Rohnerville Road, Newell St. to Redwood Way	ST	X	X	X	X	X	X	Reconstruct w/ sidewalk and bike lanes	Not funded	2018/19	\$3,000
Fortuna Boulevard, Redwood Way to Kenmar Road	ST	X	X	X	X	X	X	Overlay w/ bike lane improvements	Not funded	2017/18	\$2,000
Redwood Way, Fortuna Blvd to Rohnerville Road	ST	X	X	X	X	X	X	Overlay w/ Pedestrian and bike lane improvements	Not funded	2017/18	\$1,000
12 th Street-Riverwalk Drive/US 101 South Onramps, Dinsmore Drive	LT	X	X	X	X		X	Reconfigure intersection to accommodate increased traffic, ped and bike demand.	Not funded		\$1,500
Newburg Road and 12 th Street/NB 101 ramps realignment	LT	X	X	X	X		X	Reconfigure intersection to accommodate increased traffic, ped and bike demand.	Not funded		\$1,500
										<i>Fortuna ST Subtotal</i>	\$ 7,841
										<i>Fortuna LT Subtotal</i>	\$3,000



Table 2-1
Complete Streets Proposed Regional Projects
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Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Agency: City of Rio Dell											
Wildwood Avenue from Eagle Prairie Bridge to Davis Street	ST	X	X	X		X	X	Transportation enhancement project adding raised center median and striped bike lanes to increase safety.	State Transp. Enhancement	2013	\$589
Wildwood Avenue at Center Street and Davis Street Safe Routes to School	ST	X	X	X				Traffic calming on Davis Street, including curb extensions, crosswalks and sidewalks. Lighted Pedestrian Crossing across Wildwood Avenue.	State Safe Routes to Schools	2013/14	\$152
Wildwood Avenue, Elko St. to Belleview Ave.	ST	X	X		X	X	X	Class III bike lanes including striping and signage.	Not funded	2013/14	\$35
Rigby Ave., Davis St. to Center St.	ST	X	X	X			X	Maintenance Paving and Bike Improvements, Class II bike lane, centerline stripe.	Not funded	2013/14	\$104
Wildwood Avenue at Intersection with Hwy 101 off-ramp	ST		X	X		X	X	Re-alignment of southbound off-ramp and pavement replacement between Caltrans paving project and City of Rio Dell project on Wildwood Ave.	Not funded	2014/15	\$135
Davis Street, Between Wildwood Ave. and Rigby Ave.	ST	X	X				X	Pedestrian/Bike Improvements, narrow crossing distance at Hwy 101 on-ramp. Class II bike lanes from Rigby Ave. to Ireland St. Class III bikes lanes from Ireland St. to Wildwood Ave.	Not funded	2014/15	\$53
1st Avenue and 2nd Avenue, from Elko St. to Columbus St.	ST		X					Signage and striping to accommodate emergency response vehicles.	Not funded	2014/15	\$44
Belleview Avenue, Wildwood Ave to River Street	ST	X	X				X	Class II bike lanes, signage and centerline striping.	Not funded	2014/15	\$69
2nd Ave., Davis St. to Columbus St.	ST		X	X				Maintenance paving project including 2" overlay and striping	Not funded	2014/15	\$106
Ogle Avenue, River Street to Creek Street	ST	X	X	X	X		X	Road reconstruction and drainage improvements	Not funded	2015/16	\$3,303



Table 2-1
Complete Streets Proposed Regional Projects
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Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Monument Road, Dinsmore Ranch Rd to Redwood Lane	ST				X		X	Drainage improvements including new inlets, valley gutter, ditch and storm piping	Not funded	2016/17	\$149
Riverside Dr., Eagle Prairie Rd. to Fern St.	ST		X	X				Maintenance paving project including 2" overlay and striping	Not funded	2016/17	\$156
Northwestern Ave, east entrance to Eel River Industries to cul-de-sac at Humboldt County right-of-way	ST	X	X		X	X		Centerline and edge striping from Eel River Industries to Metropolitan Heights Rd. Edge stripe from Metropolitan Heights Rd. to cul-de-sac at County right-of-way. Centerline monument	Not funded	2017/18	\$55
Ireland Ave., Davis St. to Painter St. and Dixie St., 4th Ave. to Davis St.	ST	X	X	X	X		X	Maintenance paving project, including 2" overlay and striping, including bikeway signage	Not funded	2017/18	\$19
Monument Road at Dinsmore Ranch Road	ST		X	X	X			Replacement of a failing timber post retaining wall	Not funded	2019/20	\$234
Belleview Avenue, Spring Street to 300 ft east and 750 ft east of Creek Street to 100 ft west of Creek Street.	ST		X	X				Maintenance paving project, including 2" overlay and striping.	Not funded	2019/20	\$112
Elm St., Pacific To Wildwood Ave. Orchard Pl., Cherry Ln. to Orchard St. Cedar St., Pacific Ave. to Wildwood Ave. View St., Douglas St. to Kelly St.	ST			X				Maintenance paving project, including 2" overlay and striping.	Not funded	2019/20	\$109
W. Painter St., Pacific Ave to 50' west of Rio Dell Ave. Butcher St., Pacific Ave. to Rio Dell Ave. Rio Dell Ave., W. Center St. to Townsend St. W. Townsend St., Rio Dell Ave. to Pacific Ave.	ST			X				Maintenance paving project, including 2" overlay and striping	Notfunded	2019/20	\$95



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Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Davis Street, Gunnerson Lane to Edwards Drive and Edwards Drive from Water Treatment Plant to Davis Street.	ST	X	X	X		X		Sidewalk, Class III bikeway and Class I Bike and Pedestrian path along Eel River gravel bar, including two trailheads.	Not funded	2021/22	\$246
Scenic Way at Eeloa Avenue	ST	X	X	X	X		X	Intersection Reconfiguration to improve pedestrian and bicyclist safety	Not funded	2023/24	\$572
Eel River bar, Davis Street to Eeloa Avenue	LT	X				X	X	Class I bike and pedestrian path along Eel River bar, including two trailheads	Not funded	2025/26	\$947
Railroad ROW, Eagle Prairie Bridge to Northwestern Avenue	LT	X		X		X	X	Class I bike and pedestrian path next to railroad tracks	Not funded	2027/28	\$2,394
									<i>Rio Dell ST Subtotal</i>		\$6,337
									<i>Rio Dell LT Subtotal</i>		\$3,341
Agency: Karuk Tribe											
Karuk Tribe/County: Red Cap Road, Orleans- see under County projects.											
Karuk Tribe/Caltrans: SR 96, Orleans	LT	X	X		X	X	X	Streescapes/Dip Improvement Project: roadway rehab, ped-bike-transit improvements, landscaping	FHWA TTP Safety funds	2016-20	\$1,100
Karuk Tribe/Caltrans: Tishawniik Hill, Camp Creek Road to Asip Road	LT	X	X	X	X	X	X	Class I trail (detour project) and Class II bikeway	FHWA TTP Safety funds	2021/22	\$1,400
									<i>Karuk Tribe LT Subtotal</i>		\$2,500
Agency: City of Trinidad											
Van Wycke Street Trail	ST	X	X	X	X		X	Reconstruction, Lights	Not funded	2016/17	\$372
Trinity Street	ST	X	X	X			X	Sidewalks, driveways & curb ramps	Not funded	2018/19	\$377



Table 2-1
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Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Patrick's Point Drive/Scenic Drive	ST	X	X	X			X	Sidewalks, Driveways & Curb Ramps	Not funded	2020/21	\$191
Patrick's Point Drive	ST		X			X		Overlay/Maintenance Paving	Not funded	2021/22	\$127
Main St, Trinity St, Westhaven Drive	LT		X			X		Overlay/Maintenance Paving	Not funded	2022/23	\$561
Edwards Street	LT		X			X		Overlay/Maintenance Paving	Not funded	2024/25	\$415
Frontage Road	LT					X		Overlay/Maintenance Paving	Not funded	2026/27	\$323
Parker Creek Drive	LT					X		Reconstruction	Not funded	2027/28	\$159
Edwards Street	LT	X	X	X			X	Sidewalks, Driveways & Curb Ramps	Not funded	2028/29	\$514
									<i>Trinidad ST Subtotal</i>		\$1,067
									<i>Trinidad LT Subtotal</i>		\$1,972
Agency: County of Humboldt											
Myrtle, Lucas, Harris, Eureka	ST	X		X	X		X	Sidewalk Infilling	STIP	2014	\$580
Myrtle Avenue, Freshwater	ST	X		X	X		X	Bicycle Lane Improvements – Pigeon Point to Mitchell	BTA	2013	\$200
Central Avenue, McKinleyville	ST	X			X		X	Central Avenue Median Installation – School to Hiller	HSIP	2014	\$700
Walnut & Fern Street, Cutten	ST	X		X	X		X	Traffic Signal Installation	STIP	2015	\$400
Honeydew Bridge	ST	X	X	X	X	X	X	Replace existing bridge	HBP	2014	\$6,200
Redway	ST	X		X	X		X	Pedestrian Safety Improvements	TE	2013	\$450
School Road – Salmon to Fischer, McKinleyville	ST	X		X	X		X	Sidewalks – Salmon to Fischer	TE	2013	\$650
School Road – Washington to Salmon, McKinleyville	ST	X	X	X	X	X	X	Sidewalks & bike lanes w/ roundabout Washington to Salmon	Prop 1B & Developer	2013	\$1,400
Briceland Thorne Road	ST				X		X	Curve Correction	HRRR	2013	\$800
Oak & F Street, Eureka	ST	X		X	X		X	Sidewalks, speed table crosswalk, center median haven	SR2S	2013	\$350



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Murray Road, McKinleyville	ST	X		X			X	Sidewalks, bulbouts, center median haven	SR2S	2013	\$100
Union Street	ST	X	X	X	X	X	X	Shoulder widening & geometric improvements	STIP	2013/14	\$2,881
Central Avenue	ST	X		X	X	X	X	Shoulder widening & overlay	Not funded	TBD	\$900
Harris & Hall	ST	X			X		X	Safety improvements	Not funded	TBD	\$500
Herrick & Elk River Intersection	LT	X	X	X	X	X	X	Signalize	Not funded	TBD	\$900
Fairfield, Meyer, Eureka	LT	X	X	X	X	X	X	Route improvement	Not funded	TBD	\$1,000
McKinleyville Avenue Extension	ST	X	X	X	X		X	Connect to School Road	Not funded	TBD	\$500
Bald Hills Road	LT		X	X	X			Pave Surface	Not funded	TBD	\$6,000
New Navy Base Road	LT	X	X	X	X	X	X	Reconstruct from SR 255 to Bay	Not funded	TBD	\$1,500
Myrtle Avenue at Freshwater Road	ST	X		X	X		X	Traffic Circle	Not funded	TBD	\$900
Central Avenue, McKinleyville	ST	X		X	X		X	Shoulder widening	Not funded	TBD	\$800
Central Avenue, McKinleyville	ST		X	X	X		X	Synchronize Traffic Signals	Not funded	TBD	\$800
Hammond Trail Bridge - Mad River	ST	X		X	X	X	X	Replace existing bridge	Not funded	TBD	\$3,200
Hammond Trail Bridge - Little River	ST	X	-	X	X	X	X	Construct bridge	Not funded	TBD	—\$2,000
Glendale Drive, Blue Lake	ST	X		X	X		X	Construct Class I Trail	Not funded	TBD	\$2,000
Humboldt Hill to Thompkins Hill	LT	X	X	X	X		X	Connector Road	Not funded	TBD	\$2,000
Harris to Fern Street, Cutten	LT	X	X	X	X		X	Connector Road	Not funded	TBD	\$2,000
Alderpoint/Mattole/Maple Creek	LT		X	X	X	X	X	Reconstruct rural routes	Not funded	TBD	\$100,000
Bell Springs Road	LT		X	X	X	X	X	Improve with Mendocino County	Not funded	TBD	\$10,000



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Briceland/Shelter Cove Roads	LT		X	X	X	X	X	Reconstruction/Safety Improve	Not funded	TBD	\$10,000
Fern Street, Cutten	LT	X	X	X	X		X	Complete Connection	Not funded	TBD	\$1,000
Red Cap Road, Orleans	ST	X	X		X	X	X	Shoulder Widening	Not funded	TBD	\$1,200
Garberville	ST	X	X		X	X	X	Context Sensitive Modifications	Not funded	TBD	\$1,500
Hoopla Downtown Corridor Project	ST	X			X	X	X	Context Sensitive Modifications (County portion only)	Not funded	TBD	\$250
									<i>Humboldt Co. ST Subtotal</i>		\$27,980 \$161
									<i>Humboldt Co. LT Subtotal</i>		\$ 134,400
Agency: California Department of Transportation											
101 Corridor Improvement Project	ST	X	X	X	X	X	X	Safety improvements at uncontrolled intersections	RTIP ITIP	2017/18 2017/18	\$24,658 28,380 \$15,000
U.S. Highway 101 / Broadway, Kmart to O Street	ST	X				X	X	ADA curb returns and ramp upgrades	2016 SHOPP	2018	\$3,000
101-In Arcata from 11th Street Overcross to the Arcata Overhead	ST						X	Install cable median barrier	2013 SHOPP	2013	\$ 1,000
101-From Arcata Slough Bridge to Arcata Overhead	ST	X	X	X	X	X	X	Eureka/Arcata capital preventative maintenance and restripe	2012 SHOPP	2013	\$14,000
101-Various locations from Westhaven Dr. to Trinidad Rd.	ST					X	X	Humboldt 101 seismic retrofit	2013 SHOPP	2014	\$4,000
101- Near Rio Dell from Eel River Bridge to S. of Van Duzen Bridge	ST						X	Median barrier installation	2013 SHOPP	2014	\$ 1,000
101 – Near Garberville near Richardson Grove	ST		X		X		X	STAA Operational Improvement Project	2011 SHOPP	NA	\$5,500



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
City of Fortuna Maintenance Station	ST		X		X		X	Excavate contaminated material	2014 SHOPP	2015	\$2,000
299-Near Willow Creek on Cedar Creek Road	ST				X	X	X	Cedar Gap curve improvement	2014 SHOPP	2012	\$1,000
299-Near Blue Lake near Bair Rd	ST				X	X	X	Acorn curve improvement	2014 SHOPP	2015	\$3,000
299-Near Willow Creek near Redwood Creek Bridge	ST				X	X	X	Sabertooth shoulder widening	2016 SHOPP	2017	\$2,000
299 - Near Willow Creek near Chezem Road	ST				X	X	X	Circle Point curve improvement	2014 SHOPP	2016	\$4,000
299-near Blue Lake, Chezem Road	ST				X	X	X	Lupton curve improvement	2015 SHOPP	2016	\$2,000
299-Near Blue Lake at Mill Creek Bridge	ST			X				Mad River fish passage mitigation	2012 SHOPP	2013	\$1,000
299-Near Blue Lake at Chezem Road	ST				X	X	X	Green Point sink restoration	2012 SHOPP	2014	\$9,000
299-Near Blue Lake to 0.2m W of the Route 96 Junction	ST				X		X	Grind-in rumble strips installation	2012 SHOPP	2017	\$21,000
96 - Near Willow Creek near the Tish-Tang Campground	ST				X	X	X	Sugar Bowl Ranch curve Improvement	2012 SHOPP	2017	\$3,000
96 - Near Willow Creek near Shoemaker Road	ST				X	X	X	Hoopa Vista Point curve correction	2012 SHOPP	2017	\$2,000
96 - In Hoopa from Loop Road near Hostler Creek Bridge	ST	X	X		X		X	Shoulder widen and lighted crosswalk	2012 SHOPP	2016	\$1,000
<u>96 - Downtown Hoopa</u>	<u>ST</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>	<u>Pedestrian safety, traffic calming, drainage improvements</u>	<u>Partially funded</u>	<u>2013-2016</u>	<u>\$4,400</u>



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
255 -Near Arcata at McDaniel Slu Bridge	ST			X			X	Mad River Wetland Mitigation	2012 SHOPP	2015	\$1,000
169 - East of Pecwan near Junction of Highways 96 / 169	ST				X	X	X	Weitchepec Curve Improvement	2016 SHOPP	2017	\$1,000
169 - Various Locations	ST				X		X	Widening and Metal Beam Guardrail	2012 SHOPP	2015	\$6,000
36 - At Carlotta from Wilson Lane to 0.5 W of Cummings Creek Rd.	ST				X	X	X	Carlotta Left Turn Channelization	2012 SHOPP	2014	\$9,000
254 - Various Locations	ST				X	X	X	Avenue of the Giants - Four Bridges Project	2012 SHOPP	2016	\$6,000
101 - South Fork Eel River Bridge	ST				X	X	X	Eel River Bridges Seismic Retrofit Project	SHOPP	2015	
101 - In Trinidad between 6th Street and Trinidad Road Exit	ST		X		X		X	New Interchange	STIP (PID)	NA	\$18,000
96 - Trinity River Bridge in Downtown Hoopa	ST	X	X	X	X	X	X	Pedestrian and non-motorized vehicle crossing of Trinity River	SHOPP (PID)	NA	\$1,000
101 - Intersection of Broadway, Wabash and Hawthorne	ST	X	X		X	X	X	Intersection Control Evaluation	SHOPP (PID)	NA	\$3,000
101 - In Eureka south of Fields Landing OH to North of Herrick Avenue OC	ST				X	X	X	Pavement Preservation	SHOPP (PID)	NA	
101 - Eureka on 4th and 5th Streets from Broadway to Eureka Slough Bridge	ST	X	X		X	X	X	Eureka capital preventative maintenance	SHOPP (PID)	NA	
101 - Near Orick North of Big Lagoon	ST				X	X	X	Orick capital preventative maintenance	SHOPP (PID)	NA	



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1 Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
101 - Near Blue Lake at Various Locations from Lupton Creek to Berry Summitt	ST				X	X	X	Slope Repair and Drainage Improvements	SHOPP (PID)	NA	
101 - Near Blue Lake from Titlow Hill Road to Willow Creek	ST				X	X	X	Humboldt 299 capital preventative maintenance	SHOPP (PID)	NA	
96 - 6.2m E of Willow Creek to 2.6m W of Tish-Tang Campground	ST				X	X	X	Correct curve, shoulder widen, rumble strip, restripe, open graded friction course	SHOPP	2016	3,700
101 and 254 - Various locations in Humboldt County	ST				X		X	Upgrade guardrail and bridge approach	SHOPP	NA	\$4,000
101, 169, and 199 - Various locations	ST				X			Metal beam guard rail follow-up	SHOPP	2014	\$3,000
101 - Upgrade Bridges (2 Humboldt County Bridges)	ST				X	X	X	Bridge Seismic Retrofit	SHOPP	2014	
36 - Hely Creek, Little Larabee Creek and Butte Creek	ST				X		X	Bridge Rail Replacement and Upgrade	SHOPP (PID)	NA	\$1,000
36 - Little Golden Gate, approx 15m E of Carlotta	ST			X	X		X	Install erosion control measures	SHOPP (PID)	NA	\$2,000
36 -Near Hydesville at River Bar Road	ST				X	X	X	Alton Shoulder Widening	SHOPP (PID)	NA	
101 - Between Eureka and Arcata	ST				X		X	MBGR follow-up to previous locations	SHOPP	2014	\$2,000
299, 96 - Near willow Creek; 36 - From Carlotta to Hydesville	ST				X		X	MBGR follow up to previous locations	SHOPP	NA	\$2,000
101 - Williford Rd. Undercrossing	ST				X	X	X	Replace superstructure	SHOPP	2015	\$2,000



Table 2-1
Complete Streets Proposed Regional Projects
 (From RTP 2013/14 Update, Appendix CS-1, Table Streets-6)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
101- Through the community of Orick	LT	X	X		X		X	Streetscape improvements to enhance bicycle and pedestrian safety	Not funded	NA	\$ 1,400
96 - Through the community of Orleans	LT	X	X		X		X	Streetscape improvements to enhance bicycle and pedestrian safety	Not funded	NA	\$1,800
255 – Through the community of Manila	LT	X	X	X	X		X	Streetscape improvements to enhance bicycle and pedestrian safety	Not funded	NA	\$ 2,200
									Caltrans ST Subtotal		\$222,439
											<u>191,980</u>
									Caltrans LT Subtotal		\$3,600
											<u>5,400</u>
									Regional Projects–Funded (constrained) Subtotal		\$ 143,439
											<u>239,274</u>
									Regional Projects–Not funded (unconstrained) Subtotal		\$73,600
											<u>275,426</u>
¹ Short-term (ST) is the next 1 to 10 years; long-term (LT) is the next 11 to 20 years. ² Assume 3% annual inflation.											



Table 2-2
Regional Trails Proposed Projects
 (From RTP Table *Trails-1*)

Trail Project	Jurisdiction	Description	In HCAOG Adopted Plan(s)*:
California Coastal Trail	HCAOG	<ul style="list-style-type: none"> • Encourage Caltrans to design improvements for pedestrians and bicycles on the bridges crossing the Eel River and Mattole River. • Work towards implementing the <i>Humboldt County Coastal Trail Implementation Strategy</i>, in coordination and cooperation with local jurisdictions, agencies, and other public and private stakeholders to design, locate, fund, acquire, and maintain segments of the California Coastal Trail. • Work with private landowners to acquire public access rights at locations from Centerville Beach to Cape Mendocino. 	HCCTIS, RPP
Annie and Mary Rail Trail	Arcata, Blue Lake, Blue Lake Rancheria, Humboldt County	6.8-mile trail corridor that would run east from the Aldergrove Industrial Park in Arcata to the City of Blue Lake, following the inactive NCRA railroad corridor and a segment along SR 299.	HCCTIS, OWP, RPP, RTMP
Arcata Rails with Trail	Arcata, Humboldt County	Trail from West End Road to Samoa Boulevard, with segments along railroad tracks. This trail would link the Annie & Mary Trail and the Humboldt Bay Trail.	HCCTIS, RBP, RPP
Eureka Waterfront Trail	Eureka	From Tydd Street to Herrick Avenue, including along the existing Eureka Boardwalk. The segments still to be built and/or upgraded are: Waterfront Drive from C Street Boardwalk to Del Norte Street; PALCO Marsh Trail improvements.	HCCTIS (Priority Project), RTMP
Hammond Trail	Arcata, Eureka, Humboldt County	Extend the Hammond Trail from the Mad River bridge south, connecting to the City of Arcata (downtown) and Eureka. Extend the trail north to Westhaven and Trinidad. Restore Replace the Hammond Trail pedestrian/bicycle bridge across the Mad River.	HCCTIS, RBP, RPP, RTMP
Humboldt Bay Trail	Arcata, Eureka, Humboldt County	Arcata to Eureka Segment: A 6.5-mile Class I/multi-use path around the east side of Humboldt Bay, between Arcata and Eureka. The trail would follow the North Coast Railroad rail corridor and parallel U.S. 101.	HCCTIS, Humboldt Bay Trails Feasibility Study, RBP, RPP, RTMP
Hoopa Valley Trail	Humboldt County	A 6-mile segment along SR 96 from the south end of Shoemaker Road northward (in Caltrans right-of-way). The long-term vision is to expand the trail throughout the Hoopa Valley.	RPP
Orick Levee Coastal Trail	Humboldt County	Multi-purpose trail on north Redwood Creek levee to the U.S. 101 bridge (0.69 miles), south levee to Redwood National Park Visitor Center (2.45 miles).	HCCTIS (Priority Project)
Riverwalk Trail	Humboldt County	Fortuna City Limits to Sandy Prairie	RTMP
Baylands Trail	Arcata	Within Baylands Park – Class I	RTMP
Truesdale Vista Point Trail	Eureka	Multipurpose Trail from Truesdale Vista Point to Hilfiker Lane Trailhead	RPP, RTMP



Table 2-2
Regional Trails Proposed Projects
 (From RTP Table *Trails-1*)

Trail Project	Jurisdiction	Description	In HCAOG Adopted Plan(s)*:
Foster Avenue Extension	Arcata	Sunset Avenue to Alliance Avenue – Class I & II	RBP, RPP, RTMP
John Campbell Memorial Greenway	Fortuna	Multi-purpose from the Riverwalk Trail to the south entrance of the Headwaters Reserve	RBP, RTMP
<u>Little River Trail (Hammond Trail Extension)</u>	<u>Humboldt County</u>	<u>Construct multi-use (Class I) trail between Clam Beach and Moonstone Beach. The trail would connect the Hammond Trail and Clam Beach Road to Scenic Drive.</u>	<u>n.a.</u>

Table 2-3
Public Transportation Proposed Regional Projects
 (From RTP 2013/14 Update, Table *Transit-4*)

Operator / Agency	Short or Long Term ¹	Description	Funding Source ²	Implementation Year(s)	Cost in Year of Expenditure ³ (\$000)
Eureka	ST	Bus Replacement (2)	5311/PTMSIEA	2013-14	1,000
Eureka	ST	Bus Replacement (2)	Not funded	2016-17	1,090
Eureka DAR/L	ST	Van Replacement (1)	Not funded	2016-17	62
Eureka	LT	Eureka Intermodal Transit Center	Not funded	TBD	14,000
Arcata	ST	Bus replacement (2)	5311/PTMSIEA	2014-2023	1,200
Arcata	ST	Bus replacement (2)	5311/PTMSIEA	2025	1,400
Arcata	LT	Pursue unmet transit needs requests for service to the Arcata Marsh and service on Sundays (annual cost)	Not funded	2023-2033	90*
Fortuna Senior Bus	ST	Bus replacement	Not funded	2016-17	73
HTA	ST	Bus replacements (one 40' & two 30')	5311/5311 (f)	2013	825
HTA	ST	40' bus replacements (2 to 3 based on fuel type)	5311/PTMSIEA	2014	1,300
HTA	ST	40' bus replacements (2)	5311	2014	937
HTA	ST	30' bus replacements (2)	5311	2015	392
HTA	ST	40' bus replacements (2)	5311	2016	965
HTA	ST	40' bus replacements (2)	5311	2022	1,152



Table 2-3
Public Transportation Proposed Regional Projects
 (From RTP 2013/14 Update, Table *Transit-4*)

HTA	LT	RTS increased frequency & late night service	Not funded	2018	400*
HTA	LT	Feeder bus lines to McKinleyville and Fortuna to connect to the RTS commuter line	Not funded	2023-2033	538*
HTA	LT	Park-and-Ride lots with multi-modal facilities (e.g. bike lockers, bus shelter), located near transit stops (6)	Not funded	2023-2033	600
KT Net	ST	Bus	5311(f)	2013-2014	63.5
KT Net	ST	Expand service hours	5311(f)	2013-2014	18.5*
KT Net	ST	Intelligent Transportation System application/equipment	5311(f)	2013-2014	38
KT Net	ST	Relocate bus stop	Not funded	2014-2018	50
HCAOG	ST	Park-and-Ride Feasibility Study	RPA	2014-15	10
City Ambulance of Eureka	LT	Expand service hours and to Sundays	Not funded	2023-2033	not available, TBD
HCAR	LT	Expand service area for non-emergency medical trips	Not funded	2023-2033	not available, TBD
			Short-Term Total		\$10,576
			Long-Term Total		\$15,628+tbd
Regional Projects–Unfunded (unconstrained) Subtotal					\$16,903 +tbd
Regional Projects–Funded (constrained) Subtotal					\$ 9,301
PUBLIC TRANSPORTATION PROJECTS TOTAL					\$ 26,204+tbd

¹ Short-term (ST) is in the next 1 to 10 years; long-term (LT) is in the next 11 to 20 years.

² PTMSIEA = Public Transportation Modernization, Improvement, and Service Enhancement Account (Prop 1B); RPA = Rural Planning Assistance funding

³ Assumes 3% annual inflation.

*Annual cost



Table 2-4
Goods Movement Proposed Regional Projects
 (From RTP 2013/14 Update, Table Goods-3)

Lead Agency	Project Name	Short or Long Term ¹	Description	Funding Source	Implementation Year(s)	Estimated Cost ²
Harbor District	Redwood Marine Terminal Modernization (Option B)	LT	Establish a multipurpose, publicly-owned marine terminal with two berths. Develop a single multipurpose berth for the short-term, designed to be integrated into long-term terminal development.	Not funded	Unknown	\$32 to \$38 million (initial cost in 2008 dollars).
Harbor District	Vance Ave - Bay Street to Samoa Pulp Lane	ST	Acquire title to property; improve to Major Collector and National Highway System (NHS) standards to serve marine terminals.	Not funded	2015	\$2,336,000
Harbor District	Vance Ave – Samoa Pulp Lane to North Spur	ST	Acquire title to property; improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2015	\$1,094,000
Harbor District	North Spur off Vance Ave	ST	Acquire title to property; improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2019	\$746,000
Harbor District	South Spur off Vance Ave	ST	Acquire title to property; improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2019	\$1,033,000
Humboldt County	Bay Street - New Navy Base Road to Vance Ave	LT	Improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2017	\$978,000
Humboldt County	Samoa Pulp Lane - New Navy Base Road to Vance Ave	ST	Improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2017	\$239,000
Humboldt County	New Navy Base Road – State Route 255 to Bay St.	LT	Improve to NHS standards to serve marine terminals.	Not funded	Unknown	\$1,929,000
Freight Rail Improvements – The following improvements have been identified in terms of goals and objectives for freight rail. Because no specific projects are proposed at this time, HCAOG identifies the following improvements to document HCAOG’s advocacy for rail improvements that will enhance the region’s goods movement system.						
Harbor District and NCRA	Northern Freight Corridor Restoration Project (per 2008 RTP)		Project seeks to reduce shoaling in Humboldt Bay (thereby enhancing navigation efficiency and safety), and rehabilitate the Northern Corridor of the NWP railroad from the Port of Humboldt Bay to South Fork. The project would also open up the potential for excursion passenger train service within the NCRA’s Northern Corridor Rail. (per 2008 RTP)	Not funded	Unknown	Unknown



Table 2-4
Goods Movement Proposed Regional Projects
 (From RTP 2013/14 Update, Table Goods-3)

Lead Agency	Project Name	Short or Long Term ¹	Description	Funding Source	Implementation Year(s)	Estimated Cost ²
NCRA (NWP Co. secondary)	Northwestern Pacific Railroad Reopening Eel River and Humboldt Bay Divisions	N/A	Repair facilities and resume service on the Eel River and Humboldt Bay Divisions of the NWP Railroad (alternatively referred to as the far Northern Portion (South Fork to Samoa) and Canyon Portion and far Northern Portion).	Not funded	Not within next 20 years per NCRA	Unknown

Table 2-5
Aviation Proposed Regional Projects
 (From RTP 2013/14 Update, Table Aviation-5)

Lead Agency	Project Name/Description	Short or Long Term ¹	Funding Source	Implementation Year(s)	Estimated Cost ²
Arcata-Eureka Airport					
County of Humboldt	Phase 2 ARFF site civil work, remove nose hangar	ST	FAA, County of Humboldt	2013	\$2,478,914
County of Humboldt	Phase 3 ARFF design completion	ST	FAA, County of Humboldt	2013	\$399,277
County of Humboldt	Study hazard removal	ST	FAA, County of Humboldt	2014	\$150,00
County of Humboldt	Design runway lighting improvements	ST	FAA, County of Humboldt	2015	\$600,00
County of Humboldt	*Phase 3 construct fire station	ST	FAA, County of Humboldt	2016	\$3,700,000
County of Humboldt	*RNR TWY B&G/drainage (design complete 2006)	ST	FAA/County of Humboldt	2018	\$508,802
					<i>Subtotal \$4,208,802</i>
Dinsmore Airport					
County of Humboldt	Study removing or lowering hazards to aircraft	ST	FAA, County of Humboldt	2014	\$50,000
County of Humboldt	Remove/lower hazard to aircraft	ST	FAA, County of Humboldt	2014	\$150,000
County of Humboldt	*Design windsock and segmented circle	ST	FAA, County of Humboldt	2015	\$130,000
County of Humboldt	Construct windsock and segmented circle	ST	FAA, County of Humboldt	2016	\$88,000
County of Humboldt	*Construct west end storm drain improvements	ST	FAA, County of Humboldt	2017	\$300,000
County of Humboldt	*Construct fence and gates	ST	FAA, County of Humboldt	2018	\$166,400



Table 2-5
Aviation Proposed Regional Projects
 (From RTP 2013/14 Update, Table *Aviation-5*)

Lead Agency	Project Name/Description	Short or Long Term ¹	Funding Source	Implementation Year(s)	Estimated Cost ²
County of Humboldt	Design ramp improvements	ST	FAA, County of Humboldt	2018	\$50,000
<i>Subtotal \$934,400</i>					
Garberville Airport					
County of Humboldt	Study removing or lowering hazards to aircraft	ST	FAA, County of Humboldt	2014	\$150,000
County of Humboldt	*Design runway	ST	FAA, County of Humboldt	2014	\$52,5000
County of Humboldt	*Remove or lower hazards to aircraft	ST	FAA, County of Humboldt	2014	\$100,000
County of Humboldt	*Construct runway RNR	ST	FAA, County of Humboldt	2015	\$368,000
County of Humboldt	*Construct ramp RNR and expansion	ST	FAA, County of Humboldt	2017	\$562,500
County of Humboldt	*Design runway safety area drainage	ST	FAA, County of Humboldt	2017	\$68,000
County of Humboldt	*Construct runway safety area drainage	ST	FAA/County of Humboldt	2018	\$564,000
<i>Subtotal \$2,276,300</i>					
Kneeland Airport					
County of Humboldt	*Study removing or lowering hazards to aircraft	ST	FAA, County of Humboldt	2014	\$50,000
County of Humboldt	RSA study	ST	FAA, County of Humboldt	2012	\$156,825
County of Humboldt	*Design fencing and gates	ST	FAA, County of Humboldt	2013	\$45,000
County of Humboldt	*Construct fencing and gates	ST	FAA, County of Humboldt	2014	\$350,000
County of Humboldt	*Design stabilization	ST	FAA, County of Humboldt	2014	\$107,800
County of Humboldt	*Construct stabilization	ST	FAA, County of Humboldt	2016	\$1,077,600
<i>Subtotal \$1,787,225</i>					
Murray Field Airport					
County of Humboldt	Construct wildlife perimeter fencing/gates	ST	FAA, County of Humboldt	2012-13	\$608,708
County of Humboldt	Design AWOS, upgrade of RWY/TWY lighting system and connecting security lights to emergency generator	ST	FAA, County of Humboldt	2014	\$63,000
County of Humboldt	*Construct upgrade of RWY/TWY lighting system	ST	FAA, County of Humboldt	2015	\$350,000
County of Humboldt	*Install and implement AWOS type system	ST	FAA, County of Humboldt	2015	\$270,000
County of Humboldt	*Design RWY/TWY RNR	ST	FAA, County of Humboldt	2016	\$63,000
County of Humboldt	*Construct RWY/TWY RNR	ST	FAA, County of Humboldt	2017	\$753,000



Table 2-5
Aviation Proposed Regional Projects
 (From RTP 2013/14 Update, Table *Aviation-5*)

Lead Agency	Project Name/Description	Short or Long Term ¹	Funding Source	Implementation Year(s)	Estimated Cost ²
County of Humboldt	*Design entry road rehabilitation	ST	FAA, County of Humboldt	2017	\$40,000
County of Humboldt	*Construct entry road rehabilitation	ST	FAA, County of Humboldt	2018	\$480,000
					<i>Subtotal</i> \$1,874,708
Rohnerville Airport					
County of Humboldt	*Construct RWY/TWY RNR (design in 2006)	ST	FAA, County of Humboldt	2014	\$933,000
County of Humboldt	Design completion of wildlife exclusion fence/gates	ST	FAA, County of Humboldt	2015	\$180,000
County of Humboldt	Construct completion of wildlife exclusion fence/gates	ST	FAA, County of Humboldt	2016	\$609,000
County of Humboldt	*Construct ramp RNR (design in 2009-10)	ST	FAA, County of Humboldt	2017	\$660,450
County of Humboldt	Design and construct Phase II ramp improvements	ST	FAA, County of Humboldt	2017	\$1,081,300
County of Humboldt	Design beacon replacement	ST	FAA, County of Humboldt	2019	\$67,500
					<i>Subtotal</i> \$3,531,250
Samoa Field (Formerly Eureka Municipal)					
City of Eureka	Remove/lower hazard to aircraft	ST	Caltrans/City of Eureka	2014	\$30,000
City of Eureka	Design T-hangars	ST	City of Eureka	2014	\$20,000
City of Eureka	Construct T-hangars	ST	City of Eureka	2015	\$240,000
City of Eureka	Resurface runway/taxiways/repaint markings	ST	Caltrans/City of Eureka	2019	\$160,000
City of Eureka	Construct wildlife exclusion fence/gates	ST	Caltrans/City of Eureka	2021	\$240,000
					<i>Subtotal</i> \$690,000
Hoopla Airport, Samoa Field Airport, Shelter Cove Airport —No information available/TBD.					

¹ Short-term is 0-10 years; long-term is 11-20 years. ² To estimate the cost in year of implementation, assume a 3% annual rate of inflation.

*Project is listed in the "California Aviation System Plan: Capital Improvement Plan Year 2014-2023" (Caltrans, September-August 2013).

Acronyms: Reconstruct and Rehabilitate (RNR), Automated Weather Observation System (AWOS), taxiway (TWY), runway (RWY), Aircraft Rescue and Fire Fighting Building (ARFF)



Table 2-6
Emergency Transportation Proposed Regional Projects
 (From RTP 2013/14 Update, Table *Emergency-1*)

<p>PROJECT 1 - Rural ITS Planning Project</p>	<p>Work with partner agencies to implement an Intelligent Transportation System (ITS) project to improve the region’s rural transportation safety solutions. This project will evaluate which ITS application(s) would be most valuable and feasible for the region to pursue first. Examples of ITS technological applications include: traveler information websites, satellite positioning technology, emergency vehicle preemption, and variable message signs.</p> <p>This project would be coordinated with and would build upon HCAOG’s “Transit Intelligent Transportation System” project from the 2012-13 Overall Work Program.</p>
<p>PROJECT 2 – Interagency Emergency Transportation Planning Project</p>	<p>Foremost through the SCC, HCAOG will explore opportunities to create a formal framework between transit operators and emergency planners. The framework may identify, establish, and standardize information sharing between transit agencies and emergency operations centers (EOCs). This project could also address improving communications and leadership between the agencies and training within transit agencies.</p>



2.4 PROJECT APPROVALS

Approval of the proposed project is at the discretion of HCAOG, which is the lead agency for the RTP 2013/14 Update. It should be noted that the project sponsor, as the lead agency for the individual projects contained within the RTP 2013/14 Update, may have to conduct additional environmental review prior to implementing the project. As noted in Section 1.6, analysis of site-specific impacts of individual projects is not the intended use of a program EIR. Many specific projects in the RTP 2013/14 Update (see tables below) are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each project will be undertaken as necessary by the appropriate implementing agency prior to each project being considered for approval. In sponsoring individual projects, local agencies may choose to take advantage of the streamlining benefits of the Program EIR, including the use of any suggested mitigation measures, or to engage in their own environmental review without use or reference to the Program EIR. If they so choose, these agencies would be able to prepare subsequent environmental documents that incorporate by reference the appropriate information from this Program EIR regarding secondary effects, cumulative impacts, broad alternatives, and other relevant factors. If the lead agency finds that implementation of a later activity of an individual transportation project would have no new effects and that no new mitigation measures would be required, that activity would require no additional CEQA review. Where subsequent environmental review is required, such review would focus on project-specific significant effects (and if necessary project-specific mitigation measures) peculiar to the project, or its site, that have not been considered in this program EIR.

Depending on the location (i.e. jurisdiction(s)) of the transportation project, one or more of the following agencies or governments would have to complete future approvals:

- Humboldt County Association of Governments
- Blue Lake Rancheria, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Hoopa Valley Tribe, Karuk Tribe, and Yurok Tribe
- California Department of Transportation (Caltrans)
- Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad
- County of Humboldt
- Humboldt Bay Harbor, Recreation, and Conservation District
- Humboldt Transit Authority
- Klamath Trinity Non-Emergency Transit (K-T NeT)
- North Coast Railroad Authority

The relationship of this EIR to future environmental review of individual transportation projects is further discussed in EIR Section 1.0, *Introduction*.



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3.0 ENVIRONMENTAL SETTING

3.1 PHYSICAL SETTING

a. Geography. The RTP 2013/14 Update's planning area encompasses areas throughout the Humboldt region, covering the seven incorporated cities, the unincorporated county, tribal lands, and state highways. Humboldt County is a densely forested, mountainous, and rural county with about 110 miles of coastline (more than any other county in the state) situated along the Pacific coast in Northern California's rugged Coast (Mountain) Ranges. Land within Humboldt County's political boundaries covers 3,500 square miles of beaches, dunes, estuaries, river valleys, bay land, coastal terraces, agricultural lands and forested hills. Rural and relatively urban communities and cities dispersed throughout. The county is mostly mountainous except for the level plain which surrounds Humboldt Bay. The elevation runs from sea level to 6,934 feet.

What is now known as Humboldt County is the ancestral land of several Native American Tribes. There are eight Native American Reservations and Rancherias in Humboldt County: Bear River Band of Rohnerville Rancheria, Big Lagoon Rancheria, Blue Lake Rancheria, Hoopa Valley Tribe, Karuk Tribe, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Wiyot Tribe, and the Yurok Tribe.

Humboldt County is bounded to the west by the Pacific Ocean. It is north of Mendocino County, south of Del Norte County, and west of Trinity and Siskiyou Counties. The planning area includes Townships 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, & 12 North, and Townships 1, 2, 3, 4 & 5 South; and Ranges 1, 2, & 3 West and 1, 2, 3, 4, & 5 East of the Humboldt Base & Meridian.

b. Climate. The coastal zone of the county experiences wet, cool winters and dry, mild foggy summers. In the winter, highs range from the low 40s to high 50s (5 to 15°C), with lows in the 30s and 40s (0 to 9°C). Coastal summers are cool to mild, with average highs in the 60s (16 to 21°C) and frequent fog. Coastal summer highs range from the mid-60s to 70s (18 to 21°C), with lows from the upper 40s to mid 50s (8 to 13°C). In the populated areas and cities near the coast, the highest temperatures tend to occur at locations just a few miles inland from Eureka and Arcata, in towns like Fortuna, Rio Dell, and smaller unincorporated communities located somewhat further away from Humboldt Bay. In these locations, summer highs measure in the low- to mid-70s (21 to 24°C). The coastal zone experiences a number of frosty nights in winter and early spring, though snowfall and hard freezes are rare. Coastal winters are cool and wet. Winter rainstorms are frequent, with averages from 30 inches to 100 inches a year varying with elevation.

Summer displays the sharpest difference between the coastal and inland climates. Inland regions of Humboldt County experience highs from the 80s to the 90s (27 to 37°C) depending on the elevation and distance from the ocean. At higher elevations, summers and autumns are hot and dry. Inland areas of the county also experience wet, cold winters. Snowfall is common at elevations over 3,000 feet throughout the winter months.

c. Regional Transportation System. In Humboldt County, there are approximately 1,400 miles of county roads and city streets, and 378 miles of state highways and roadways on federal



lands. Proportionately, HCAOG's members (the County and seven cities) maintain 79% of the road miles. The two major highways in Humboldt County are U.S. Highway 101 (north-south) and State Route 299 (east-west). They carry the highest volumes of passenger cars and commercial trucks. U.S. Highway 101 and State Route 299 are two of California's Focus Routes. The Focus Routes represent ten State corridors that are highest priorities for bringing to minimum-facility-concept standards over the next 20 years (HCAOG, Public Draft RTP, September 2013). Other State Routes in the County include 36, 96, 169, 200, 211, 254, 255, 271, and 283. Highway 96 connects State Route 255 with Interstate 5 north of Yreka, along the scenic Klamath River canyon.

Federal and/or State agencies have jurisdiction over roads within public resource lands in Humboldt County, such as in the National and State Parks or in the Bureau of Land Management areas. The agencies responsible for maintaining non-local roadways like these include, but are not limited to, the California Department of Transportation (Caltrans), U.S. Forest Service, National and State Park Service, Bureau of Land Management, and Bureau of Indian Affairs. Roads owned by Native American tribal governments are maintained by them; some roads on tribal land are in the local city, County, or Caltrans District 1 jurisdictions and are maintained by the respective entity (HCAOG, Public Draft RTP, September 2013).

Local streets and roads provide a functional, interconnected, multi-modal transportation system in Humboldt County. Roads are often the main – and sometimes the safest, if not the only – access available between rural and urban areas, or between developed and natural areas. In Humboldt County, pedestrian access via sidewalks and crosswalks is more typically built in urban areas than rural areas (i.e., in cities and larger unincorporated communities more than in outlying communities in Humboldt County). Besides sidewalks, a few examples of walkways designed primarily for pedestrian travel (not solely recreation) are: the Boardwalk and PALCO Marsh path in Eureka; the Hammond Trail in McKinleyville; and Shay Park path (along Foster Avenue and railroad tracks) in Arcata (HCAOG, Public Draft RTP, September 2013).

The statewide California Coastal Trail is partially completed and extends from the Mexican border to the Oregon border following Highway 1 and the California Coast. The trail is primarily designed for pedestrians but also accommodates bicyclists, wheelchair users, equestrians, and others as opportunities allow. Bikeways in the County are generally located in urban areas (excluding solely recreational trails) including several bike lanes and bike routes in Eureka, Arcata, Fortuna, and some urban unincorporated areas (HCAOG, Public Draft RTP, September 2013).

While there is no rail, subway, or ferry service in Humboldt County, there is regional and local public transportation via transit buses and complementary paratransit. Interregional bus transportation is provided by Amtrak Thruway Motorcoach, Greyhound Bus Lines, and the Redwood Coast Transit. The regional transit system includes the Redwood Transit System, South Humboldt Transit System, Eureka Transit System, Willow Creek Transit System, Arcata & Mad River Transit System, Blue Lake Rancheria Transit, and Klamath-Trinity Non-Emergency Transportation (HCAOG, Public Draft RTP, September 2013).

The County has nine public airports. Six of the region's nine public use airports are owned by the County of Humboldt; they are managed by the Aviation and Airport Division of the



Humboldt County Public Works Department. The Samoa Field Airport (formerly called Eureka Municipal Airport) is owned and managed by the City of Eureka. The Hoopa Airport is owned and managed by the Hoopa Valley Tribal Council, located in Hoopa. The Shelter Cove Airport is owned and managed by the Shelter Cove Resort Improvement District #1, located in Whitethorn (HCAOG, Public Draft RTP, September 2013).

In Humboldt County, the goods movement system includes highway (trucking), maritime, and aviation facilities. The common transportation facility that connects the three is U.S. 101, which accesses the county from north to south, and links Humboldt's cities. Major freight facilities that access U.S. 101 include the Port of Humboldt, the California Redwood Coast-Humboldt County Airport (formerly called Arcata-Eureka Airport), Murray Field Airport, and State Route 299 (and the NWP railroad line, albeit defunct). State Route 299, which junctions U.S. 101 in Arcata, is the main route for truck transport to/from eastern Humboldt County and Trinity County. State Route 255 (Arcata to Samoa Peninsula) is also an important intermodal route for the Port of Humboldt Bay. Additionally, Washington Street in Eureka has been designated as a route of intermodal significance because of its rail, port, highway, and pipeline accessibility.

The Port of Humboldt Bay is the only deepwater shipping port between San Francisco and Coos Bay, Oregon. It is a working port that can handle ocean-going vessels with domestic or international cargoes, including Panama Canal-class (Panamax) vessels. The Port's major international trading partners are Canada, China, and Pacific Rim countries (Caltrans 2012). Since the railroad is not in service, cargo loads from commercial vessels calling on Humboldt Bay are transported to and from the harbor by truck.

The Northwestern Pacific (NWP) Railroad line, which formerly served Humboldt Bay, has been out of service since 1998. Service is not expected to resume within the RTP's 20-year planning horizon (HCAOG, Public Draft RTP, September 2013).

3.2 DEMOGRAPHIC SETTING

a. Population. Humboldt's countywide population is approximately 134,819 (California Department of Finance, July 2013). The seven incorporated cities in Humboldt are Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad. The City of Eureka is the city with the largest population (27,000); Trinidad has the smallest population (400).

b. Economic Setting. Humboldt County's coastal location situates it as a key player in the commerce of Northern California. The Prosperity! 2012 Report identifies several industries as assets to Humboldt County's economy: tourism, aquaculture, lumber and wood products (especially redwood production), agriculture (beef, dairy, wine grapes, flowers), arts and culture, and specialty agriculture and horticulture (marijuana cultivation). Humboldt State University is another major economic stimulator, which provides jobs for many county residents, as well as helps support business and commerce in Arcata and adjacent cities and communities. (Prosperity! 2012, "Humboldt County Comprehensive Economic Development Strategy 2013-2018", March 26, 2013)

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4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section discusses the possible environmental effects of the proposed project for the specific issue areas that were identified as having the potential to experience significant impacts. To recap, the EIR analyzes eight issues:

- Air Quality
- Biological Resources
- Environmental Justice
- Geology and Soils
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Noise
- Transportation

“Significant effect” is defined by the *State CEQA Guidelines* §15382 as :

“a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.”

This section assesses each issue by discussing the respective setting (under “Setting”) and analyzing the project’s impact on it (under “Impact Analysis”). The impact analysis identifies the methodologies used for analyzing impacts and the “significance thresholds” used to determine if potential effects were significant. The criteria for significance thresholds were either adopted by HCAOG, other agencies or developed specifically for this analysis, or are reasonable for use under CEQA. The impact analysis then describes each environmental impact of the proposed project (listed in bold text), mitigation measures for significant impacts, and the level of significance after mitigation, which is summed up with the “significance determination.” The “significance determination” will be one of the following:

- Class I. Significant and Unavoidable:** *An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved (per §15093 of the State CEQA Guidelines).*
- Class II. Significant:** *An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made (per §15091 of the State CEQA Guidelines).*
- Class III. Not Significant:** *An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.*
- Class IV. Beneficial:** *An effect that would reduce existing environmental problems or hazards.*



Following each environmental effect discussion is a listing of recommended mitigation measures (if required) and the residual effects or level of significance remaining after the implementation of the measures.



4.1 AIR QUALITY

This section analyzes the impacts of the RTP 2013/14 Update on local and regional air quality for criteria pollutants. Both temporary impacts relating to construction activities and long-term impacts associated with population growth and associated growth in vehicle traffic and energy consumption are discussed.

4.1.1 Setting

a. Local Climate and Meteorology. For criteria pollutants, air quality is affected by the rate and location of pollutant emissions and by climatic conditions that influence the movement and dispersion of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local and regional topography, provide the links between air pollutant emissions and air quality.

Humboldt County is located within the North Coast Air Basin. Air pollution control authority for stationary sources is vested with the North Coast Unified Air Quality Management District (NCUAQMD). The NCUAQMD is located in the far northwestern portion of California and contains 7,767 square miles, or approximately 5 percent of the total area of California. The topography of the District is mountainous with some fairly level terrain found along the coast and in isolated mountain valleys. Elevations vary from sea level to over 9,000 feet. The mountain ranges, known as the Coast Range, generally run north to south, divided by deep canyons cut by the many rivers in this area. Most of the rivers flow into the Pacific Ocean within the boundaries of the District, while often originating in areas outside the District (NCUAQMD, 1995).

In general, the climate of northern coastal California is characterized by cool summers and mild winters with frequent fog and substantial amounts of rain. In coastal areas, the ocean helps to moderate temperatures year-round. Further inland, the summers are hotter and drier and the winters colder and more snowy. At higher elevations in inland areas, it is cooler in the summers and snowier in the winter. The average annual rainfall in the county ranges from 38 inches in Eureka to 141 inches in Honeydew. Approximately 90 percent of the annual precipitation falls between October and April. Higher rainfall in winter often influences high river levels. Winter snowfall is common at higher elevations. The dry season is between May and September. Average temperatures on the coast in Eureka range from the low 60s in the summer to the low 40s during the winter. Inland average temperatures, such as in Willow Creek or Hoopa, range from the 90s to the 30s. On the coast, summer fog is common when inland temperatures rise (Humboldt County General Plan Update Draft EIR, 2012).

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to move and disperse air pollutants. Winds control the rate and dispersion of local pollutant emissions. In the California North Coast Air Basin, dominant winds exhibit a seasonal pattern, especially in coastal areas. In the summer months, strong north to northwesterly winds are common; during the winter, storms from the South Pacific increase the percentage of days that winds originate from southerly quadrants. Wind direction often follows a daily pattern in river canyons that empty into the Pacific. In the morning hours, cool air from higher elevations flows down the valleys. Later in the day, as the



lower elevation air heats up, this pattern is reversed and the airflow heads up the canyon. These airflows are often quite strong. Offshore and onshore flows are also common along the coast and are associated with pressure systems in the area. Onshore flows frequently bring foggy cool weather to the coast, while offshore flows often blow fog away from the coast and bring sunny warm days (Humboldt County General Plan EIR, 2012).

Temperature inversions (where warm air overlies cooler air below) occur commonly in the District. An inversion can trap pollution, such as smog, close to the ground, with possible adverse health effects. There are two types of temperature inversions that are common on the North Coast, the radiation inversion and the subsidence inversion. A radiation inversion is caused when the air layer near the surface of the ground cools, and may extend upward several hundred feet. Although the inversion is a daily occurrence in the District, it is more prominent from late fall through early spring when the sun's heat is weaker and there are less hours of sunshine. A subsidence inversion is caused by slowly sinking air being heated by adiabatic compression, which is common in the area of high pressure along and off the coast. This inversion is present mainly from late spring through early fall and generally affects only the coastal areas of the District. The coastal regions of the District are also at times affected by an inversion known as a modified subsidence inversion (NCUAQMD, 1995).

b. Pollutants. Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere. Primary criteria pollutants include carbon monoxide (CO), reactive organic gases (ROG), nitric oxide (NO), fine particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb). Secondary criteria pollutants are created by atmospheric chemical and photochemical reactions; reactive organic gases (ROG) together with nitrogen oxides form the building blocks for the creation of photochemical (secondary) pollutants. Secondary pollutants include oxidants, ozone (O₃) and sulfate and nitrate particulates (smog). The characteristics, sources and effects of critical air contaminants are provided in Table 4.1-1 on the following page.

Humboldt County contains a wide variety of emission sources including stationary, area-wide, on-road vehicles, and other mobile sources. The NCUAQMD is listed as "attainment" or "unclassified" for all the federal and State ambient air quality standards except for the State 24-hour standard for PM₁₀ (particulate matter with a diameter of 10 micrometers or less). The District has not exceeded (i.e., violated) the federal annual standard for particulate matter during the last five year period. Emissions of PM₁₀ come from a number of sources within Humboldt County:

- Stationary sources such as power plants and manufacturing facilities. These sources are not the most substantial PM₁₀ contributors locally.
- Area-wide sources in which emissions originate from many points over a wide area. These include emissions from fireplaces, construction and demolition, road dust, and agricultural operations. Wood stove emissions are a substantial source of PM₁₀ emissions during the winter months when the county exceeds PM₁₀ thresholds. Road dust is a substantial source during dry months.

- Mobile sources including “on-road sources” such as automobiles, and “off-road sources,” such as farm and construction equipment. Automobiles are a substantial source of PM₁₀ locally.
- Natural sources include wildfires, sea salts, windblown dust, and biogenic emissions from plants and trees. Along the coast, sea salts are a substantial source of PM₁₀.

An important fraction of the particulate matter emission inventory is formed by diesel engine fuel combustion. Particulates in diesel emissions are very small and readily respirable (i.e. easily breathed in). The particles absorb hundreds of chemicals onto their surfaces, including many known or suspected mutagens and carcinogens. The California Office of Environmental Health Hazard Assessment (OEHHA) reviewed and evaluated the potential for diesel exhaust to affect human health (ARB, April 1998). Based on the available scientific evidence, OEHHA and ARB determined that no known research has identified a level of diesel PM exposure where carcinogenic effects would not be anticipated. The Scientific Review Panel that approved the OEHHA report determined that, based on studies to date, $3 \times 10^{-4} (\mu\text{g}/\text{m}^3)^{-1}$ is a reasonable estimate of the unit risk for diesel PM. This means that a person exposed to a diesel PM concentration of $1 \mu\text{g}/\text{m}^3$ continuously over the course of a lifetime has a 3 per 10,000 chance (or 300 in one million chance) of contracting cancer due to this exposure. Based on an estimated year 2000 statewide average concentration of $1.26 \mu\text{g}/\text{m}^3$ for indoor and outdoor ambient air, about 380 excess cancers per one million population could be expected if diesel PM concentrations remain the same (ARB, October 2000). Therefore, these particulate emissions have been determined by the ARB to be a toxic air contaminant (TAC).

Compared to other air toxics that the ARB has identified and controlled, diesel PM emissions are estimated to be responsible for about 70% of the total ambient air toxics risk. In addition to these general risks, diesel PM can also be responsible for elevated localized or near-source exposures (“hot-spots”). Depending on the activity and nearness to receptors, these potential risks can range from small to 1,500 per million or more (ARB, October 2000). Risk characterization scenarios have been conducted by the ARB staff to determine the potential excess cancer risks involved due to the location of individuals near to various sources of diesel engine emissions, ranging from school buses to high-volume freeways. The purpose of the risk characterization was to estimate, through air dispersion modeling, the cancer risk associated with typical diesel-fueled engine or vehicle activities based on modeled PM concentration at the point of maximum impact (PMI). The study included various sources of diesel PM emissions, including idling school buses, truck stops, low and high volume freeways, and other sources. High volume freeways were estimated to cause 800-1,700 per million potential excess cancers, while low volume freeways (similar to U.S. Highway 101 in Humboldt County) were estimated to cause about 100-200 per million potential excess cancers. Please see further discussion concerning risk levels below in the Analysis Methodology section.

Besides diesel PM, several other pollutants are emitted by vehicle exhausts that are a public health concern. The U.S. Environmental Protection Agency (USEPA) has identified six pollutants of highest priority: diesel particulate matter (DPM), acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene. The latter five pollutants are part of the total organic gases emitted by vehicles.

**Table 4.1-1
 Description Of Selected Air Contaminants**

<p>PHOTOCHEMICAL OXIDANT (O_x)</p> <p>Characteristics- The term “photochemical oxidant” can include several different pollutants, but consists primarily of ozone (more than 90 percent) and a group of chemicals called organic peroxy nitrates. Photochemical oxidants are created in the atmosphere rather than emitted directly into the air. Reactive organic gases and oxides of nitrogen are the emitted contaminants, which participate in the reaction. Ozone is a pungent, colorless toxic gas, which is produced by the photochemical process. Photochemical oxidant is a characteristic of southern California-type smog, and reaches highest concentrations during the summer and early fall.</p> <p>Sources - Ozone is caused by complex atmospheric reactions involving oxides of nitrogen and reactive organic gases with ultraviolet energy from sunlight. Motor vehicles are the major source of oxides of nitrogen and reactive organic gases in the basin.</p> <p>Effects - The common manifestations of ozone and other photochemical oxidants are damage to vegetation and cracking of untreated rubber. Ozone in high concentrations (ranging from 0.15 ppm to 0.50 ppm) can also directly affect the lungs, causing respiratory and coronary irritation and possible changes in lung functions. These health problems are particularly acute in children and elderly people exposed to these pollutants.</p>
<p>CARBON MONOXIDE (CO)</p> <p>Characteristics - CO is a colorless, odorless, toxic gas produced through the incomplete combustion of fossil fuels. Concentrations are higher in winter when more fuel is burned for heating purposes and weather conditions favor the build-up of directly emitted contaminants.</p> <p>Sources -The use of gasoline-powered engines is the major source of this contaminant, with automobiles being the primary contributor. CO emissions from gasoline-powered engines are higher during winter months due to poor engine efficiency in cold temperatures. Various industrial processes also produce CO emissions through incomplete combustion of fossil fuels.</p> <p>Effects - CO does not irritate the respiratory tract. However, it passes through the lungs directly into the blood stream and, by interfering with the transfer of oxygen, deprives sensitive tissues of oxygen.</p>
<p>NITROGEN OXIDES (NO_x)</p> <p>Characteristics - It primarily consists of nitric oxide (NO) (a colorless, odorless gas formed from atmospheric nitrogen and oxygen when petroleum combustion takes place under high temperatures and/or pressure) and nitrogen dioxide (NO₂) (a reddish-brown irritating gas formed by the combination of nitric oxide with oxygen). Due to the role they play as ozone precursors, oxides of nitrogen are one of the two criteria pollutants subject to federal ozone requirements.</p> <p>Sources - High combustion temperatures cause nitrogen and oxygen to combine and form nitric oxide. Further reaction produces additional oxides of nitrogen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations are the primary sources in the region. Ships, railroads and aircraft are other substantial emitters.</p> <p>Effects - Oxides of nitrogen are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of sunlight, to form nitrogen dioxide and ozone. Nitrogen dioxide, the most substantial of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppm on days of 21 0-mile visibility. NO₂ is an important air pollutant in the region because it is a primary receptor of ultraviolet light. The latter initiates photochemical reactions, helping to form ozone and/or particulate nitrate. It will also react in the air to form nitrate particulates.</p>



**Table 4.1-1
Description Of Selected Air Contaminants**

<p>SULFUR DIOXIDE (SO₂)</p> <p>Characteristics - SO₂ is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. In humid atmospheres, SO₂ can form sulfur trioxide and sulfuric acid mist, with some of the latter eventually reacting to produce sulfate particulates.</p> <p>Sources -This contaminant is the natural combustion product of sulfur or sulfur-containing fuels. Fuel combustion is the major source, while chemical plants, sulfur recovery plants, and metal processing are minor contributors.</p> <p>Effects - At sufficiently high concentrations, sulfur dioxide irritates the upper respiratory tract. At lower concentrations, when in conjunction with particulates, SO₂ appears able to do still greater harm by injuring lung tissues. Sulfur oxides, in combination with moisture and oxygen, can yellow the leaves of plants, dissolve marble and eat away iron and steel. Sulfur oxides can also react to form sulfates which reduce visibility..</p>
<p>PARTICULATES (Total Suspended Particles and PM₁₀)</p> <p>Characteristics - Atmospheric particulates are made up of finely divided solids or liquids, such as soot, dust, aerosols, fumes and mists. About 90 percent by weight of the emitted particles are larger than 10 microns in diameter, but about 10 percent by weight, or 90 percent of the total <i>number</i> of particulates are less than 5 microns in diameter. The aerosols formed in the atmosphere, primarily sulfate and nitrate, are usually smaller than 1 micron. In areas close to major sources, particulate concentrations are generally higher in the winter, when more fuel is burned for heating, and meteorological conditions favor the build-up of directly-emitted contaminants. However, in areas remote from major sources and subject to photochemical smog (ozone), particulate concentrations can be higher during summer months because the presence of ozone increases the potential for SO₂ and NO₂ to convert to sulfate and nitrate particulates.</p> <p>Sources - Particulate matter consists of particles in the atmosphere resulting from many kinds of dust and fume-producing industrial and agricultural operations, from combustion, and from atmospheric photochemical reactions. Re-entrained road dust from vehicles is a substantial source of particulates. Natural activities also put particulates into the atmosphere; wind-raised dust and ocean spray are two such sources of particulates.</p> <p>Effects - In the respiratory tract very small particles of certain substances may produce injury by themselves, or may contain absorbed gases that are injurious. Suspended in the air, particulates less than 5 microns in diameter can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.</p>



**Table 4.1-1
Description Of Selected Air Contaminants**

<p>DIESEL PARTICULATE MATTER (DPM)</p>
<p>Characteristics - Diesel particulate matter is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is commonly found throughout the environment. Diesel exhaust is composed of two phases, either gas or particle, and both phases contribute to the risk. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. Diesel exhaust has a distinct odor, which is primarily a result of hydrocarbons and aldehydes contained in diesel fuel. The particle phase also has many different types of particles that can be classified by size or composition. The size of diesel particulates that are of greatest health concern are those that are in the categories of fine and ultra fine particles. The composition of these fine and ultra fine particles may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements.</p> <p>Sources - Diesel exhaust is emitted from a broad range of diesel engines: the on-road diesel engines of trucks, buses and cars and the off-road diesel engines that include locomotives, marine vessels and heavy-duty equipment.</p> <p>Effects - Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs, and some neurological effects such as lightheadedness. Acute exposure may also elicit a cough or nausea as well as exacerbate asthma. Chronic exposure in experimental animal inhalation studies have shown a range of dose-dependent lung inflammation and cellular changes in the lung and there are also diesel exhaust immunological effects. Based upon human and laboratory studies, there is considerable evidence that diesel exhaust is a likely carcinogen. Human epidemiological studies demonstrate an association between diesel exhaust exposure and increased lung cancer rates in occupational settings.</p>
<p>HYDROCARBONS AND OTHER ORGANIC GASES (Total Hydrocarbons, CH₄ NMHC (non-methane), AHC, NHC)</p>
<p>Characteristics - Any of the vast family of compounds consisting of hydrogen and carbon in various combinations are known as hydrocarbons. Fossil fuels are included in this group. Many hydrocarbon compounds are major air pollutants, and those which can be classified as olefins or aromatics are highly photochemically reactive. Atmospheric hydrocarbon concentrations are generally higher in winter because the reactive hydrocarbons react more slowly in the winter and meteorological conditions are more favorable to their accumulating in the atmosphere to higher concentration before producing photochemical oxidants. Due to the role they play as ozone precursors, reactive hydrocarbons are one of the two criteria pollutants subject to federal ozone requirements.</p> <p>Sources - Motor vehicles are a major source of anthropogenic hydrocarbons (AHC) in the basin. Other sources include evaporation of organic solvents and petroleum refining and marketing operations. Trees are the principal emitters of biogenic or natural hydrocarbons (NHC).</p> <p>Effects - Certain hydrocarbons can damage plants by inhibiting growth and causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions which produce photochemical oxidants.</p>



c. Local Regulatory Framework. Air quality regulations in Humboldt County are subject to both federal and State standards. The 1990 Amendments to the Federal Clean Air Act mandated that the USEPA manage and control air quality by establishing the National Ambient Air Quality Standards (NAAQS). In California, the task of air quality management and regulation has been legislatively granted to the California Air Resources Board (ARB) and the local and regional air quality management districts and air pollution control districts. The ARB is responsible for research activities, establishing California Ambient Air Quality Standards (CAAQS) for air quality, and regulating mobile emission sources (i.e., motor vehicles) and to a much lesser extent stationary sources. The CAAQS are generally more stringent than corresponding federal standards. Table 4.1-2 illustrates both the federal and State current pollutant regulations.

**Table 4.1-2
 Current Federal and State Ambient Air Quality Standards**

Pollutant	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.07 ppm (8-hr avg)
Carbon Monoxide	35.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)	20.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)
Nitrogen Dioxide	0.10 ppm (1-hr avg) 0.053 ppm (annual avg)	0.18 ppm (1-hr avg) 0.030 ppm (annual avg)
Sulfur Dioxide	0.075 ppm (1-hr avg) 0.14 ppm (24-hr avg)	0.25 ppm (1-hr avg) 0.04 ppm (24-hr avg)
Lead	1.5 $\mu\text{g}/\text{m}^3$ (calendar quarter)	0.15 $\mu\text{g}/\text{m}^3$ (3-month avg)
Particulate Matter (PM ₁₀)	150 $\mu\text{g}/\text{m}^3$ (24-hr avg)	50 $\mu\text{g}/\text{m}^3$ (24-hr avg) 20 $\mu\text{g}/\text{m}^3$ (annual avg)
Particulate Matter (PM _{2.5})	35 $\mu\text{g}/\text{m}^3$ (24-hr avg) 12 $\mu\text{g}/\text{m}^3$ (annual avg)	12 $\mu\text{g}/\text{m}^3$ (annual avg)

ppm= parts per million

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

Source: California Air Resources Board, www.arb.ca.gov/research/aaqs/aaqs2.pdf, June 4, 2013

The ARB established fourteen air basins. State law directly created local air quality management districts and air pollution control districts which have primary authority over regulating stationary sources. As described above, for Humboldt County, located within the North Coast Air Basin, air pollution control authority for stationary sources is vested with the North Coast Unified Air Quality Management District (NCUAQMD).

Emission Regulations. Mobile emission sources are regulated through the establishment of federal and State vehicle emission requirements with which auto manufacturers must comply. Motor vehicle emissions are also regulated by the State’s vehicle inspection and maintenance program (the “Smog Check Program”). Indirectly, increases in motor vehicle emissions can be mitigated by agencies other than NCUAQMD or ARB through CEQA and determinations of consistency with City and County General Plans. The NCUAQMD has not formally adopted significance thresholds, but rather utilizes the Best Available Control Technology (BACT) emission rates for stationary sources as defined and listed in the NCUAQMD Rule and Regulations, Rule 110 - New Source Review (NSR) And Prevention of



Significant Deterioration (PSD), Section 5.1 - BACT (pages 8-9). The District does not currently have any thresholds for toxics, but recommends the use of the latest version of the CAPCOA's "Health Risk Assessments for Proposed Land Use Project" to evaluate and reduce air pollution impacts from new development.

d. Current Air Quality. Monitoring ambient air pollutant concentrations is conducted by the ARB, NCUAQMD, and industry. Monitors operated by the ARB and NCUAQMD are part of the State and Local Air Monitoring System (SLAMS). The SLAMS stations are located to provide local and regional air quality information. NCUAQMD operated five monitoring sites in 2012, at sites in Crescent City, Eureka, and Weaverville. Data for Humboldt County is collected at three air quality stations located in Eureka. The Eureka air quality stations also monitor for the federal Particulate Matter Standard (PM_{2.5}). Data from the monitoring stations indicate that the air quality in Eureka is improving; PM levels have been reduced to nearly below State standards (Humboldt County General Plan Update EIR, 2012).

The NCUAQMD is required to monitor air pollutant levels to assure that the air quality standards are met and, in the event they are not, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified either as being in "attainment" or "non-attainment." NCUAQMD is listed as "attainment" or unclassified" for all the federal and State ambient air quality standards except for the State 24-hour particulate (PM₁₀) standard. The District has not exceeded the federal annual standard for particulate matter during the last five year period. Humboldt County's sunny climate, pollution-trapping mountains and valleys, along with the growing population, all contribute to the non-attainment status for PM₁₀ (NCUAQMD, 2013). Primary sources of particulate matter in the Eureka area are on-road and off-road vehicles (engine exhaust and dust from paved and unpaved roads), open burning of vegetation (both residential and commercial), residential wood fireplaces or stoves, and stationary industrial sources (factories) (NCUAQMD, 2013).

e. PM₁₀ Attainment Plan. The federal Clean Air Act Amendments (FCAAA) of 1990 set a schedule for the attainment of the NAAQS. States are required to prepare a State Implementation Plan (SIP) to develop strategies to bring about attainment of the standards. In addition, the California Clean Air Act of 1988 requires areas that exceed the California ambient air quality standards to plan for the eventual attainment of the State standards.

In 1995, the District prepared a draft PM₁₀ Attainment Plan to identify the major contributors of PM₁₀. The plan also identifies cost-effective control measures for decreasing ambient PM₁₀ to levels that will meet the State AAQS. The control strategies include transportation control measures (public transit, ridesharing, vehicle buy-back program, traffic flow improvements, bicycle incentives, etc.), land use measures to reduce reliance on automobiles, and open burning measures (NCUAQMD, 1995).

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds. Pursuant to the State CEQA Guidelines, air quality impacts related to the proposed project would be significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;



- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative guidelines for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people.

As stated above, the District has not formally adopted significance thresholds, but rather utilizes the Best Available Control Technology (BACT) emission rates for stationary sources as defined and listed in the NCUAQMD Rule and Regulations, Rule 110 - New Source Review (NSR) And Prevention of Significant Deterioration (PSD), Section 5.1 - BACT (pages 8-9). The District does not currently have any thresholds for toxics, but recommends the use of the latest version of the CAPCOA's "Health Risk Assessments for Proposed Land Use Project" to evaluate and reduce air pollution impacts from new development.

The NCUAQMD does not have established CEQA significance criteria to determine the significance of impacts that would result from the proposed project. However, the NCUAQMD has criteria pollutant significance thresholds for new or modified stationary source projects proposed within the NCUAQMD's jurisdiction. NCUAQMD has indicated that it is appropriate for lead agencies to compare proposed project emissions to its stationary source significance thresholds, which are:

- *Nitrogen oxides (NO_x) – 40 tons per year*
- *Reactive organic gases (ROG) – 40 tons per year*
- *PM₁₀ – 16 tons per year*
- *Carbon monoxide (CO) – 100 tons per year*

The NCUAQMD thresholds listed above are not applicable to the RTP as it is not a new or modified stationary source project. However, individual RTP projects would be required to demonstrate consistency with NCUAQMD thresholds. If an individual project's emission of a particular criteria pollutant is within the thresholds outlined above, the project's effects concerning that pollutant would be less than significant.

NCUAQMD Registration Program for Naturally Occurring Asbestos. The NCUAQMD is required by State law to implement and enforce all State Airborne Toxic Control Measures (ATCMs). The NCUAQMD has instituted a registration program for construction, grading, quarrying, and surface mining operations, and applicants must register with the NCUAQMD prior to engaging in specific activities covered by the regulation. As part of the registration process, the applicant may be required to submit a dust control plan. Applicants must notify the NCUAQMD at least 14 days before activity begins. However, the program includes a series of exemptions. One of these exemptions is for projects that are located in an area not designated as an ultramafic rock unit area by the California Department of Conservation Division of Mines and Geology.

NCUAQMD Rule 430 – Fugitive Dust Emissions. NCUAQMP Rule 430 prohibits the handling, transporting, or open storage of materials in such a manner that allows or may allow unnecessary amounts of particulate matter from becoming airborne. The rule requires project applicants to take reasonable precautions to prevent particulate matter from becoming airborne including, but not limited to, the following:

1. Covering trucks when used for transporting materials likely to give rise to airborne dust.
2. Installing and using hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, and requiring containment methods during sandblasting and other similar operations.
3. Conducting agricultural practices in a way that minimizes the creation of airborne dust.
4. Using water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, and the clearing of land.
5. Applying asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dust.
6. Paving roadways and maintaining them in a clean condition.
7. Promptly removing earth or other material from paved streets onto which earth or other material has been transported by construction equipment, wind, water, or other means.

The above measures would be enforced by Humboldt County, individual cities in the county, or tribal governments as applicable, in the context of the grading permit(s) to be issued by the County or cities for the individual projects of the proposed RTP.

Short-Term Emissions Methodology. Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Air quality impacts can nevertheless be acute during construction periods, resulting in significant localized impacts to air quality. Construction-related emissions would indirectly result from the RTP 2013/14 Update program level, and such emissions would depend on the characteristics of individual development projects. Furthermore, the NCUAQMD has not adopted significance thresholds for construction-related emissions. Nevertheless, because the region does not meet the State 24-hour standard for PM₁₀, the NCUQMD requires project applicants to take reasonable precautions to prevent particulate matter from becoming airborne through compliance with the Registration Program for Naturally Occurring Asbestos and Rule 430.

Long-Term Emissions Methodology. The methodology for determining the significance of air quality impacts compares baseline conditions (as of 2013) to the future RTP conditions, as required in CEQA Section 15126.2(a). The air quality analysis also compares expected future conditions with the RTP to expected future conditions if no RTP were adopted (“no project scenario”). With respect to long-term impacts, because the RTP itself does not directly generate the emissions, thresholds associated with “new” or stationary sources do not apply in this case. However, State and federal clean air laws require reducing, from current levels, pollutant emissions that violate national or State ambient air quality standards. Therefore, the project’s long-term impacts to air quality will be considered significant if the project results in mobile source emissions that significantly exceed existing levels. In this case, the pollutant of concern is fine particulate matter, as this is a primary pollutant associated with vehicle transportation.

The long-term emissions analysis uses the 2013 on-road mobile source emissions estimate as the baseline existing conditions for determining air quality impacts. This is the most recent year for which accurate county-wide vehicle miles traveled (VMT) data is available. Projected air emissions from mobile sources were calculated using EMFAC2011 emissions factors and multiplied by VMT. The EMFAC emissions factors are established by the California Air Resources Board and accommodate certain mobility assumptions (e.g., vehicle speed, delay times, average trip lengths, and total travel time). Projected vehicle emissions on the HCAOG transportation network for the year 2035 under the RTP 2013/14 Update were compared with 2013 existing conditions and with future conditions under the “no project scenarios” in 2035. If county-wide ROG, NO_x, PM₁₀, and PM_{2.5} emissions caused by the RTP 2013/14 Update do not significantly exceed existing conditions as defined by the 2013 baseline and PM₁₀ Attainment Plan, impacts to long-term air quality will not be considered significant.

In addition, the PM₁₀ Attainment Plan contains a 1991 inventory baseline of the total county-wide, on-road mobile emissions. In 1991, PM₁₀ area emissions in Humboldt County totaled 2,485 tons/year.¹ According to the Particulate Matter Plan, Humboldt County must reduce area emissions by 49% from 1991 levels to prevent exceedences of the State 24 hour standard. This is equivalent to reducing emissions by 1,218 tons/year. To determine consistency with the Particulate Matter Plan, project emissions were also compared to Humboldt County’s required area PM₁₀ level as established by the Particulate Matter Plan.

b. Project Impacts and Mitigation Measures. Implementing the RTP could create both short-term and long-term impacts to air quality. Short-term air quality impacts would be generated during construction of the capital improvements listed in the RTP. Long-term emissions would be generated indirectly by the on-road vehicles which would utilize the capital improvements proposed.

Impact AQ-1 Construction activities associated with transportation projects under the RTP 2013/14 Update would create fugitive dust and ozone precursor emissions and have the potential to result in temporary adverse impacts on air quality in Humboldt County. Impacts would be Class II, significant but mitigable.

There are three primary sources of short-term emissions which would be generated by constructing future transportation projects under the RTP 2013/14 Update. These sources include: operating construction vehicles, (e.g., scrapers, loaders, dump trucks); creating fugitive dust during clearing and grading; and using asphalt or other oil-based substances during the final construction phases, which also generates nuisance odors. The significance of daily emissions, particularly ROG and NO_x emissions, generated by construction equipment utilized to build RTP transportation improvements would depend on the quantity of equipment used and the hours of operation. The significance of fugitive dust (PM_{2.5} and PM₁₀) emissions would depend upon the following factors: 1) the aerial extent of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved (including the potential removal of underground storage tanks); and, 5) whether transporting excavated materials offsite is necessary. The amount of ROG emissions generated by oil-based substances such as asphalt depends upon the type and amount of asphalt utilized.

¹ Area emissions are the estimates of PM₁₀ emissions from source categories that affect the problem PM₁₀ areas in the counties.



Asbestos can also be of concern during demolition activities; however, demolishing, renovating, or removing asbestos-containing materials is subject to the limitations of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations. These regulations require notification and inspection, and require applicants (project sponsors) to comply with the NCUAQMD Registration Program for Naturally Occurring Asbestos.

Intersection improvements such as signalization, re-striping or signal coordination are not expected to generate significant short-term emissions impacts. However, other RTP projects may involve grading and paving, or the construction of permanent facilities. The precise quantity of emissions would need to be determined at the time of proposed construction of a given transportation improvement project. Although any individual improvement or project may not generate significant short-term emissions, it is probable that several projects would be under construction simultaneously, generating cumulative construction emissions which could impact air quality. However, by implementing mitigation measures for individual projects, the resulting impacts would be reduced. Impacts would be Class II, significant but mitigable.

Mitigation Measures. The following mitigation measures are required by HCAOG to reduce, minimize or avoid significant adverse environmental impacts. HCAOG shall, and sponsor agencies can and should, implement the following mitigation measures for applicable projects that result in air quality impacts. Project-specific environmental impacts may require these mitigation measures be revised or expanded in response to site-specific conditions. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

- AQ-1(a)** The RTP project sponsor shall ensure that NCUAQMD Rule 430 precautionary measures are implemented. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. NCUAQMD Rule 430 precautionary measures include, but are not limited to, the following:
- Covering trucks when used for transporting materials likely to give rise to airborne dust.
 - Installing and using hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, and requiring containment methods during sandblasting and other similar operations.
 - Using water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, and the clearing of land.



- Applying asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dust.
- Paving roadways and maintaining them in a clean condition.
- Promptly removing earth or other material from paved streets onto which earth or other material has been transported by construction equipment, wind, water, or other means.

AQ-1(b) The RTP project sponsor shall ensure registration with the NCUAQMD prior to engaging in specific activities covered by the Program for Naturally Occurring Asbestos. As part of the registration process, the applicant may be required to submit a dust control plan. Notification shall be made to the NCUAQMD at least 14 days before activity begins.

AQ-1(c) The RTP project sponsor shall ensure that fleet owners of mobile construction equipment are subject to the California Air Resources Board Regulation for In-use Off-road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, § 2449), the purpose of which is to reduce diesel particulate matter and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles. The project sponsor shall also ensure to the maximum extent feasible, that diesel construction equipment meeting the California Air Resources Board Tier 2 or higher emission standards for off-road heavy-duty diesel engines is used. If using Tier 2 equipment it not feasible, diesel construction equipment meeting Tier 1 emission standards shall be used. These measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections.

AQ-1(d) The project sponsor shall ensure that, to the extent possible, construction activity utilizes electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.

AQ-1(e) The project sponsor shall ensure that removing underground storage tanks and other project excavation is a permitted activity in accordance with NCUAQMD rules and regulations. This shall be accomplished through issuing NCUAQMD permits to the project sponsor prior to issuing a grading permit.

Significance after Mitigation. With the implementation of the above mitigation, impacts related to short-term construction emissions would be less than significant.

Impact AQ-2 Implementation of the RTP 2013/14 Update would result in an overall reduction of on-road vehicle emissions when compared to baseline conditions as defined by the RTP 2013/14 Update baseline or the PM₁₀ Attainment Plan, and would not result in



an increase in criteria pollutants as compared to the future “no project scenario.” Therefore, long-term operational impacts would be Class III, less than significant.

Projected on-road vehicle emissions on the HCAOG transportation network for the year 2035 under the RTP 2013/14 Update were compared to existing conditions as defined by the 2013 baseline or the PM₁₀ Attainment Plan baseline. Projected on-road vehicle emissions on the HCAOG transportation network for the year 2035 under the RTP 2013/14 Update were also compared with those projected under the “no project scenario” a scenario that accounts for future growth, but in which the transportation improvements identified in the RTP 2013/14 Update are not implemented.

The on-road vehicle source emissions for the RTP 2013/14 Update were estimated with the EPA approved EMFAC2011 emission inventory model developed by the California Air Resources Board for use in California. Table 4.1-3 shows the results of the long-term emissions analysis based on annual VMT which were computed for each scenario using HCAOG’s regional travel demand model.

**Table 4.1-3
 Regional Emissions Analysis**

Scenario	Analysis Year	ROG (tons/day)	NOx (tons/day)	PM₁₀ (tons/day)¹	PM_{2.5} (tons/day)
2013 Baseline	2013	2.90	5.84	0.31	0.17
2035 No Project Scenario	2035	0.96	1.73	0.29	0.14
2035 with RTP	2035	0.96	1.73	0.29	0.14

¹ PM₁₀ includes tire wear and brake wear emissions

Source: The on-road mobile source criteria pollutant emissions estimates for the RTP 2013/14 Update were calculated using CARB’s EMFAC2011 emission inventory model.

As previously noted, Humboldt County is currently classified as being a non-attainment area for the state 24-hour particulate (PM₁₀) standard. As shown in Table 4.1-3, projected RTP 2013/14 Update emissions for ROG, NO_x, PM₁₀, and PM_{2.5} would be below the 2013 baseline. In addition, the RTP does not result in increasing criteria pollutant emissions over the “no project scenario” in 2035. Future-year criteria pollutant emissions under the RTP would decrease slightly compared to the “no project scenario” because there would be an overall decrease in countywide VMT (refer to Section 4.8, *Transportation and Circulation*).

PM₁₀ emissions associated with the RTP would also be lower than PM₁₀ Attainment Plan baseline and target levels. According to the Particulate Matter Plan, Humboldt County must reduce area emissions by 49 percent from 1991 levels to prevent exceedences of the State 24 hour standard. In 1991, PM₁₀ area emissions in Humboldt County totaled 2,485 tons/year (equivalent to 6.81 tons/day), of which nine percent (or 217 tons/year [equivalent to 0.59 tons/day]) were a result of on road gas and diesel vehicles and other mobile sources. A reduction of 49 percent from 1991 mobile emissions levels would be equivalent to 0.30 tons/day. As shown in Table 4.1-3, projected RTP emissions for PM₁₀ would be 0.29 tons/day in 2035. As such, PM₁₀ emissions associated with the RTP would be below 1991 baseline and targeted levels established by the Particulate Matter Plan.



In addition to the specific transportation improvements identified by the RTP, the RTP also includes several policies that would contribute to reducing air pollutants. Table 4.1-4 summarizes RTP 2013/14 Update policies that promote improvements to air quality.

**Table 4.1-4
 2013/14 RTP Update Policies that Promote Air Quality Improvements**

RTP Policy	Description
Policy CS-2	HCAOG recognizes the high level of public support for a dedicated bicycle and pedestrian trail in the NCRA and Caltrans corridor between Eureka and Arcata (the “Humboldt Bay Trail”), and supports multi-jurisdictional, public, and private efforts to develop it.
Policy CS-3	HCAOG shall pursue grants to augment funding for pedestrian, bicycle, and transit facility improvements.
Policy CS-4	HCAOG shall include Complete Streets improvements in regionally-funded transportation system projects to the extent feasible, as consistent with California Complete Streets Act of 2008 (AB 1358) and Caltrans Deputy Directive 64-R1. HCAOG will accelerate programming for regional projects that retrofit existing roads to provide safe and convenient travel by all users.
Policy CS-7	HCAOG shall use the Bicycle Level of Service and Quality of Service (BLOS/BQOS) and the Bicycle Compatibility Index as tools for assessing bicycle facility needs and prioritizing projects.
Policy CS-9	HCAOG shall favor first projects that, by design and siting, will result in no significant adverse environmental impacts, and secondarily projects that result in no significant adverse impacts due to mitigation.
Policy CS-10	Carry out policies and program funding for projects that will help achieve the goals of California Assembly Bill 32: Global Warming Solutions Act. This shall include supporting efforts to reduce energy consumption and air pollution, such as projects that increase access to alternative transportation, reduce congestion, reduce single-occupancy (motorized) vehicle trips, and shorten vehicle trip length.
Policy CS-12	HCAOG will support and collaborate with local and regional efforts to advance Safe Routes to School programs.
Policy Trails-1	HCAOG shall coordinate and support local jurisdictions in developing a regional trails network. HCAOG shall support lead agencies in completing a contiguous California Coastal Trail in Humboldt County. The regional network shall provide travel options for residents and visitors, including transportation-disadvantages populations.
Policy Trails-2	Maintain the quality and condition of the active transportation system.
Policy Trails-3	HCAOG shall pursue, and help member entities pursue, active transportation system funding to implement priority trail projects identified in the Humboldt County Regional Trails Master Plan.
Policy Trails-6	HCAOG supports actions to improve the safety of the regional trails system, which is an integral part of an active transportation system.
Policy PT-1	To grow and meet transit demand, fund programs to increase trip frequency. Prioritize programs with the highest potential to increase ridership and reduce the number of single occupancy vehicle trips made in Humboldt County.
Policy PT-2	HCAOG shall support transit providers in Humboldt County in coordinating local, intercity, and interregional transportation alternatives, including with regional providers in neighboring counties.
Policy PT-3	HCAOG shall support paratransit providers to maintain a zero trip-denial rate (defined by ADA) for ADA-eligible registrants and ensure that ADA complementary paratransit is capable of serving all confirmed ADA-eligible trips within the ADA service area.



**Table 4.1-4
2013/14 RTP Update Policies that Promote Air Quality Improvements**

RTP Policy	Description
Policy PT-4	HCAOG encourages city, county, and tribal governments to pursue transit-friendly development. HCAOG encourages designs to facilitate effective transit service, such as strategically increasing densities, building transit-oriented development within major transit corridors, and making it convenient to walk to transit and other destinations. HCAOG will provide information on transit-oriented development, as requested. HCAOG encourages member and committee agencies to have transit operators actively participate in the planning and review process for new developments.
Policy PT-5	HCAOG supports designs and projects to enhance pedestrian access to bus stops and bicycle facilities at bus stops
Policy PT-6	Develop local funding sources to afford expanding service to meet demand. Potential sources include but are not limited to: parking fees, transportation sales tax, employer contributions, local gas sales tax, impact fees, local vehicle impact fee, and cost-sharing quotas
Policy PT-7	HCAOG shall evaluate and consider requests for extending service hours, expanding service area, and adding service frequency, based on the potential of the new service(s) to achieve minimum productivity standards.
Policy PT-8	HCAOG shall facilitate transit service operators to use advanced technology such as vehicle location systems, dispatch and scheduling software, and safety and security systems.
Policy PT-9	HCAOG shall work to ensure ongoing service monitoring and evaluation, and short- and long-term planning. For each public transit operator and entity, HCAOG shall maintain a current transit development plan. HCAOG will follow and promote recommendations to improve system performance and sustainability whenever feasible.
Policy PT-10	HCAOG shall complete periodic performance audits of public transit services. Measure productivity based on performance measures identified in HCAOG’s adopted Regional Transportation Plan and Transit Development Plan.
Policy PT-11	Support the transition to alternative fuels for transit fleet.
Policy PT-14	HCAOG shall help promote integrated social services and public transportation services, including specialized transportation programs for the county’s disabled and elderly population.
Policy AS-2	HCAOG shall support and encourage programs and projects to integrate scheduled passenger airline service with other travel modes (e.g. transit routes/schedules, secure bicycle storage).
Policy AS-3	HCAOG supports applying Complete Streets strategies to airport access road improvements for regional projects included in the RTP, as well as and local projects in jurisdictions’ Capital Improvement Programs.
Policy AS-4	HCAOG shall have an adopted Airport Ground Access Improvement Program (AGAIP) for the Arcata-Eureka Airport, the primary air carrier airport within HCAOG’s jurisdiction. The program shall consider feasible projects to develop or extend highways, bikeways, or mass transit systems to improve intermodal ground access to the airport, and any other ground access improvement projects the RTPA deems appropriate to that end (per California Government Code §65081.1(a)).
Policy AS-7	HCAOG shall promote projects and programs that increase the energy efficiency and use of “clean” energy sources in aviation transportation; HCAOG shall also promote programs to reduce aviation-related air pollution.
Policy GM-3 (Road/Trucking)	HCAOG prioritizes projects to design and maintain truck routes consistent with Complete Streets goals whenever safe and feasible.
Policy GM-9 (Goods Movement)	HCAOG shall promote projects and programs that increase energy efficiency, conserve energy, and use alternative (“clean”) energy sources to reduce the direct and indirect costs of freight and passenger transportation.
Policy GM-10 (Goods Movement)	HCAOG shall work with NCUAQMD and other stakeholders to develop and promote programs, technologies, and best practices to reduce the transportation sector’s air pollutant emissions (e.g., NOx, PM, SOx, sulfate, VOC).



**Table 4.1-4
 2013/14 RTP Update Policies that Promote Air Quality Improvements**

RTP Policy	Description
Policy GM-13 (Goods Movement)	HCAOG shall support implementing cost-effective technologies and operational strategies (including Intelligent Transportation Systems (ITS) to improve safety, expedite goods movement, and minimize emissions and congestion related to goods movement transportation.

In summary, transportation improvement projects identified in the RTP would result in an overall reduction of on-road vehicle emissions when compared to baseline conditions and would not exceed emissions associated with the "no project scenario." The RTP 2013/14 Update also includes several goals and policies that would contribute to reducing air pollutant emissions. Therefore, impacts related to criteria pollutants would be less than significant. No mitigation is required.

Mitigation Measures. None required.

Significance after Mitigation. The operational impacts of the RTP on the attainment of State and federal air quality standards would be less than significant.

Impact AQ-3 The transportation improvement projects included in the RTP 2013/14 Update may facilitate increased exposure of sensitive receptors to hazardous air pollutants that may cause health risks. Implementation of the RTP 2013/14 Update would not result in a regional increase in toxic air emissions. Impacts would be Class III, *less than significant*.

Diesel particulate matter is classified as the primary airborne carcinogen in the State. The ARB reports that diesel particulate matter represents about 70 percent of the potential cancer risk from vehicle travel on a typical urban freeway. In addition, diesel exhaust has a distinct odor, which is primarily a result of hydrocarbons and aldehydes contained in diesel fuel. In addition to the health risks associated with diesel exhaust, the odors associated with diesel exhaust could be a nuisance to nearby receptors. An analysis of 2035 on-road mobile source diesel PM_{2.5} and PM₁₀ emissions (primary) and diesel ROG, NO_x, and SO_x (as surrogates for secondary PM₁₀) is shown in Table 4.1-5.

**Table 4.1-5
 On-Road Mobile Source Toxics Comparison**

Vehicle Activity	Diesel PM _{2.5} (tons/day)	Diesel PM ₁₀ (tons/day)	Diesel NO _x (tons/day)	Diesel ROG (tons/day)	Diesel SO _x (tons/day)
2013 Baseline	0.09	0.13	3.28	0.18	<0.01
2035 No Project Scenario	0.05	0.09	1.06	0.11	0.01
2035 with RTP	0.05	0.09	1.06	0.11	0.01

Source: The on-road mobile source criteria pollutant emissions estimates for the RTP 2013/14 Update were calculated using CARB's EMFAC2011 emission inventory model.



As shown in Table 4.1-5, results indicate that for diesel PM_{2.5}, PM₁₀, NO_x, and ROG RTP emissions for 2035 would be less than 2013 baseline emission levels. In addition, the RTP does not result in an increase in diesel criteria pollutant emissions over the “no project scenario” in 2035. While RTP scenarios for 2035 result in a slight increase in diesel SO_x, the increase is at a magnitude of less than 0.002 tons/day and would therefore not be a significant increase. Therefore, impacts related to diesel criteria pollutant exposure and associated health risks and nuisance odors at the regional level would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. The operational impacts of the RTP on exposure of sensitive receptors to hazardous air pollutants are less than significant.

Impact AQ-4 Re-entrained dust has the potential to increase airborne PM₁₀ and PM_{2.5} levels in Humboldt County. The increase in growth expected through the RTP 2013/14 Update planning horizon would result in additional vehicle miles traveled, which would add to the PM₁₀ and PM_{2.5} levels in the area. However, re-entrained dust levels would be lower with the RTP 2013/14 Update than 2013 baseline levels. In addition, implementation of planned Humboldt County control measures would further reduce such emissions. Impacts would be Class III, less than significant.

Re-entrained dust would be generated by roadway activity (e.g., roadway dust kicked up by moving vehicles on paved and unpaved roadways). In addition, dust from construction activity would add to regional dust levels. The effects of road dust (typically measured as PM₁₀) combining with ozone and the hazardous constituents of re-entrained road dust itself (carcinogens, irritants, pathogens) may contribute to respiratory illnesses such as asthma and allergies. Although motor vehicle emission control advances have allowed vehicle tailpipe emissions of some pollutants to decrease over the last 20 years, the number of vehicles in use and the amount of vehicle activity has continued to increase. This would suggest that re-entrained road dust has increased as well.

In Humboldt County, paved road dust accounts for 32 percent of the County’s PM₁₀ emissions and unpaved road dust accounts for another 29 percent (NCUAQMD, 1995). Re-entrained roadway dust as well as roadway construction dust emissions are included in the estimated criteria pollutant emissions for PM_{2.5} and PM₁₀ discussed in Impacts AQ-1 and AQ-2 above. As discussed, emissions levels for PM_{2.5} and PM₁₀ criteria pollutants would be reduced substantially from the 2013 baseline with the implementation of the RTP. Increased vehicle miles travelled may contribute to an increase in re-entrained roadway dust; however, the RTP 2013/14 Update would result in fewer VMT when compared to the 2013 baseline and future “no project scenario.” As a result, re-entrained dust emissions would also be lower under the RTP 2013/14 Update when compared to both the 2013 baseline and future “no project scenario.”

In addition, NCUAQMD control measures would further reduce re-entrained dust within the region. The PM₁₀ Attainment Plan includes control strategies that are intended to achieve the



attainment goals identified in the Plan. Control strategies include transportation control measures such as encouraging the use of public transit, replacing the diesel powered bus fleet with natural gas fueled models, encouraging car-pooling and bicycle commuting, removing or repairing vehicles that have inefficient emission control systems, and improving traffic flow to reduce idling.

Mitigation Measures. None required.

Significance after Mitigation. Impacts would be Class III, less than significant with implementation of NCUAQMD control measures.

Impact AQ-5 The proposed RTP 2013/14 Update would be consistent with the PM₁₀ Attainment Plan. Impacts would be Class III, less than significant.

As described in Impact AQ-2 above, PM₁₀ emissions associated with the RTP are lower than PM₁₀ Attainment Plan baseline and target levels. According to the Particulate Matter Plan, Humboldt County must reduce area emissions (including mobile emissions) by 49 percent from 1991 levels to prevent exceedences of the state 24 hour standard. In 1991, PM₁₀ area emissions in Humboldt County totaled 2,485 tons/year (equivalent to 6.81 tons/day), of which nine percent (or 217 tons/year [equivalent to 0.59 tons/day]) were a result of mobile emissions sources (e.g., on road gas vehicles, on road diesel vehicles, and other mobile sources). A reduction of 49 percent from 1991 mobile emissions levels would be equivalent to 0.30 tons/day. Projected RTP emissions for PM₁₀ would be 0.29 tons/day in 2035. As such, PM₁₀ emissions associated with the RTP would be below 1991 baseline and targeted levels established by the Particulate Matter Plan.

Another consideration of consistency is how the RTP 2013/14 Update implements/promotes the on-road mobile source emission control strategy in the PM₁₀ Attainment Plan. In 1995, the District prepared a draft PM₁₀ Attainment Plan to identify the major contributors of PM₁₀ and cost-effective control measures which can be implemented to bring ambient PM₁₀ levels down to levels that will meet the state AAQS. The control strategies include transportation control measures (public transit, ridesharing, vehicle buy-back program, traffic flow improvements, bicycle incentives, etc.), land use measures to reduce reliance on automobiles, and open burning measures (NCUAQMD, 1995).

Consistent with the TCMs in the PM₁₀ Attainment Plan, the RTP 2013/14 Update identifies other means of reducing potential emissions beyond what can be reflected in HCOAG's travel model. The transportation projects and policies identified in the RTP are designed to improve transportation congestion and reduce VMT. The RTP projects and policies promote the implementation of the TCMs identified in the PM₁₀ Attainment Plan. In addition, as discussed above, implementing the RTP would reduce emissions of PM₁₀ and PM_{2.5} below 1991 and 2013 baseline levels, consistent with the goals outlined in the PM₁₀ Attainment Plan. Impacts would be Class III, less than significant.

Mitigation Measures. None required.



Significance After Mitigation. The RTP 2013/14 Update would be consistent with the PM₁₀ Attainment Plan.

c. Specific RTP Projects That May Result in Impacts. The proposed projects listed in Section 2.0, *Project Description*, would have the potential to result in air quality impacts. All projects that include a construction component would be included in the analysis and subject to the mitigation under Impact AQ-1. Projects that include roadway, rail, and transit features and/or expansions would be included in the analysis under Impacts AQ-2 through AQ-4. As the individual projects are designed and implemented, additional specific analysis as applicable may need to be conducted in order to determine the actual magnitude of impact. Mitigation measures discussed above could apply to these specific projects.



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4.2 BIOLOGICAL RESOURCES

4.2.1 Setting

a. Habitats. Humboldt County is part of the Klamath/North coast bioregion. In general, this bioregion is characterized by its rocky coastline, forested montane areas, and relatively sparse human settlement. Much of this mountainous bioregion is covered by forest. It is considered one of the wettest areas in the State of California. Humboldt's coastal area is characterized as having a cool and moist climate with a tendency for fog, while inland the climate is drier.

The bays, estuaries, and other tidal inlets of the Humboldt coastal area provide a variety of habitats for resident and migratory wildlife species. Humboldt Bay, one of California's largest coastal estuaries, is home to diverse and resource-rich habitats that support invertebrates, fish, birds, and mammals. The Humboldt Bay National Wildlife Refuge, established in 1971 within the Humboldt Bay area, provides almost 4,000 acres of conserved habitats, including mudflats, estuarine eelgrass meadows, saltmarsh, brackish marsh, seasonally flooded freshwater wetlands, riparian wetlands, streams, coastal dunes, and forest. These habitats support over 316 species of birds and 40 species of mammals. The refuge also provides habitat for approximately 100 species of fish and marine invertebrates, including steelhead, coho, chinook salmon, and Dungeness crab (USFWS, 2014; Humboldt County General Plan Update Draft EIR, 2012).

The inland areas of Humboldt County are composed mainly of coastline and mountainous areas with dense coniferous forests interspersed with grass or chaparral covered slopes. Six wild rivers run through the County, providing habitats for fish and wildlife as well as important water resources. Over 400,000 acres of the County's undeveloped forest and coastline habitats are designated as parkland in the State and National Park systems, leaving large tracts of undisturbed habitat (Humboldt County General Plan Update Draft EIR, 2012).

Twenty-eight terrestrial habitat types are mapped using the California Department of Fish and Wildlife (CDFW; formerly referred to as the California Department of Fish and Game) California Wildlife Habitat Relationships (CWHR) habitat classification system within Humboldt County (CDFW, 2008) (Figure 4.2-1). Because of the scale of this programmatic EIR, the habitat categories presented in Figure 4.2-1 depict a broad illustration of the CWHR types found within Humboldt County. The following describes each of the habitats adapted from *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988). It should be noted that these habitats are generalized and that site-specific variation is likely present. Also note that the CWHR classification system maps habitats from a broad perspective and that in many areas it is expected that two or more habitats may blend with one another. Habitats which occur within populated areas can also show variation because of a greater exposure to anthropogenic influences, such as the introduction of exotic plant species.

Tree Dominated Habitats. Tree dominated habitats are the predominant vegetation type in Humboldt County. Fir forest and redwood represent over 50 percent of the county (Figure 4.2-1). Redwood areas generally occur from the coast eastward to the ridgeline. Fir and montane hardwood occur in the eastern and southeastern areas of the county. Fir and



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 US Department of Agriculture, 2014.

California Wildlife Relationship Classifications

Figure 4.2-1

HCAOG

hardwood forests support sensitive species such as goshawk, red tree vole, and spotted owls. Old growth redwood and Douglas fir forests provide prime breeding grounds for numerous sensitive species. Most of the old growth forestland is protected by State and federal park designation (e.g., Redwoods State Park, Headwaters, and Redwood National Park). However, there are a few pockets of unprotected old growth forestlands near the Headwaters land and adjacent to other protected areas. Hardwood and conifer forests are not considered as sensitive as fir and redwood forests, in terms of habitat quality (Humboldt County General Plan Update, Natural Resources and Hazards, Biological Resources, 2002). The following describes types of tree-dominated habitats that occur within Humboldt County.

Riparian areas are critical to many species of wildlife. The vegetation provides cover and nesting habitat for birds and creates corridors for animal movement including travel to and from different habitat types. These areas are important for wildlife migration and dispersal. While riparian habitat occurs as linear strips through various vegetation types, the adjacent upland habitat is often different. The edges where riparian habitat meets with upland habitat are known as ecotones, or edge habitats, which are important for many wildlife species (Humboldt County General Plan Update, Natural Resources and Hazards, Biological Resources, 2002).

Douglas Fir Forest. This habitat typically exhibits a spatial variation due to geologic, topographic, and successional variation typical within its range. Structure within this habitat types typically consists of a lower overstory of dense, sclerophyllous, broad-leaved evergreen trees such as tanoak (*Lithocarpus densiflorus*) and Pacific madrone (*Arbutus menziesii*), with an irregular, often open, higher overstory of tall needle-leaved evergreen trees such as Douglas fir (*Pseudotsuga menziesii*).

Klamath Mixed Conifer. This habitat type is typically composed of tall, dense to moderately open, needle-leaved evergreen forests with patches of broad-leaved evergreen and deciduous low trees and shrubs. The overstory layer is characterized by a mixture of conifers. Dominant conifers in the western range of this habitat are typically white fir (*Abies concolor*) and Douglas fir. In the east, dominant conifers consist of white fir, Douglas-fir, ponderosa pine (*Pinus ponderosa*), incense cedar (*Calocedrus decurrens*) and sugar pine (*Pinus lambertiana*).

Coastal Oak Woodland. Coastal oak woodlands are common to mesic coastal foothills of California. The woodlands do not form a continuous belt, but occur in a mosaic closely associated with mixed chaparral, coastal scrub and annual grasslands. These woodlands are commonly dominated by coast live oak (*Quercus agrifolia*). At drier sites other species such as blue oak and foothill pine (*Pinus sabiniana*) may also be interspersed. The understory of dense stands tends to be composed of shade tolerant shrubs and herbaceous plant species such as California blackberry (*Rubus ursinus*), miner's lettuce (*Claytonia perfoliata*) and toyon (*Heteromeles arbutifolia*). In areas with more open canopies the understory may be more dominated by grassland and shrub species such as California blackberry (*Rubus ursinus*), and western (or Pacific) poison oak (*Toxicodendron diversilobum*).

Closed-Cone Pine-Cypress Forest. This habitat type is typically dominated by a single species of closed-cone pines (*Pinus* sp.) or cypress (*Cupressus* sp.) and the height and canopy closure of these series are variable depending upon site characteristics including soil type, the age of the stand and the floristic composition. Closed-cone pine-cypress forests are considered

fire climax or fire-dependent vegetation types. This habitat type is typically found within rocky and infertile soils along the extreme coast or on very shallow infertile soils contain stunted, wind-pruned individuals.

Montane hardwood-conifer. This habitat type includes both conifers and hardwoods often as a closed forest. Composition is comprised of at least one-third conifers and at least one-third broad-leaved tree species. The habitat often occurs in a mosaic-like pattern with small pure stands of conifers interspersed with small stands of broad-leaved trees. This diverse habitat consists of a broad spectrum of mixed, vigorously growing conifer and hardwood species. Most of the broad-leaved trees are sclerophyllous evergreen, but winter-deciduous species also occur. Relatively little understory occurs under canopy. Steeper slopes are normally devoid of litter; however, gentle slopes often contain considerable accumulations of leaf and branch litter.

Redwood. Second growth redwood habitats are characterized by an even-aged structure with an open park like appearance. Coast redwood (*Sequoia sempervirens*) is the dominant tree species. Understory vegetation in old-growth redwood is usually very dense and composed of tall shrubs. Redwoods are very vigorous sprouters; sprouts eventually form the dominant canopy. Redwood and associated conifers also reproduce well by seed.

Montane Hardwood. A typical montane hardwood habitat is composed of a pronounced hardwood tree layer, with an infrequent and poorly developed shrub stratum, and a sparse herbaceous layer. In the Coast Ranges, canyon live oak (*Quercus chrysolepis*) often forms pure stands on steep canyon slopes and rocky ridge tops. It is replaced at higher elevations by scattered huckleberry oak (*Quercus vacciniifolia*) amongst an overstory of various conifers including ponderosa pine (*Pinus ponderosa*), Coulter pine (*Pinus coulteri*), California white fir (*Abies concolor*), and Jeffrey pine (*Pinus jeffreyi*). At mid elevations typical associates include Douglas-fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), Pacific madrone (*Arbutus menziesii*), California black oak (*Quercus kelloggii*), and bristlecone fir (*Abies bracteata*). At lower elevations knobcone pine (*Pinus attenuata*), foothill pine, Oregon white oak (*Quercus garryana*), and coast live oak are abundant. Understory vegetation is mostly scattered woody shrubs and a few forbs. Elevations range from 300 feet near the Pacific Ocean up to 9,000 feet.

Valley Foothill Riparian. This habitat type is associated with drainages, particularly those with low-velocity flows, flood plains, and gentle topography. This habitat is generally comprised of a sub-canopy tree layer dominated by cottonwoods (*Populus* sp.), sycamore (*Platanus racemosa*), and/or valley oak and an understory shrub layer typically consisting of willows (*Salix* spp.) and/or mulefat (*Baccharis salicifolia*).

Eucalyptus Forest. This habitat type ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Blue gum eucalyptus (*Eucalyptus globulus*) and red gum eucalyptus (*E. camaldulensis*) are the most common eucalyptus species found in these stands. The understory of these areas tends to have extensive patches of leaf litter but may include species such as poison oak.

Jeffrey Pine Forest. The structure of the Jeffrey pine forest varies over its distribution. A single tree layer is characteristic of Jeffrey pine (*Pinus jeffreyi*) stands on moderately dry sites.

On moist and mesic sites a second tree layer exists which is composed of deciduous hardwood species. Jeffrey Pine habitats are dominant by Jeffrey pine. A sclerophyllous shrub layer is common to most Jeffrey pine stands except on serpentine soils and extremely xeric sites. Jeffrey pine forests occur in mountainous regions and ranges in elevation from 500 to 9,500 feet.

Lodgepole Pine Forest. Lodgepole pine forests typically form open stands of similarly sized trees in association with few other species and with a sparse understory. Lodgepole pine (*Pinus contorta*) overwhelmingly dominates the habitat. Occasional associates include aspen (*populus* sp.) and mountain hemlock (*Tsuga martensiana*). The understory may be virtually absent, consisting of scattered shrubs and herbs, or a rich herbaceous layer at meadow margins. Many lodgepole stands are associated with meadow edges and streams, where the understory consists of grasses, forbs, and sedges.

Montane Riparian Forest. The vegetation of montane riparian forest habitats is variable and often structurally diverse. Usually, these riparian areas occur as a narrow, often dense grove of broad-leaved, winter deciduous trees with a sparse understory. At high mountain elevations, more shrubs tend to occur in the understory. Typical dominants include big leaf maple (*Acer macrophyllum*), alder species (*Alnus* sp.), black cottonwood (*Populus trichocarpa*) and California bay laurel (*Umbellularia californica*).

Ponderosa Pine Forest. Tree spacing in ponderosa pine forests varies from open to dense. The ponderosa pine forest includes pure stands of ponderosa pine (*Pinus ponderosa*) as well as stands of mixed species in which at least 50% of the canopy area is ponderosa pine. Associated species vary depending on location in the state and site conditions. Typical tree associates include, but are not limited to white fir (*Abies concolor*), incense-cedar (*Calocedrus decurrens*), Coulter pine (*Pinus coulteri*), Jeffrey pine (*Pinus jeffreyi*), sugar pine (*Pinus lambertiana*), Douglas-fir (*Pseudotsuga menziesii*), bigcone Douglas-fir (*Pseudotsuga macrocarpa*). Associated shrubs include manzanita (*Arctostaphylos* sp.), buckbrush (*Ceanothus* sp.), and Pacific dogwood (*Cornus nuttallii*). This habitat type is found on all aspects, depending on soils and location within the local elevational range. Ponderosa pine forest is found on suitable mountain and foothill sites throughout California except in the immediate area of San Francisco Bay, in the north coast area, south of Kern County in the Sierra Nevada and east of the Sierra Nevada Crest.

Red Fir Forest. Large expanses of nearly monotypic stands of red fir (*Abies magnifica*) are common throughout its range, with very few other plant species in any layer. Heavy shade and a thick layer of duff tend to inhibit understory vegetation, especially in dense stands. Red fir habitats are found on frigid soils over a wide range of topography exclusive of very wet sites. Red fir is distributed in an elevational band from about 6,000 to 9,000 feet. Red fir forest extends from northern Lake County northward through the North Coast Ranges and from Kern County northward through the Sierra Nevada into the Cascade Range of southwestern Oregon.

Sierran Mixed Conifer Forest. The Sierran mixed conifer forest is an assemblage of conifer and hardwood species that forms a multilayered forest. Five conifers and one hardwood typify the mixed conifer forest white fir (*Abies concolor*), Douglas-fir (*Pseudotsuga menziesii*), ponderosa pine (*Pinus ponderosa*), sugar pine (*Pinus lambertiana*), incense-cedar (*Calocedrus decurrens*), and California black oak (*Quercus kelloggii*). Some species common to the understory of this habitat type include deerbrush (*Ceanothus integerrimus*), manzanita (*Arctostaphylos* sp.), and chinquapin

(*Chrysolepis chrysophylla*). The Sierran mixed conifer forest generally forms a vegetation band ranging in elevation from 2,500 to 4,000 ft in the north and 4,000 to 10,000 ft in the southern Sierra Nevada. Sierran mixed conifer forest can correspond to multiple alliances as described by Sawyer et al. (2009) depending upon the species composition.

White Fir Forest. The white fir forest habitat is characterized by nearly monotypic even aged white fir (*Abies concolor*). This habitat type is found throughout California on a variety of soils developed from different parent material, including volcanic and igneous rocks, granitics, various metamorphics, and sedimentary material. Soils are coarse textured, well-drained, have poorly developed profiles, are often rocky. This habitat type occurs at about 5,500 ft in the Southern Sierra Nevada. White fir forest typically corresponds to the *Abies concolor* Forest Alliance as described by Sawyer et al. (2009).

Shrub Dominated Habitats. Shrub-dominated habitats, such as chaparral and coastal scrub, are comprised primarily of woody, evergreen shrubs and occur primarily along the coastal bluffs and ranges. The following describes shrub-dominated habitats that occur within three miles of the transportation projects outlined in the RTP.

Chamise-Redshank Chaparral. This habitat type can range from nearly pure stands of chamise (*Adenostoma fasciculatum*) or redshank (*A. sparsifolium*) to a mixture of both. Mature Chamise-Redshank Chaparral is single layered, generally lacking well-developed herbaceous ground cover and over story trees. Shrub canopies frequently overlap, producing a nearly impenetrable canopy of interwoven branches. Redshank stands tend to be slightly taller and more open than chamise-dominated stands. Fire occurs regularly in Chamise-Redshank Chaparral and influences habitat structure.

Coastal Scrub. This habitat type is typically dominated by shrub species with mesophytic leaves and shallow root systems. This habitat type can differ in composition depending upon proximity to the coastline. California sagebrush (*Artemisia californica*) tends to be common in all coastal scrub habitats. Other shrub species common to this habitat type include black sage (*Salvia mellifera*), coyotebrush (*Baccharis pilularis*) and California buckwheat (*Eriogonum fasciculatum*).

Mixed Chaparral. Mixed Chaparral is a structurally homogeneous brushland type dominated by shrubs with thick, stiff, heavily cutinized evergreen leaves. Shrub height and crown cover vary with age since last burn, precipitation, aspect, and soil type. At maturity, cismontane Mixed Chaparral typically is a dense, nearly impenetrable thicket. On poor sites, serpentine soils or transmontane slopes, shrub cover may be considerably reduced and shrubs may be shorter. Leaf litter and standing dead material may accumulate in stands that have not burned for several decades.

Montane Chaparral. The growth form of montane chaparral species can vary from treelike (up to 10 ft) to prostrate. Montane chaparral varies markedly throughout California. Species composition changes with elevational and geographical range, soil type, and aspect. Species that usually characterize montane chaparral communities include, but are not limited to, whitethorn Ceanothus (*Ceanothus cordulatus*), snowbrush Ceanothus (*Ceanothus velutinus*), and greenleaf manzanita (*Arctostaphylos patula*). Montane chaparral can be found on shallow to deep

soils, on all exposures, and from gentle to relatively steep slopes. Montane chaparral is associated with mountainous terrain from mid to high elevation at 3,000 to 10,000 ft.

Herbaceous Dominated Habitats. These habitats are generally comprised of areas dominated by grasses and other non-woody species. The following describes the herbaceous dominated habitats that occur within Humboldt County.

Annual Grasslands. This habitat type is composed primarily of non-native annual herbs and forbs and typically lacks shrub or tree cover. The physiognomy and species composition of annual grasslands is highly variable and also varies considerably on a temporal scale. Grazing is a common land use within this habitat type. Common grass species include wild oats (*Avena* sp.), soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and red brome (*Bromus madritensis*). Common forb species can include species of filaree (*Erodium* sp.), and bur clover (*Medicago* sp.). California poppy can also be quite common in this habitat type.

Perennial Grassland. Perennial grassland habitats occur in two forms in California: coastal prairie, found in areas of northern California under maritime influence, and relics in habitats now dominated by annual grasses and forbs. Perennial grassland habitats are dominated by perennial grass species such as California oatgrass (*Danthonia californica*), Pacific hairgrass (*Deschampsia holciformis*), and sweet vernalgrass (*Anthoxanthum odoratum*). Perennial grassland habitat typically occurs on ridges and south-facing slopes, alternating with forest and scrub in the valleys and on north-facing slopes. Perennial grassland habitat of the coastal prairie form occurs along the California coast from Monterey County northward. It is found below 3,280 ft in elevation and seldom more than 62 miles from the coast. Relic perennial grasses within annual grassland habitat occur in patches throughout the State.

Wet Meadow. Wet meadows at all elevations generally have a simple structure consisting of a layer of herbaceous plants. Shrub or tree layers are usually absent or very sparse; but may be found along the meadow edge. Within the herbaceous plant community a microstructure is frequently present. Species composition generally differs between sites includes a variety of members of the following Genera: *Agrostis*, *Carex*, *Danthonia*, *Juncus*, *Salix*, and *Scirpus*. Fewer species tend to occur as surface water depth increases during spring runoff. The single most important characteristic of a Wet Meadow is its hydrology. Seasonality and reliability of yearly water inflows and outflows largely determine the vegetational stability of Wet Meadows.

Pasture. Pasture vegetation is a mix of perennial grasses and legumes with typically complete canopy closure. Structurally this habitat type resembles annual grassland habitats. Height of vegetation varies, according to season and livestock stocking levels. Old or poorly drained pastures may have patches of weeds in excess of two feet in height. The mix of grasses and legumes varies according to management practices such as seed mixture, fertilization, soil type, irrigation, weed control, and the type of livestock on the pasture.

Developed and Sparsely/Non-Vegetated Habitats. Developed habitats are usually sparsely or non-vegetated and are associated with urban and agricultural areas and are highly disturbed. Species that occur in these areas are typically adapted to anthropogenic disturbance and/or comprised of ornamental species. Sparsely vegetated habitats also tend to be associated

with rock outcrops and cliffs. The following describes developed and sparsely/non-vegetated habitats that occur within Humboldt County.

Dryland Grain Crop. Vegetation in the dryland (nonirrigated) grain and seed crops habitat includes seed producing grasses, primarily barley, cereal rye, oats, and wheat. These seed and grain crops are annuals.

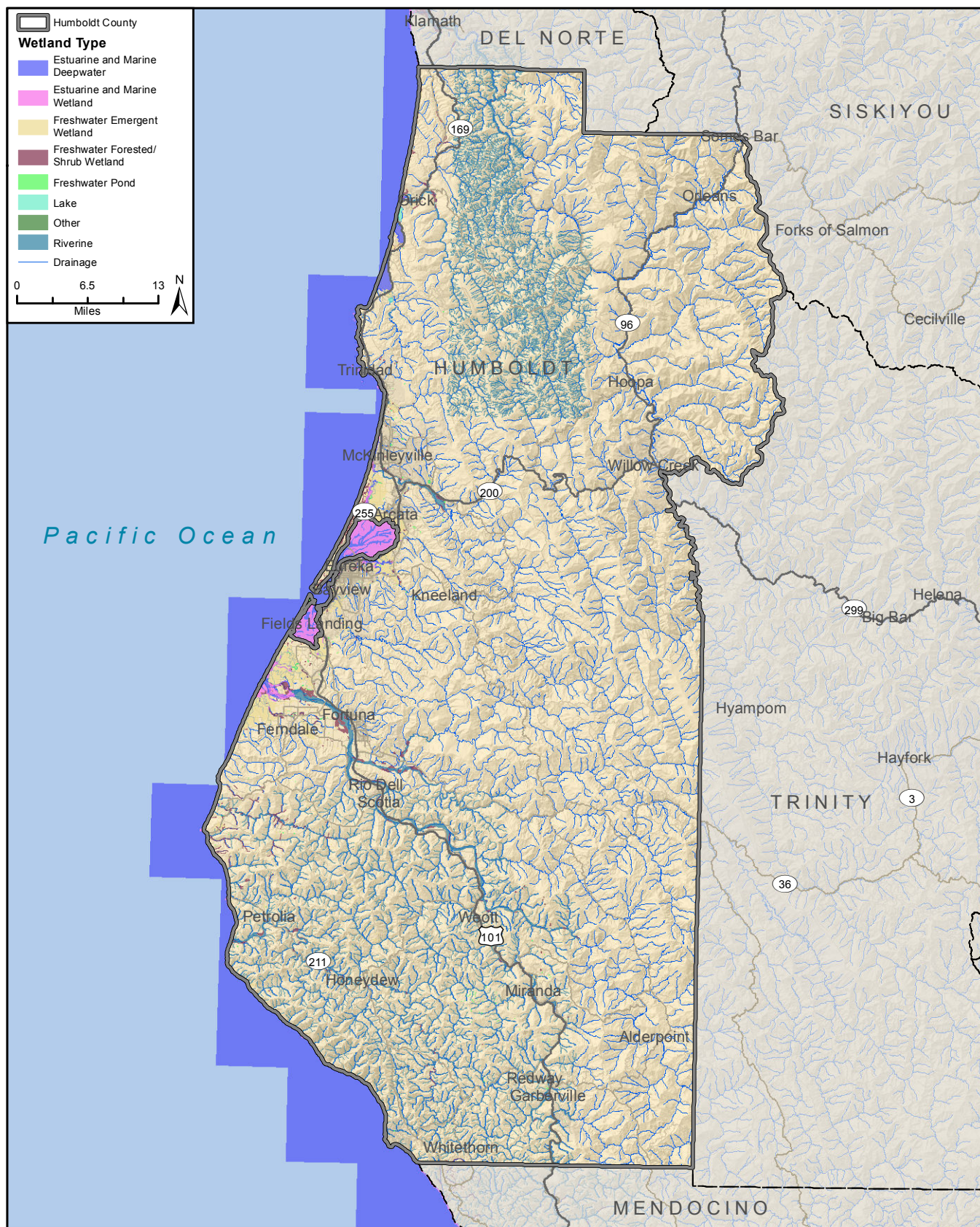
- *Irrigated Hayfield Crop.* Vegetation in this habitat includes a variety of sizes, shapes and growing patterns. Most irrigated grain and seed crops are grown in rows. Some may exhibit complete canopy enclosure while others may have significant bare areas between rows. All seed and grain crops are annuals. They are usually planted in spring and harvested in summer or fall. However, they may be planted in rotation with other irrigated crops and sometimes winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months) or they may be irrigated, and then harvested in the late spring.
- *Irrigated Row and Field Crop.* Vegetation in this habitat includes a variety of sizes, shapes and growing patterns. Cotton and asparagus can be three or four feet tall while others may be a foot or less high. Most irrigated row and field crops are grown in rows. Some may form 100 percent canopy while others may have significant bare areas between rows. Most are annuals, while others, such as asparagus and strawberries, are perennial. The annuals are usually planted in spring and harvested in summer or fall. However, they may be planted in rotation with other irrigated crops and sometimes winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months), and then harvested in the late spring. In some areas of southern California three crops may be grown in a year.

Urban. This habitat type is also a completely man-made habitat comprising residential, commercial, and industrial developed areas. Plant species within urban habitats are typically comprised of ornamental and other non-native invasive plant species, with large developed areas lacking vegetation.

Barren. This habitat type is defined by the absence of vegetation. Any habitat with less than two percent total vegetation cover and less than 10 percent cover by tree or shrub species is defined as barren. Structure and composition of the substrate is largely determined by the region of the state as well as surrounding environment. Examples of barren habitats include areas of exposed parent rock or talus.

b. Drainages, Fisheries, Wetlands. Information on drainages, wetlands, and fisheries in the County are described below. Figure 4.2-2 shows water bodies, wetlands, and drainages in the County.

Drainages. The Humboldt County General Plan identifies twelve (12) watersheds within the County that range from 73,000 acres to 333,000 acres. The watersheds are grouped into four (4) larger basins: the Klamath-Trinity Basin; the Mad-Redwood Basin; the Eel Basin and the Mattole Basin. Ten of Humboldt County's twelve planning watersheds each drain to a single stream or river, all of which either drain directly to the Pacific Ocean or to another river that



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 U.S. Fish and Wildlife Service, April, 2014.

National Wetlands Inventory

Figure 4.2-2

HCAOG

empties into the Pacific. Eureka Plain and Trinidad are drained by many smaller streams, which terminate in Humboldt Bay or the Pacific Ocean, respectively. The County contains four principal rivers: the Klamath River, Eel River, Trinity River and Mad River. Several creeks and tributaries are associated with each one of these watersheds. The drainages within these watersheds are of biological importance as they provide valuable foraging habitat, breeding, habitat, and movement habitat for a variety of animal species (Humboldt County General Plan Update, Natural Resources and Hazards Background Report, September 2002).

Wetlands. Wetland areas, which are scattered throughout the county, include wet meadows, and both saline and freshwater, emergent wetlands. Coastal wetlands were inventoried during preparation of the County's Coastal Plan; other areas of the county have not been comprehensively inventoried for wetland features. For areas outside of the Coastal Zone, wetland data is from the National Wetland Inventory, which is limited to the central portion of the county (Humboldt County General Plan Update, Natural Resources and Hazards Background Report, September 2002). A general description of each of the classifications from the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS, 2014c) is provided below. Of those wetland types mapped by the NWI, freshwater emergent wetland, riverine and lacustrine habitats are also mapped by the CWHR within Humboldt County.

Estuarine and Marine Deep-Water Wetlands. These deep-water wetlands are composed of estuarine or marine systems. Estuarine systems are composed of tidal habitats and adjacent tidal wetlands that are influenced by water runoff from, and often semi-enclosed by, land. They are located along low-energy coastlines and have variable salinity. Marine systems of this type are generally open ocean and occur along high energy coastlines with salinities exceeding 30 parts per thousand (ppt) and little or no dilution except outside the mouths of estuaries.

Estuarine and Marine Wetlands. These wetlands are composed of estuarine and marine systems as described above; however, they are not deep-water. These areas can be subtidal or intertidal with a variety of vegetated and non-vegetated bottoms. Beaches, bars and flats are also included. One type of estuarine and marine wetland, saline emergent wetland, is mapped by the CWHR. Saline emergent wetlands are characterized as salt or brackish marshes consisting mostly of perennial graminoids and forbs, the latter often succulent and suffrutescent, along with algal mats on moist soils and at the base of vascular plant stems. The component plants occur sometimes in zones but more often in patches or as a sequence of overlapping species along an elevation gradient. Vegetation coverage is complete or nearly so except where creeks and ponds are present, or following a disturbance.

Freshwater Emergent Wetlands. Freshwater emergent wetlands includes all non-tidal waters dominated by emergent herbaceous plant species, mosses, and/or lichens. Wetlands of this type are also low in salinity. Wetlands which lack vegetation can be included in this class if they are less than 20 acres, do not have an active wave-formed or bedrock shoreline feature and have a low water depth less than 6.6 feet. This wetland type is also mapped by the CWHR. Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots. All emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment. The vegetation may vary in size from small clumps to vast areas covering several kilometers. The

acreage of Fresh Emergent Wetlands in California has decreased dramatically since the turn of the century due to drainage and conversion to other uses, primarily agriculture.

Freshwater Forested/Shrub Wetlands. These wetlands include non-tidal waters which are dominated by trees and shrubs, with emergent herbaceous plants, mosses and/or lichens. Wetlands which lack vegetation can be included in this class if they also exhibit the same criteria as described for freshwater emergent wetlands. The vegetation found in freshwater forested/shrub wetlands are generally dominated by woody vegetation such as shrubs and trees.

Freshwater Ponds. Freshwater ponds include non-tidal waters with vegetative cover along its edges such as trees, shrubs, emergent herbaceous plants, mosses, and/or lichens. Freshwater ponds can be man-made or natural. They typically consist of an area of standing water with variable amounts of shoreline. These wetlands and deep water habitats are dominated by plants that grow on or below the surface of the water. This wetland type is also mapped by the CWHR and categorized as lacustrine habitat, which includes vernal pools.

Lakes. Lakes are a lacustrine system which includes wetlands and deep water habitats that are located in a topographic depression or dammed river channel. These areas tend to be greater than 20 acres. Vegetation cover within this habitat is generally less than 30 percent and often occurs in the form of emergent or surface vegetation. Substrates are composed of at least 25 percent cover of particles smaller than stones. This wetland type is also mapped by the CWHR and categorized as lacustrine habitat, which also includes vernal pools.

Riverine. Riverine habitats are a riverine system which includes all wetlands and deep water habitats contained in natural or artificial channels that contain periodically or continuously flowing water. This system may also form a connecting link between two bodies of standing water. Substrates generally consist of rock, cobble, gravel or sand.

Fisheries. Humboldt's many wild rivers, Humboldt Bay, and the ocean off of the coast of Humboldt County all support fisheries. Humboldt Bay is one of California's largest estuaries and is a significant fishery in Humboldt County. In the seventies, over half of the fish produced and consumed in California were landed in the Humboldt Bay Area. The bay provides habitat to over 100 different fish species and other wildlife. The five major fisheries based out of Humboldt Bay are groundfish, salmon, shrimp, crab, and albacore. Sport fishing in Humboldt's many wild rivers has declined over recent years as fewer adult fish return from the sea to spawn as a result of habitat damage from logging, road building, grazing and mining; over-fishing; and flawed hatcheries. Several species of fish living in both the ocean and rivers have become threatened or endangered and are protected by the Federal Endangered Species Act (Humboldt County General Plan Update, Natural Resources and Hazards Background Report, September 2002).



c. Special Status Species and Sensitive Communities. For the purpose of this EIR, special status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS under the federal Endangered Species Act (FESA); those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as “Species of Special Concern,” “Fully Protected,” or “Watch List” by the CDFW; and plants with a California Rare Plant Rank (CRPR) of 1, 2, 3, and 4, which are defined as:

- *List 1A = Plants presumed extinct in California;*
- *List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);*
- *List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened);*
- *List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened or no current threats known);*
- *List 2 = Rare, threatened or endangered in California, but more common elsewhere;*
- *List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);*
- *List 4.1 = Plants of limited distribution (watch list), seriously endangered in California;*
- *List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80 percent occurrences threatened); and*
- *List 4.2= Plants of limited distribution (watch list), not very endangered in California.*

Queries of the USFWS Environmental Conservation Online System (ECOS) Information Planning and Conservation System (IPaC) (USFWS, 2014b), USFWS Critical Habitat Portal (USFWS, 2014a), California Natural Diversity Database (CNDDDB) (California Department of Fish and Wildlife, 2003), and California Native Plant Society (CNPS) *Online Inventory of Rare, Threatened and Endangered Plants of California* (CNPS, 2014) were conducted. The queries were conducted to obtain comprehensive information regarding State and federally listed species, sensitive communities and federally designated Critical Habitat known or considered to have potential to occur within Humboldt County.

Sensitive Communities and Critical Habitat. Several natural communities considered sensitive by the CDFW occur within Humboldt County. The CNDDDB lists twelve natural communities that occur within Humboldt County. Federally designated critical habitat for eight species also occurs in Humboldt County (see Figure 4.2-3). These sensitive communities and critical habitats are listed in Table 4.2-1.



**Table 4.2-1
 Sensitive Communities and Critical Habitats Documented
 within Humboldt County**

Communities Considered Sensitive by the CDFW
Klamath/North Coast Fall/Winter Run Chinook Salmon River
Klamath/North Coast Interior Headwater Fishless Stream
Klamath/North Coast Rainbow Trout Stream
North Central Coast Summer Steelhead Stream
Coastal and Valley Freshwater Marsh
Coastal Douglas Fir Western Hemlock Forest
Coastal Terrace Prairie
Northern Coastal Salt Marsh
Northern Foredune Grassland
Sitka Spruce Forest
Sphagnum Bog
Upland Douglas Fir Forest
Critical Habitat
Northern Spotted Owl (<i>Strix occidentalis caurina</i>)
Marbled murrelet (<i>Brachyramphus marmoratus</i>)
Steelhead (<i>Oncorhynchus mykiss</i>)
Chinook salmon (<i>Oncorhynchus tshawytscha</i>)
Western snowy plover (<i>Charadrius alexandrinus nivosus</i>)
Steller sea-lion (<i>Eumetopias jubatus</i>)
Tidewater goby (<i>Eucyclogobius newberryi</i>)
Kneeland Prairie pennycress (<i>Noccaea fendleri</i> ssp. <i>Californica</i>)

Sources: CNDDDB (CDFW, 2003); USFWS, Critical Habitat Portal (2014)

Special Status Plants and Animals. Humboldt County is home to several species protected by federal and state agencies. Table 4.2-2 shows a complete list of federal and State listed species for the County. Important animal species can be found in a variety of habitats the County of Humboldt hosts. The CNDDDB, CNPS *Online Inventory of Rare, Threatened and Endangered Plants of California* and USFWS IPaC lists 219 special status animal (45 species) and plant (174 species) that are known to or with potential to occur within Humboldt County. The status for each of these species is presented in Table 4.2-2 (animal species) and 4.2-3 (plant species).



**Table 4.2-2
Special Status Animal Species Known to Occur or with
Potential to Occur within Humboldt County**

Scientific Name	Common Name	Federal Status	State Status	CDFW Status
Amphibians				
<i>Ascaphus truei</i>	Pacific tailed frog	None	None	SSC
<i>Plethodon elongatus</i>	Del Norte salamander	None	None	SSC
<i>Rana aurora</i>	northern red-legged frog	None	None	SSC
<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC
<i>Rhyacotriton variegatus</i>	southern torrent salamander	None	None	SSC
Birds				
<i>Accipiter cooperii</i>	Cooper's hawk	None	None	WL
<i>Accipiter gentilis</i>	northern goshawk	None	None	SSC
<i>Accipiter striatus</i>	sharp-shinned hawk	None	None	WL
<i>Agelaius tricolor</i>	tricolored blackbird	None	None	SSC
<i>Aquila chrysaetos</i>	golden eagle	None	None	FP
<i>Bonasa umbellus</i>	ruffed grouse	None	None	WL
<i>Cerorhinca monocerata</i>	rhinoceros auklet	None	None	WL
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	Threatened	None	SSC
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	Proposed Threatened	Endangered	-
<i>Cypseloides niger</i>	black swift	None	None	SSC
<i>Empidonax traillii brewsteri</i>	little willow flycatcher	None	Endangered	-
<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	FP
<i>Fratercula cirrhata</i>	tufted puffin	None	None	SSC
<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted	Endangered	FP
<i>Oceanodroma furcata</i>	fork-tailed storm-petrel	None	None	SSC
<i>Pandion haliaetus</i>	osprey	None	None	WL
<i>Phalacrocorax auritus</i>	double-crested cormorant	None	None	WL
<i>Rallus longirostris obsoletus</i>	California clapper rail	Endangered	Endangered	FP
<i>Strix occidentalis caurina</i>	Northern spotted owl	Threatened	Candidate Threatened	SSC
<i>Phoebastria (=diomedea) albatrus</i>	Short-tailed albatross	Endangered	None	SSC
<i>Brachyramphus marmoratus</i>	Marbeled murrelet	Threatened	Endangered	-
<i>Riparia riparia</i>	bank swallow	None	Threatened	-
Fish				
<i>Acipenser medirostris</i>	green sturgeon	Threatened	None	SSC
<i>Eucyclogobius newberryi</i>	tidewater goby	Endangered	None	SSC
<i>Oncorhynchus clarkii clarkii</i>	coast cutthroat trout	None	None	SSC
<i>Oncorhynchus kisutch</i>	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	SSC
<i>Oncorhynchus mykiss irideus</i>	summer-run steelhead trout	None	None	SSC



**Table 4.2-2
Special Status Animal Species Known to Occur or with
Potential to Occur within Humboldt County**

Scientific Name	Common Name	Federal Status	State Status	CDFW Status
<i>Oncorhynchus tshawytscha</i>	chinook salmon - California coastal ESU	Threatened	None	SSC
<i>Oncorhynchus tshawytscha</i>	chinook salmon - spring-run Klamath-Trinity Rivers pop.	None	None	SSC
<i>Spirinchus thaleichthys</i>	longfin smelt	Candidate	Threatened	SSC
<i>Thaleichthys pacificus</i>	eulachon	Threatened	None	SSC
Invertebrates				
<i>Speyeria zerene behrensii</i>	Behren's silverspot butterfly	Endangered	None	-
Mammals				
<i>Antrozous pallidus</i>	pallid bat	None	None	SSC
<i>Arborimus albipes</i>	white-footed vole	None	None	SSC
<i>Arborimus pomo</i>	Sonoma tree vole	None	None	SSC
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	Candidate Threatened	SSC
<i>Martes americana humboldtensis</i>	Humboldt marten	None	None	SSC
<i>Martes pennanti</i>	fisher - West Coast DPS	Candidate	Candidate Threatened	SSC
<i>Taxidea taxus</i>	American badger	None	None	SSC
Reptiles				
<i>Emys marmorata</i>	western pond turtle	None	None	SSC

Source: CNDDB (2003); USFWS IPaC (2014)
SSC = Species of Special Concern
FP = Fully Protected
WL = Watch List

**Table 4.2-3
Special Status Plant Species Known to Occur or with
Potential to Occur within Humboldt County**

Scientific Name	Common Name	Federal Status	State Status	CA Rare Plant Bank
<i>Abronia umbellata</i> var. <i>breviflora</i>	pink sand-verbena	None	None	1B.1
<i>Allium hoffmanii</i>	Beegum onion	None	None	4.3
<i>Allium siskiyouense</i>	Siskiyou onion	None	None	4.3
<i>Angelica lucida</i>	sea-watch	None	None	4.2
<i>Anomobryum julaceum</i>	slender silver moss	None	None	2B.2
<i>Antennaria suffrutescens</i>	evergreen everlasting	None	None	4.3
<i>Arctostaphylos canescens</i> ssp. <i>sonomensis</i>	Sonoma canescent manzanita	None	None	1B.2
<i>Arctostaphylos hispidula</i>	Howell's manzanita	None	None	4.2
<i>Arnica cernua</i>	serpentine arnica	None	None	4.3
<i>Arnica spathulata</i>	Klamath arnica	None	None	4.3
<i>Astragalus agnicidus</i>	Humboldt milk-vetch	None	Endangered	1B.1
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch	None	None	1B.2



**Table 4.2-3
Special Status Plant Species Known to Occur or with
Potential to Occur within Humboldt County**

Scientific Name	Common Name	Federal Status	State Status	CA Rare Plant Bank
<i>Astragalus rattanii</i> var. <i>rattanii</i>	Rattan's milk-vetch	None	None	4.3
<i>Astragalus umbraticus</i>	Bald Mountain milk-vetch	None	None	2B.3
<i>Bensoniella oregona</i>	bensoniella	None	Rare	1B.1
<i>Bryoria pseudocapillaris</i>	false gray horsehair lichen	None	None	3.2
<i>Bryoria spiralis</i>	twisted horsehair lichen	None	None	1B.1
<i>Calamagrostis bolanderi</i>	Bolander's reed grass	None	None	4.2
<i>Calamagrostis crassiglumis</i>	Thurber's reed grass	None	None	2B.1
<i>Calamagrostis foliosa</i>	leafy reed grass	None	Rare	4.2
<i>Cardamine angulata</i>	seaside bittercress	None	None	2B.1
<i>Carex arcta</i>	northern clustered sedge	None	None	2B.2
<i>Carex buxbaumii</i>	Buxbaum's sedge	None	None	4.2
<i>Carex geyeri</i>	Geyer's sedge	None	None	4.2
<i>Carex lenticularis</i> var. <i>limnophila</i>	lagoon sedge	None	None	2B.2
<i>Carex leptalea</i>	bristle-stalked sedge	None	None	2B.2
<i>Carex lyngbyei</i>	Lyngbye's sedge	None	None	2B.2
<i>Carex praticola</i>	northern meadow sedge	None	None	2B.2
<i>Carex saliniformis</i>	deceiving sedge	None	None	1B.2
<i>Carex viridula</i> ssp. <i>viridula</i>	green yellow sedge	None	None	2B.3
<i>Castilleja ambigua</i> var. <i>ambigua</i>	johnny-nip	None	None	4.2
<i>Castilleja ambigua</i> var. <i>humboldtiensis</i>	Humboldt Bay owl's-clover	None	None	1B.2
<i>Castilleja litoralis</i>	Oregon coast paintbrush	None	None	2B.2
<i>Castilleja mendocinensis</i>	Mendocino Coast paintbrush	None	None	1B.2
<i>Ceanothus gloriosus</i> var. <i>exaltatus</i>	glory brush	None	None	4.3
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes salty bird's-beak	None	None	1B.2
<i>Clarkia amoena</i> ssp. <i>whitneyi</i>	Whitney's farewell-to-spring	None	None	1B.1
<i>Clarkia gracilis</i> ssp. <i>tracyi</i>	Tracy's clarkia	None	None	4.2
<i>Collinsia corymbosa</i>	round-headed Chinese-houses	None	None	1B.2
<i>Collomia tracyi</i>	Tracy's collomia	None	None	4.3
<i>Coptis laciniata</i>	Oregon goldthread	None	None	2B.2
<i>Cornus canadensis</i>	bunchberry	None	None	2B.2
<i>Cypripedium californicum</i>	California lady's-slipper	None	None	4.2
<i>Cypripedium fasciculatum</i>	clustered lady's-slipper	None	None	4.2
<i>Cypripedium montanum</i>	mountain lady's-slipper	None	None	4.2
<i>Dicentra formosa</i> ssp. <i>oregana</i>	Oregon bleeding heart	None	None	4.2
<i>Didymodon norrisii</i>	Norris' beard moss	None	None	2B.2



**Table 4.2-3
Special Status Plant Species Known to Occur or with
Potential to Occur within Humboldt County**

Scientific Name	Common Name	Federal Status	State Status	CA Rare Plant Bank
<i>Discelium nudum</i>	naked flag moss	None	None	2B.2
<i>Draba howellii</i>	Howell's draba	None	None	4.3
<i>Eleocharis parvula</i>	small spikerush	None	None	4.3
<i>Empetrum nigrum</i>	black crowberry	None	None	2B.2
<i>Epilobium oregonum</i>	Oregon fireweed	None	None	1B.2
<i>Epilobium septentrionale</i>	Humboldt County fuchsia	None	None	4.3
<i>Erigeron biolettii</i>	streamside daisy	None	None	3
<i>Erigeron bloomeri</i> var. <i>nudatus</i>	Waldo daisy	None	None	2B.3
<i>Erigeron maniopotamicus</i>	Mad River fleabane daisy	None	None	1B.2
<i>Erigeron petrophilus</i> var. <i>viscidulus</i>	Klamath rock daisy	None	None	4.3
<i>Erigeron robustior</i>	robust daisy	None	None	4.3
<i>Erigeron supplex</i>	supple daisy	None	None	1B.2
<i>Eriogonum umbellatum</i> var. <i>bahiiforme</i>	bay buckwheat	None	None	4.2
<i>Erysimum concinnum</i>	bluff wallflower	None	None	1B.2
<i>Erysimum menziesii</i>	Menzies' wallflower	Endangered	Endangered	1B.1
<i>Erythranthe trinitensis</i>	pink-margined monkeyflower	None	None	1B.3
<i>Erythronium citrinum</i> var. <i>citrinum</i>	lemon-colored fawn lily	None	None	4.3
<i>Erythronium oregonum</i>	giant fawn lily	None	None	2B.2
<i>Erythronium revolutum</i>	coast fawn lily	None	None	2B.2
<i>Eucephalus vialis</i>	wayside aster	None	None	1B.2
<i>Fissidens pauperculus</i>	minute pocket moss	None	None	1B.2
<i>Fritillaria purdyi</i>	Purdy's fritillary	None	None	4.3
<i>Gentiana plurisetosa</i>	Klamath gentian	None	None	1B.3
<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	None	None	1B.2
<i>Gilia millefoliata</i>	dark-eyed gilia	None	None	1B.2
<i>Glehnia littoralis</i> ssp. <i>leiocarpa</i>	American glehnia	None	None	4.2
<i>Glyceria grandis</i>	American manna grass	None	None	2B.3
<i>Hemieva ranunculifolia</i>	buttercup-leaf suksdorfia	None	None	2B.2
<i>Hemizonia congesta</i> ssp. <i>tracyi</i>	Tracy's tarplant	None	None	4.3
<i>Hesperervax sparsiflora</i> var. <i>brevifolia</i>	short-leaved evax	None	None	1B.2
<i>Hesperolinon adenophyllum</i>	glandular western flax	None	None	1B.2
<i>Horkelia sericata</i>	Howell's horkelia	None	None	4.3
<i>Hosackia gracilis</i>	harlequin lotus	None	None	4.2
<i>Hosackia yollabolliensis</i>	Yolla Bolly Mtns. bird's-foot trefoil	None	None	1B.2
<i>Iliamna latibracteata</i>	California globe mallow	None	None	1B.2



**Table 4.2-3
Special Status Plant Species Known to Occur or with
Potential to Occur within Humboldt County**

Scientific Name	Common Name	Federal Status	State Status	CA Rare Plant Bank
<i>Iris longipetala</i>	coast iris	None	None	4.2
<i>Iris tenax</i> ssp. <i>klamathensis</i>	Orleans iris	None	None	4.3
<i>Juncus dudleyi</i>	Dudley's rush	None	None	2B.3
<i>Juncus interior</i>	inland rush	None	None	2B.2
<i>Juncus nevadensis</i> var. <i>inventus</i>	Sierra rush	None	None	2B.2
<i>Kopsiopsis hookeri</i>	small groundcone	None	None	2B.3
<i>Lathyrus biflorus</i>	two-flowered pea	None	None	1B.1
<i>Lathyrus glandulosus</i>	sticky pea	None	None	4.3
<i>Lathyrus japonicus</i>	seaside pea	None	None	2B.1
<i>Lathyrus palustris</i>	marsh pea	None	None	2B.2
<i>Layia carnosa</i>	beach layia	Endangered	Endangered	1B.1
<i>Leptosiphon acicularis</i>	bristly leptosiphon	None	None	4.2
<i>Leptosiphon latisectus</i>	broad-lobed leptosiphon	None	None	4.3
<i>Lewisia cotyledon</i> var. <i>heckneri</i>	Heckner's lewisia	None	None	1B.2
<i>Lewisia cotyledon</i> var. <i>howellii</i>	Howell's lewisia	None	None	3.2
<i>Lewisia kelloggii</i> ssp. <i>hutchisonii</i>	Hutchison's lewisia	None	None	3.2
<i>Lewisia kelloggii</i> ssp. <i>kelloggii</i>	Kellogg's lewisia	None	None	3.2
<i>Lilium bolanderi</i>	Bolander's lily	None	None	4.2
<i>Lilium kelloggii</i>	Kellogg's lily	None	None	4.3
<i>Lilium occidentale</i>	western lily	Endangered	Endangered	1B.1
<i>Lilium pardalinum</i> ssp. <i>vollmeri</i>	Vollmer's lily	None	None	4.3
<i>Lilium rubescens</i>	redwood lily	None	None	4.2
<i>Lilium washingtonianum</i> ssp. <i>purpurascens</i>	purple-flowered Washington lily	None	None	4.3
<i>Listera cordata</i>	heart-leaved twayblade	None	None	4.2
<i>Lomatium tracyi</i>	Tracy's lomatium	None	None	4.3
<i>Lupinus constancei</i>	The Lassics lupine	None	None	1B.2
<i>Lupinus elmeri</i>	South Fork Mtn. lupine	None	None	1B.2
<i>Lupinus lapidicola</i>	Heller's Mount Eddy lupine	None	None	4.3
<i>Lupinus tracyi</i>	Tracy's lupine	None	None	4.3
<i>Lycopodiella inundata</i>	inundated bog-clubmoss	None	None	2B.2
<i>Lycopodium clavatum</i>	running-pine	None	None	4.1
<i>Lycopus uniflorus</i>	northern bugleweed	None	None	4.3
<i>Meesia triquetra</i>	three-ranked hump moss	None	None	4.2
<i>Melica spectabilis</i>	purple onion grass	None	None	4.3
<i>Microseris borealis</i>	northern microseris	None	None	2B.1



**Table 4.2-3
Special Status Plant Species Known to Occur or with
Potential to Occur within Humboldt County**

Scientific Name	Common Name	Federal Status	State Status	CA Rare Plant Bank
<i>Mielichhoferia elongata</i>	elongate copper moss	None	None	2B.2
<i>Minuartia decumbens</i>	The Lassics sandwort	None	None	1B.2
<i>Mitellastrum caulescens</i>	leafy-stemmed mitrewort	None	None	4.2
<i>Moneses uniflora</i>	woodnymph	None	None	2B.2
<i>Monotropa uniflora</i>	ghost-pipe	None	None	2B.2
<i>Montia howellii</i>	Howell's montia	None	None	2B.2
<i>Navarretia sinistra</i> ssp. <i>pinnatisecta</i>	pinnate-leaved navarretia	None	None	4.3
<i>Noccaea fendleri</i> ssp. <i>californica</i>	Kneeland Prairie pennycress	Endangered	None	1B.1
<i>Oenothera wolfii</i>	Wolf's evening-primrose	None	None	1B.1
<i>Orthocarpus cuspidatus</i> ssp. <i>cuspidatus</i>	Siskiyou Mountains orthocarpus	None	None	4.3
<i>Oxalis suksdorfii</i>	Suksdorf's wood-sorrel	None	None	4.3
<i>Packera bolanderi</i> var. <i>bolanderi</i>	seacoast ragwort	None	None	2B.2
<i>Packera macounii</i>	Siskiyou Mountains ragwort	None	None	4.3
<i>Pinguicula macroceras</i>	horned butterwort	None	None	2B.2
<i>Piperia candida</i>	white-flowered rein orchid	None	None	1B.2
<i>Piperia michaelii</i>	Michael's rein orchid	None	None	4.2
<i>Pityopus californica</i>	California pinefoot	None	None	4.2
<i>Platanthera stricta</i>	slender bog-orchid	None	None	4.2
<i>Pleuropogon refractus</i>	nodding semaphore grass	None	None	4.2
<i>Polemonium carneum</i>	Oregon polemonium	None	None	2B.2
<i>Polygonum marinense</i>	Marin knotweed	None	None	3.1
<i>Ptilidium californicum</i>	Pacific fuzzwort	None	None	4.3
<i>Puccinellia pumila</i>	dwarf alkali grass	None	None	2B.2
<i>Ribes laxiflorum</i>	trailing black currant	None	None	4.3
<i>Ribes marshallii</i>	Marshall's gooseberry	None	None	4.3
<i>Ribes roezlii</i> var. <i>amictum</i>	hoary gooseberry	None	None	4.3
<i>Romanzoffia tracyi</i>	Tracy's romanzoffia	None	None	2B.3
<i>Rorippa columbiae</i>	Columbia yellow cress	None	None	1B.2
<i>Rosa gymnocarpa</i> var. <i>serpentina</i>	Gasquet rose	None	None	1B.3
<i>Sanguisorba officinalis</i>	great burnet	None	None	2B.2
<i>Sanicula peckiana</i>	Peck's sanicle	None	None	4.3
<i>Sanicula tracyi</i>	Tracy's sanicle	None	None	4.2
<i>Schoenoplectus subterminalis</i>	water bulrush	None	None	2B.3
<i>Sedum divergens</i>	Cascade stonecrop	None	None	2B.3
<i>Sedum laxum</i> ssp. <i>flavidum</i>	pale yellow stonecrop	None	None	4.3



**Table 4.2-3
Special Status Plant Species Known to Occur or with
Potential to Occur within Humboldt County**

Scientific Name	Common Name	Federal Status	State Status	CA Rare Plant Bank
<i>Sedum laxum</i> ssp. <i>heckneri</i>	Heckner's stonecrop	None	None	4.3
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	None	None	4.2
<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	None	None	1B.2
<i>Sidalcea oregana</i> ssp. <i>eximia</i>	coast sidalcea	None	None	1B.2
<i>Silene marmorensis</i>	Marble Mountain campion	None	None	1B.2
<i>Sisyrinchium hitchcockii</i>	Hitchcock's blue-eyed grass	None	None	1B.1
<i>Spergularia canadensis</i> var. <i>occidentalis</i>	western sand-spurrey	None	None	2B.1
<i>Stellaria littoralis</i>	beach starwort	None	None	4.2
<i>Stellaria obtusa</i>	obtuse starwort	None	None	4.3
<i>Tauschia glauca</i>	glaucous tauschia	None	None	4.3
<i>Thermopsis gracilis</i>	slender false lupine	None	None	4.3
<i>Thermopsis robusta</i>	robust false lupine	None	None	1B.2
<i>Thlaspi californicum</i>	Kneeland Prairie penny-cress	Endangered	None	1B.1
<i>Tiarella trifoliata</i> var. <i>trifoliata</i>	trifoliolate laceflower	None	None	3.2
<i>Tracyina rostrata</i>	beaked tracyina	None	None	1B.2
<i>Trichodon cylindricus</i>	cylindrical trichodon	None	None	2B.2
<i>Trifolium howellii</i>	Howell's clover	None	None	4.3
<i>Usnea longissima</i>	long-beard lichen	None	None	-
<i>Veratrum insolitum</i>	Siskiyou false-hellebore	None	None	4.3
<i>Viburnum ellipticum</i>	oval-leaved viburnum	None	None	2B.3
<i>Viola palustris</i>	alpine marsh violet	None	None	2B.2
<i>Wyethia longicaulis</i>	Humboldt County wyethia	None	None	4.3

Source: CNDDB (2003); CNPS (2014); USFWS IPaC (2014)

CRPR (California Rare Plant Rank):

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

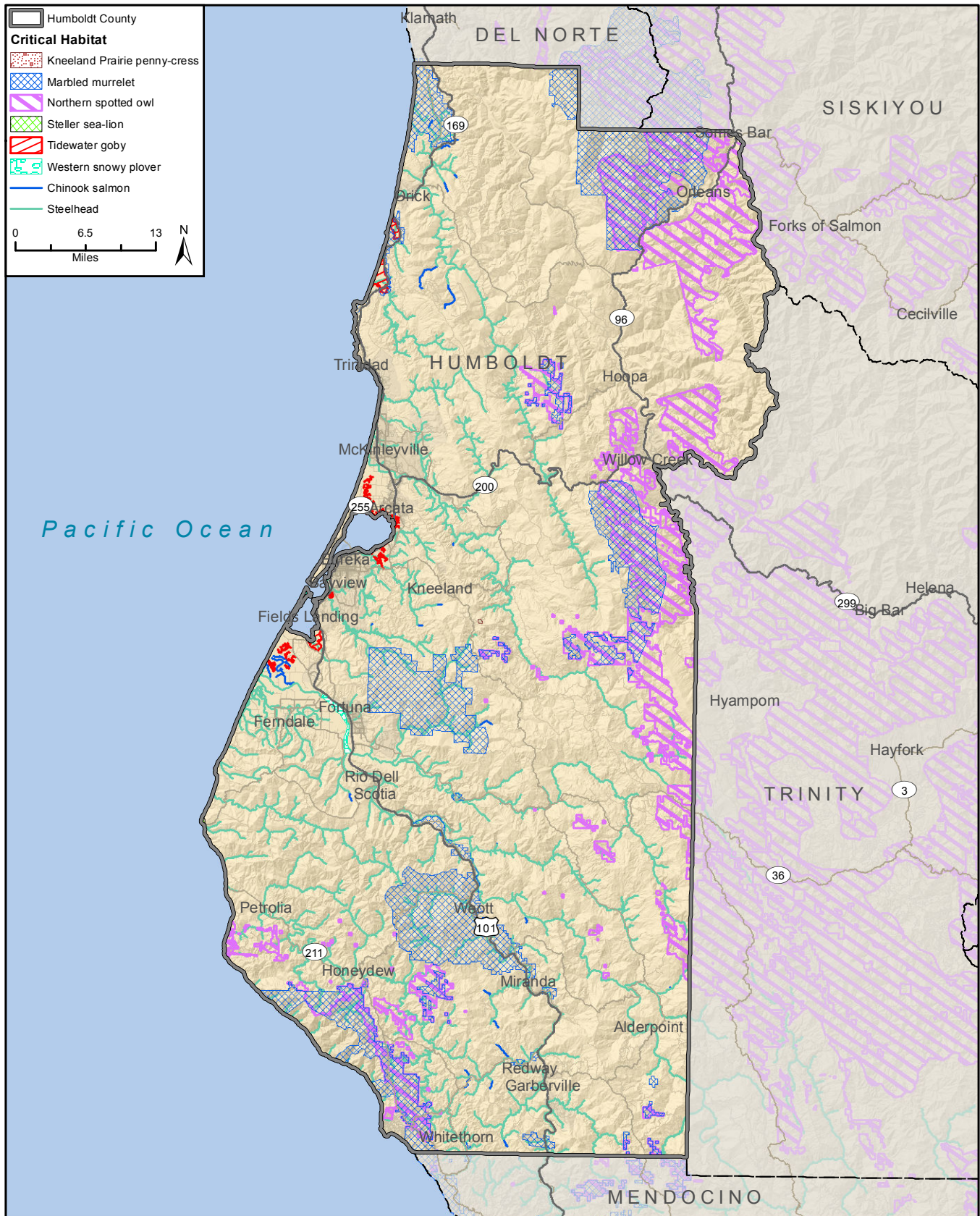
2=Rare, Threatened, or Endangered in California, but more common elsewhere

3=Need more information (a Review List)

4=Plants of Limited Distribution (a Watch List)

d. Wildlife Movement Corridors. Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas. Or, they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.





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 U.S. Fish and Wildlife Service, April, 2014.

Federally Designated Critical Habitat

Figure 4.2-3

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Wildlife movement corridors can be both large and small scale. The mountainous regions of Humboldt County may support wildlife movement on a regional scale while riparian corridors and waterways may provide more local scale opportunities for wildlife movement throughout the County. The CDFW BIOS (2014) mapped several essential connectivity areas with Humboldt County, primarily in forest land covers in the eastern and southern portions of the County.

e. Regulatory Framework. Federal, State, and local authorities under a variety of statutes and guidelines share regulatory authority over biological resources. The primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, which in this instance is the County of Humboldt and local municipalities. The CDFW is a trustee agency for biological resources throughout the State under the California Environmental Quality Act (CEQA). The CDFW also has direct jurisdiction under the California Fish and Game Code (CFGC), which includes, but is not limited to, resources protected by the State of California under the California Endangered Species Act (CESA).

Federal and State Jurisdictions.

United States Fish and Wildlife Service. The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 *et seq.*). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species.

Projects that would result in “take” of any federally listed threatened or endangered species are required to obtain permits from the USFWS and/or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. “Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that such species could be elevated to listed status at any time.



In the 1982 amendments to the FESA, Congress established a mechanism authorizing the USFWS and the NMFS to issue to non-Federal entities a permit for the "incidental take" of endangered and threatened wildlife species. This permit allows a non-Federal landowner to proceed with an activity that is legal in all other respects, but results in the "incidental" taking of a listed species. The ESA defines incidental take as "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." A Habitat Conservation Plan, or HCP, must accompany an application for an incidental take permit. The purpose of the HCP is to ensure that the effects of the permitted action on listed species are adequately minimized and mitigated. The permit authorizes the incidental take, not the activity that results in take. The activity itself must comply with other applicable laws and regulations.

The USFWS lists the following HCPs in Humboldt County:

- Green Diamond Resource Company California Timberlands (formerly Simpson Timber Company) Northern Spotted Owl HCP (HCP Permit #767798), was issued on September 17, 1992, covering 380,000 acres in Humboldt, Del Norte and Trinity Counties, California, to be used for forest management activities. The threatened northern spotted owl is covered under the incidental take permit for a period of 30 years.
- Green Diamond Resource Company, 2007 Aquatic Habitat Conservation Plan/ Candidate Conservation Agreement with Assurances (AHCP/CCAA) covering its timberland ownership in Del Norte and Humboldt counties in Northern California. The plan seeks to conserve habitat for, and mitigate impacts on, seven aquatic species: Coho salmon; steelhead; Chinook salmon; coastal cutthroat trout; rainbow trout; the southern torrent salamander and the tailed frog. The plan was negotiated between Green Diamond Resource Company, NMFS, and the USFWS.
- Pacific Lumber Company (now Humboldt Redwoods Company) HCP Permit #TE828950-0 was issued on March 1, 1999, covering 211,700 acres in Humboldt County, California, to be used for forest management activities, mining or other extraction. Marbled murrelet, northern spotted owl, Western snowy plover, and several candidate and non-listed species are covered under the incidental take permit for a period of 50 years.
- Humboldt Bay Municipal Water District HCP, 2004, covering the width of the Mad River bank full channel from the river mouth to Mathews Dam in Trinity County, to be used for flow release and management activities; diversion activities in the Essex reach; maintenance; and periodic excavation. Chinook and coho salmon and steelhead and coastal cutthroat trout are covered under the incidental take permit for a period of 50 years (Humboldt County General Plan Update Draft EIR, 2012).

United States Army Corps of Engineers. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other "waters of the United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetlands. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and



offset unavoidable adverse impacts on existing aquatic resources. Any discharge into wetlands or other “waters of the United States” that are hydrologically connected and/or demonstrate a significant nexus to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetlands is met through compensatory mitigation involving creating or enhancing similar habitats.

California Department of Fish and Wildlife (formerly the California Department of Fish and Game). The CDFW derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 *et. seq.*) prohibits take of State-listed threatened and endangered species. A take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW additionally prohibits take for species designated as Fully Protected under the CFGC under various sections.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (CFGF Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Species of Special Concern (SSC) is a category used by the CDFW for those species that are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The CDFW intends the SSC category to be used as a management tool to include these species under special consideration when (1) deciding whether or not (or how) to develop natural lands, and (2) when these species are considered sensitive as described under the CEQA Appendix G questions.

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (CFGF Section 1900 *et seq.*). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use in order to allow for salvage of the plant(s).

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under CDFW’s jurisdiction. Section 1600 *et seq.* of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain); regulated work consists of, but is not limited to, diverting or obstructing the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Regional Water Quality Control Board. The State Water Resources Control Board (SWRCB) and each of nine local Regional Water Quality Control Boards (RWQCB) has jurisdiction over “waters of the State” pursuant to the Porter-Cologne Water Quality Control Act. Waters of the State are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-



DWQ, *Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction*). The RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction. The RWQCB is also responsible for issuing water quality certifications pursuant to Section 401 of the CWA for waters subject to federal jurisdiction.

California Department of Transportation - California Streets and Highways Code Section 156.3. Assessments and remediation of potential barriers to fish passage are required for transportation projects that use State or federal transportation funds. Such assessments must be conducted for any projects that involve stream crossings or other alterations and assessments must be submitted to the CDFW.

California Coastal Commission – Coastal Act. All RTP projects in the California Coastal Zone are subject to the California Coastal Act (Public Resources Code §30150 et seq.) and within the coastal development permit jurisdictional areas of the Coastal Commission.

Development within and adjacent to environmentally sensitive habitat areas (ESHA) in the coastal zone are subject to Coastal Act Section 30240, which directs:

- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
- (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

In addition, RTP projects located within the coastal zone are subject to the “one-parameter” definition of wetlands (Title 14, California Code of Regulations, section 13577(b)) considered as applied by the Coastal Commission and local governments with regulatory authority granted by the Coastal Act.

Local Jurisdictions General Plans. A discussion of the various General Plans adopted within Humboldt County and how they pertain to the protection of biological resources is presented below.

County of Humboldt. The Conservation and Open Space Elements of the Humboldt County General Plan includes several goals to protect biological resources. Various policies are also included which pertain to, but are not limited to, protecting rare and endangered species, development in environmentally sensitive areas, and protecting riparian areas. The following goals and policies regarding biological resources are applicable to the project in Humboldt County pursuant to the RTP:

- 3430 GOAL - *To maximize where feasible, the long-term public and economic benefits from the biological resources within the County by maintaining and restoring fish and wildlife habitats.*

3431 POLICIES

1. *Maintain values of significantly important habitat areas by assuring compatible adjacent land uses, where feasible.*
2. *Habitats for "critical species" shall be protected under provisions of NEPA and CEQA.*
3. *Development within stream channels shall be permitted when there is no less environmentally damaging feasible alternative, where the best feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to essential, non-disruptive projects as listed in Standard 6.*
4. *To protect sensitive fish and wildlife habitats and to minimize erosion, runoff and interference with surface water flows, the County shall maintain Streamside Management Areas (SMA), along its blue line streams as identified on the largest scale U.S.G.S. topographic maps most recently published, and any significant drainage courses identified through the CEQA process.*
5. *Development within the Streamside Management Areas shall be permitted where mitigation measures (Standard 8) have been provided to minimize any adverse environmental effects, and shall be limited to uses as described in Standard 7.*
6. *The Biological Resource Maps shall be incorporated into the project review process in order to identify sensitive habitat concerns. These maps shall be kept up to date with the most recent information obtainable. Accommodation of new resource information on the Biological Resource Maps may require an amendment to the adopted General Plan.*
7. *The County should request the Department of Fish and Game¹, as well as other appropriate agencies and organizations to review plans for development within sensitive habitat areas or Streamside Management Areas. Recommended mitigation measures shall be considered prior to project approval.*

City of Arcata. The Open Space Element and the Resource Conservation & Management Element of the City of Arcata's General Plan includes specific Guiding Principles and Goals to protect the natural resources found within the city. The following goals are applicable to projects in Arcata pursuant to the RTP:

Open Space Element:

- A. *Protect open space lands with native biotic resources as a natural legacy for future generations.*
- B. *Protect and manage public trust lands to sustain plant and animal species and ecosystem health.*
- C. *Recognize that the value of natural resources lands of all sizes and shapes are significantly enhanced when linked together in an open space system.*
- D. *Designate as open space, resource lands capable of producing agricultural, forest, mineral, and aquaculture products; and manage those lands for sustained production as well as habitat, hydrological, mineral, recreational, and aesthetic values.*

¹ As noted above, the California Department of Fish and Game is now officially referred to as the California Department of Fish and Wildlife.



Resource Conservation & Management Element:

- A. *Protect, maintain and enhance natural ecosystem processes and functions in the region, in order to maintain their natural ecological diversity.*
- B. *Restore and maintain the physical and biological integrity of Arcata's streams.*
- C. *To protect, restore, enhance, and maintain riparian habitat on those lands subject to wetlands and streamside protection zone.*
- D. *Recognize and protect wetlands as highly productive complex ecosystems that provide vital habitat and cleansing systems.*
- E. *Restore and maintain the physical and biological integrity of publicly owned former tidelands (farmed wetlands) subject to the Public Trust easement, to a diversity of tidal, freshwater, and riparian habitats.*
- H. *Manage water resources at the watershed level, to maintain high ground and surface water quality.*
- I. *Manage surface and groundwater resources to provide water quality and quantity adequate to support natural ecosystem processes and functions.*
- J. *Conserve soil resources as the foundation of resource production, and minimize erosion and other soil depleting processes.*
- L. *Maintain an active relationship with adjacent communities and government agencies to encourage cooperative management of natural resources and ecosystems in Arcata's Planning Area.*

City of Eureka. The Natural Resources Element and the Recreation and Cultural Resources Element of the City of Eureka's General Plan include various goals to protect the biological resources found within the city. The following guiding policy is applicable to projects in Eureka pursuant to the RTP:

Natural Resources Element:

AQUATIC RESOURCES AND MARINE, WETLAND, AND RIPARIAN HABITAT

Goa16.A: To protect and enhance the natural qualities of the Eureka area's aquatic resources and to preserve the area's valuable marine, wetland, and riparian habitat.

CONSERVATION OF OPEN SPACE

Goa16.C: To support the continued protection of valuable open space resources in and around Eureka.

TIMBER RESOURCES

Goal6.D: To conserve the Eureka area's timber resources, enhance the quality and diversity of forest ecosystems, reduce conflicts between forestry and other uses, and encourage a sustained yield of forest products.



Cultural Resources Element:

GENERAL PARKS AND RECREATION

Goal 15.A: To provide for park and recreational systems which include sufficient diversity of areas and facilities to effectively serve a population with varied characteristics, densities, needs and interests, consistent with protecting environmentally sensitive habitats.

COASTAL RECREATION AND ACCESS

Goal 15.B: To provide public open space and shoreline accessways throughout the Coastal Zone, consistent with protecting environmentally sensitive habitats and other coastal priority land uses.

City of Ferndale. The Land Use Element of the City of Ferndale's General Plan includes various goals to protect the biological resources found within the city. The following goals are applicable to projects in Ferndale, pursuant to the RTP:

2550 UNIQUE RESOURCES GOALS

- 3) *To protect the Francis Creek watershed from land use and development activities which could degrade the quality of the resource.*

2560 UNIQUE RESOURCES POLICIES

- 1) *The Francis Creek privately owned riparian corridor shall be maintained or improved to permit free flow and prevent flooding, and to maintain its use as natural habitat where appropriate.*
- 2) *Natural features such as streams and trees should be preserved whenever possible.*
- 3) *Developed and potential spring and surface water sources shall be protected within the Francis Creek watershed.*
- 9) *Land use, density and development controls should be adopted for the Francis Creek watershed to assure the long term protection of Ferndale's domestic water supply, and to control flooding and sedimentation of Francis Creek.*
- 10) *Low density, agricultural and timber land uses should be maintained and protected within the Francis Creek watershed and other areas adjacent to the City.*
- 11) *The Francis Creek watershed shall be designated as a "Critical Watershed" for the City of Ferndale.*
- 12) *Land use and development activities proposed within the Francis Creek watershed shall demonstrate that no risk of contamination to the water supply area could occur due to the land use or development activity proposed.*
- 13) *All development should be designed to minimize erosion and sedimentation.*

City of Rio Dell. The Conservation and Open Space Element of the City of Rio Dell's General Plan includes Goals and Policies to protect the biological resources found within the city. The following objectives are applicable to projects in Rio Dell pursuant to the RTP:

Goal CO 5.2-1 - Provide open space for the preservation of natural resources for the preservation of plant and animal life, such as habitat for fish and wildlife and areas required



for ecological and other scientific study (for example: rivers, streams, bays and estuaries, coastal beaches, lakeshores, riverbanks, and watersheds)

Policy CO 5.2-1 - Riparian areas within the City shall be protected when adjacent development projects are proposed.

Goal CO 5.2-2 - Preserve existing trees and encourage additional trees on hillsides and within the urban developed areas of the City.

Policy CO 5.2-2 - Maintain and expand the tree canopy within and outside the developed areas of the City.

Policy CO 5.2-3 - Protect distinctive natural vegetation such as riparian corridors and mixed evergreen forests by maintaining the natural features as a whole. Preservation of individual trees or features rather than the larger habitat does not satisfy this policy.

Goal CO 5.2-7 - Conserve natural vegetation and wildlife resources.

Policy CO 5.2-7 - Conserve and protect the area's natural vegetation by ensuring that: Drainage and runoff from City sources is not impairing the water quality of the Eel River.

- Retaining existing riparian vegetation within the conservation buffers along all natural watercourses to preserve riparian vegetation and habitat.*
- Restoring degraded riparian habitats where feasible.*
- Prohibiting agricultural activities within the conservation buffers along all natural watercourses.*
- Avoiding the contamination of groundwater supplies.*

City of Blue Lake. The Open Space and Conservation Element of the City of Blue Lake's General Plan includes goals to protect the biological resources found within the city. The following goals are applicable to projects in Blue Lake pursuant to the RTP:

PRESERVATION OF OPEN SPACE AND AGRICULTURAL LANDS

GOAL: Agriculture and open space lands shall be preserved as a buffer around the city to retain the character and sense of community of Blue Lake. Designated Open Space within the city shall be enhanced and coordinated with other City facilities.

DAVE POWERS CREEK MANAGEMENT

GOAL: To protect and enhance Dave's Creek as an attractive natural feature and valuable resource, and to minimize flood, erosion and other property damage.

Local Ordinances. Some resources are afforded protection via local ordinances such as those that impacts to trees. Also many local jurisdictions' municipal codes also address compliance with environmental regulations.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds. It should be noted that the following analysis is programmatic, and encompasses the broader RTP region because final designs (which also includes project components such as potential staging areas, project access, etc.) are



not developed for projects included in the RTP. Thus, specific impacts to biological resources are unknown.

Data used for this analysis include aerial photographs, topographic maps, the CNDDDB, the CNPS online inventory of rare and endangered plants, and accepted scientific texts to identify species. Federal special status species inventories maintained by the USFWS were reviewed in conjunction with the CNDDDB and CNPS online inventory. Other data on biological resources were collected from numerous sources, including relevant literature, maps of natural resources, and data on special status species and sensitive habitat information obtained from the California Department of Fish and Wildlife (CDFW) (formerly referred to as the California Department of Fish and Game) California Natural Diversity Data Base (CNDDDB) (2003; queried May 2014), CDFW BIOS (CDFW, 2014), the California Wildlife Habitat Relationships (CWHR) (CDFW, 2008), the California Native Plant Society (CNPS) online *Inventory of Rare, Threatened, and Endangered Plants of California* (2014), and the U.S. Fish and Wildlife Service (USFWS) ECOS (2014b). The USFWS Critical Habitat Mapper (2014a) and National Wetlands Inventory (NWI; 2014c) were also queried.

Evaluation Criteria. The following thresholds are based on Appendix G of the *State CEQA Guidelines*. Impacts would be significant if the RTP 2013/14 Update would result in any of the following:

1. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;*
2. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;*
3. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*
4. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*
5. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or*
6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

The following section presents a programmatic-level discussion of the potential for impacts to sensitive biological resources from implementation of the RTP.



b. Project Impacts and Mitigation Measures.

Impact B-1 Implementing transportation projects proposed by the RTP 2013/14 Update may result in impacts to special status plant and animal species. Impacts would be Class II, significant but mitigable.

For the purposes of this analysis, special status plant and animal species include those designations described under 4.2.1.c above, as well as locally important species including protected trees. Most of the capital improvements proposed under the RTP 2013/14 Update consist of minor expansions of existing facilities that would likely not involve construction in environmentally sensitive habitat areas. As mentioned above and presented in Table 4.2-2 (animal species) and Table 4.2-3 (plant species), there are 219 special status species known to occur or with potential to occur within Humboldt County. Twenty-five of these species (19 animal species and six plant species) are given high levels of protection by the federal government through listing under FESA and/or by the State government through listing under CESA or Fully Protected. The remaining species shown in Table 4.2-2 and Table 4.2-3 are protected through CEQA and/or through local ordinances. Most special-status species have very limited ranges within the subject jurisdictions and have specific habitat requirements. Special status species may also tend to be associated with sensitive habitats, such as riparian habitats and drainages.

Because of the programmatic nature of the RTP 2013/14 Update, a precise, project-level analysis of individual transportation projects' specific impacts on special-status species is not possible at this time; the level of analysis is maintained at the County level. That said, some special-status species are expected to be encountered at the locations where projects administered under the RTP 2013/14 Update would occur. Thus, it is assumed that some resources would not be avoided and that potentially significant impacts would occur.

Projects such as those that occur over or in the vicinity of rivers and creeks are within suitable habitat for species such as chinook salmon (*Oncorhynchus tshawytscha*) (Federally Threatened and State Species of Special Concern), and Coho salmon (*Oncorhynchus kisutch*) (Federally Threatened and State Threatened and Species of Special Concern).

In addition to the rivers and creeks that may be impacted, future transportation projects under the RTP 2013/14 Update could impact upland habitats and the sensitive plant and animal species that may occupy them. For example, the American badger (*Taxidea taxus*), a State Species of Special Concern, may be present in grassland near roads where projects could occur. Proposed projects may affect several special status bat species where they occur under bridges or similar structures, or in native habitat adjacent to construction areas. Furthermore, the wide variety of habitats within the RTP 2013/14 Update area can support many species of nesting birds, including sensitive species such as the Federally threatened marbled murrelet (*Brachyramphus marmoratus*) and the Federally threatened western snowy plover (*Charadrius alexandrinus nivosus*). Disturbance of special-status plants such as the federal and State threatened Humboldt milk-vetch (*Astragalus agnicidus*) could reduce local population size, fragment habitat, or lower reproductive success.

Direct impacts to special status species include injury or mortality occurring during implementation and/or operation of projects under the RTP. Direct impacts also include habitat modification and loss such that it results in the mortality or otherwise alters the foraging and breeding behavior substantially enough to cause injury. Indirect impacts could be caused by the spread of invasive non-native species that out-compete native species and/or alter habitat towards a state that is unsuitable for special status species. For example, the spread of certain weed species can reduce the biodiversity of native habitats, potentially eliminating special status plant species and reducing the availability of suitable forage and breeding sites for special status animal species. Indirect impacts could also result from increased access by humans and domestic animals, particularly in areas where trails may be planned. Increased human and domestic animal (especially dogs) presence foster the spread of non-native invasive plant species and disrupt the normal behaviors of animal species.

Ground-disturbing activities associated with proposed transportation projects in the RTP 2013/14 Update could also directly impact trees through trimming, removal or directly and indirectly through disturbance of tree root systems. Impacts would be potentially significant.

Mitigation Measures. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects identified in Table 4.2-4. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

- B-1(a) Biological Resources Screening and Assessment.** On a project-by-project basis, when final design is completed, a preliminary biological resource screening shall be performed as part of the environmental review process; the screening shall determine whether the project has any potential to impact biological resources. If it is determined that the project has no potential to impact biological resources, no further action will be required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a biological resources assessment (BRA) or similar type of study to (1) document the existing biological resources within the project footprint plus a buffer, and (2) determine the potential impacts to those resources. The BRA shall evaluate the potential for impacts to all biological resources including, but not limited to special status species, nesting birds, wildlife movement, sensitive plant communities/critical habitat, and other resources judged to be sensitive by local, state, and/or federal agencies. The results of the BRA may determine that design alterations, further technical studies (i.e. protocol surveys) and/or consultations with the

USFWS, CDFW and/or other local, state, and federal agencies may be required.

The following mitigation measures [B-1(b) through B-1(k)] shall be incorporated, only as applicable, into the BRA for projects where specific resources are present or may be present and impacted by the project. Note that specific surveys described in the mitigation measures below may be completed as part of the BRA where suitable habitat is present.

- B-1(b) Special Status Plant Species Surveys.** If the project-specific BRA determines that special status plant species may occur on-site, surveys for special status plants shall be completed prior to removing vegetation, grubbing, or other construction activity of each segment (including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the target species identified in the project-specific BRA. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency, and shall be conducted no more than two years before initial ground disturbance. All special status plant species identified on site shall be mapped onto a site-specific aerial photograph and topographic map. Surveys shall be conducted according to the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results shall be submitted to the implementing agency, and the CDFW and/or USFWS, as appropriate, for them to review and approve.
- B-1(c) Special Status Plant Species Avoidance, Minimization, and Mitigation.** If State listed or California Rare Plant List 1B species are found during special status plant surveys [pursuant to mitigation measure B-1(b)], then the project shall be re-designed to avoid impacting these plant species, if feasible. Rare plant occurrences that are not within the immediate disturbance footprint, but are located within 50 ft of disturbance limits, shall have bright orange protective fencing installed to protect them from harm. Fencing shall be installed at least 30 ft beyond their extent, or other distance as approved by a qualified biologist.
- B-1(d) Restoration and Monitoring.** If special status plants species cannot be avoided and will be impacted by a project implemented under the RTP, all impacts shall be mitigated by habitat restoration at a ~~minimum~~ ratio of 1:1 to 4:1 or higher as applied on a case-by-case project basis by local jurisdictions in consultation with appropriate resource agencies of 2:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species. A restoration plan shall be submitted to and approved by the jurisdiction overseeing the project. (Note:



if a State listed plant species will be impacted, the restoration plan shall be submitted to the CDFW for approval). The restoration plan shall include, at a minimum, the following components:

- Description of the project/impact site (location, responsible parties, areas to be impacted by habitat type);
- Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved];
- Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values);
- Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan);
- Maintenance activities during the monitoring period, including weed removal as appropriate (activities, responsible parties, schedule);
- Monitoring plan for the compensatory mitigation site, including a no less than quarterly monitoring for the first years schedule to be determined by the sponsoring agency implementing the individual transportation project (performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports);
- Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type;
- An adaptive management program and remedial measures to address any shortcomings in meeting success criteria;
- Notification of completion of compensatory mitigation and agency confirmation; and
- Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism).

B-1(e)

Endangered/Threatened Species Habitat Assessment and Protocol Surveys. Specific habitat assessment and survey protocol surveys are established for several federally and State Endangered or Threatened species. If the results of the BRA determine that suitable habitat may be present any such species, protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or USFWS protocols prior to issuance of any construction permits. If through consultation with the CDFW and/or USFWS it is determined that protocol habitat assessments/surveys are not required, said consultation shall be

documented prior to issuance of any construction permits. Each protocol has different survey and timing requirements. The applicants for each project shall be responsible for ensuring they understand the protocol requirements.

B-1(f)

Endangered/Threatened Species Avoidance and Minimization.

The habitat requirements of endangered and threatened species throughout Humboldt County are highly variable. The potential impacts from any given project implemented under the RTP 2013/14 Update are likewise highly variable. However, there are several avoidance and minimization measures which can be applied for a variety of species to reduce the potential for impact, with the final goal of no net loss of the species. The following measures may be applied to aquatic and/or terrestrial species. Project sponsors shall select from these measures as appropriate.

- Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern within or adjacent to the limits of disturbance shall have highly visible orange construction fencing installed between said area and the limits of disturbance.
- All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed between April 1 and October 31, if feasible, to avoid impacts to sensitive aquatic species.
- All projects occurring within or adjacent to sensitive habitats that may support federally and/or state Endangered/Threatened species shall have a CDFW and/or USFWS-approved biologist present during all initial ground disturbing/vegetation clearing activities. Once initial ground disturbing/vegetation clearing activities have been completed, said biologist shall conduct daily pre-activity clearance surveys for Endangered/Threatened species. Alternatively, and upon approval of the CDFW and/or USFWS, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are begin fully implemented.
- No Endangered/Threatened species shall be captured and relocated without expressed permission from the CDFW and/or USFWS.
- If at any time during construction of the project an Endangered/Threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. A CDFW/USFWS-approved biologist shall document the occurrence and consult with the CDFW and/or USFWS as appropriate.



- For all projects occurring in areas where Endangered/Threatened species may be present and are at risk of entering the project site during construction, exclusion fencing shall be placed along the project boundaries prior to start of construction (including staging and mobilization). The placement of the fence shall be at the discretion of the CDFW/USFWS-approved biologist. This fence shall consist of solid silt fencing placed at a minimum of 3 feet above grade and 2 feet below grade and shall be attached to wooden stakes placed at intervals of not more than 5 feet. The fence shall be inspected weekly and following rain events and high wind events and shall be maintained in good working condition until all construction activities are complete.
- All vehicle maintenance/fueling/staging shall occur not less than 100 feet from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian habitat or water bodies.
- No equipment shall be permitted to enter wetted portions of any affected drainage channel.
- All equipment operating within streams shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access.
- If project activities could degrade water quality, water quality sampling shall be implemented to identify the pre-project baseline, and to monitor during construction for comparison to the baseline.
- If water is to be diverted around work sites, a diversion plan shall be submitted (depending upon the species that may be present) to the CDFW, RWQCB, USFWS, and/or NMFS for their review and approval prior to the start of any construction activities (including staging and mobilization). If pumps are used, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system.
- At the end of each work day, excavations shall be secured with cover or a ramp provided to prevent wildlife entrapment.
- All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.
- The CDFW/USFWS-approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic habitat whenever observed and shall dispatch them in a humane manner and dispose of properly.

- If any federally and/or state protected species are harmed, the CDFW/USFWS-approved biologist shall document the circumstances that led to harm and shall determine if project activities should cease or be altered in an effort to avoid additional harm to these species. Dead or injured special status species shall be disposed of at the discretion of the CDFW and USFWS. All incidences of harm shall be reported to the CDFW and USFWS within 48 hours.
- Considering the potential for projects to impact Federal and State listed species and their habitat, ~~HCAOG shall contact the CDFW and USFWS to identify mitigation banks within Humboldt County during development of the RTP. Upon~~ implementation of projects included in the RTP, but on a project-by-project basis, if the results of the BRA determines that impacts to Federal and State threatened or endangered species habitat are expected, HCAOG and sponsor agencies shall explore species-appropriate mitigation bank(s) in the County for purchase of mitigation credits.

B-1(g)

Non-Listed Special Status Animal Species Avoidance and Minimization. Depending on the species identified in the BRA, several of the measures identified under B-1(f) shall be applicable to the project. In addition, the following measures shall be recommended to be selected by sponsor agencies if it is necessary from among the following to reduce the potential for impacts to non-listed special status animal species that would result from individual transportation projects:

- For non-listed special-status terrestrial amphibians and reptiles, coverboard surveys shall be completed within three months of the start of construction. The coverboards shall be at least four feet by four feet (4' x 4'), constructed of untreated plywood, and placed flat on the ground. The coverboards shall be checked by a qualified biologist once per week for each week after placement up until the start of vegetation removal. All non-listed special status and common animals found under the coverboards shall be captured and placed in five-gallon buckets for transport to relocation sites. All relocation sites shall be reviewed by the project sponsor and shall consist of suitable habitat. Relocation sites shall be as close to the capture site as possible but far enough away to ensure the animal(s) is not harmed by construction of the project. Relocation shall occur on the same day as capture. CNDDDB Field Survey Forms shall be submitted to the CDFW for all special status animal species observed.
- Pre-construction clearance surveys shall be conducted within 14 days of the start of construction (including staging and mobilization). The surveys shall cover the entire disturbance



footprint plus a minimum 200 foot buffer, if feasible, and shall identify all special status animal species that may occur on-site. All non-listed special status species shall be relocated from the site either through direct capture or through passive exclusion (e.g., American badger). A report of the pre-construction survey shall be submitted to HCAOG and/or the local jurisdiction for their review and approval prior to the start of construction.

- A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal to recover special status animal species unearthed by construction activities.
- Upon completion of the project, a qualified biologist shall prepare a Final Compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project.
- If special status bat species may be present and impacted by the project, a qualified biologist shall conduct presence/absence surveys for special status bats where suitable roosting habitat is present. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may roost. Surveys shall be conducted within 30 days of the start of construction and in consultation with the CDFW. If active roosts are located, exclusion devices such as netting shall be installed to discourage bats from occupying the site. If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the size of the hibernaculum and shall be determined through consultations with the CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until a qualified biologist determines that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.

B-1(h)

Preconstruction Surveys for Nesting Birds. For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the California Fish and Game Code and the Migratory Bird Treaty Act shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal. The surveys shall include the entire segment disturbance area plus a 200 ft buffer around the site. If active nests are located, the qualified biologist shall determine an



appropriate buffer zone from the nest, and all construction work shall be conducted outside the buffer zone. The buffer shall be a minimum of 50 feet for non-raptor bird species and at least 150 ft for raptor species. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer zone(s) shall be closed to all construction personnel and equipment until the adult and young birds are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removing the buffer. A report of these preconstruction nesting bird surveys shall be submitted to HCAOG and/or the local jurisdiction.

B-1(i) **Worker Environmental Awareness Program (WEAP).** Prior to initiating construction activities (including staging and mobilization) for individual transportation projects determined to have potentially significant impacts to biological resources, all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the project area. The specifics of this program shall include identifying sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and a review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to other personnel involved with constructing the project. All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them. To document compliance, the form shall be submitted to HCAOG and/or the local jurisdiction overseeing the transportation project to document compliance.

B-1(j) **Tree Protection.** If it is determined that construction may impact trees, including their root systems, protected by local agencies, the project sponsor shall procure all necessary tree removal permits. A tree protection and replacement plan shall be developed by a certified arborist as appropriate. The plan shall include, but would not be limited to, an inventory of trees to within the construction site, setbacks from trees and protective fencing, restrictions regarding grading and paving near trees, direction regarding pruning and digging within root zone of trees, and requirements for replacing and maintaining trees. If protected trees will be removed, replacement tree plantings of like species in accordance with local agency standards, but at a minimum ratio of 2:1 (trees planted to trees impacted). Replacement trees shall be installed on-site or at an approved off-site location. A restoration and

monitoring program shall be developed in accordance with B-1(d) and shall be implemented for a minimum of seven years or until stasis has been determined by a certified arborist. If a protected tree shall be encroached upon but not removed, a certified arborist shall be present to oversee all trimming of roots and branches.

Significance After Mitigation. Compliance with the above mitigation measures and all existing State, local and/or federal regulations would reduce impacts to a less than significant level.

Impact B-2 Implementing transportation projects proposed by the RTP 2013/14 Update may impact sensitive habitats, including federally protected wetlands. This impact would be Class II, significant but mitigable.

Because of the programmatic nature of the RTP, it is not possible at this time to precisely analyze the individual transportation projects' specific impacts on sensitive habitats. However, several of the projects that may be implemented under the RTP 2013/14 Update have the potential to impact sensitive habitats, as mapped on Figure 4.2-2. The extent and severity of the impacts is not known at this time, but examples of potential impacts include, but are not limited to, constructing and reconstructing bridges over rivers and creeks, such as the Eel River and Mad River. These types of projects would potentially impact riparian areas, as well as water bodies.

In addition, projects in the vicinity of rivers and creeks may involve development along riparian corridors. Riparian areas provide wildlife habitat, and movement corridors, enabling both terrestrial and aquatic organisms to move along river systems between areas of suitable habitat. Constructing the proposed projects could have both direct impacts associated with disturbing riparian flora and fauna, and indirect impacts caused by increased erosion and sedimentation. This could adversely affect downstream water quality.

Direct impacts to sensitive habitats include loss of habitat during construction of the project. Indirect impacts include habitat degradation caused by incidentally introducing invasive plant species from construction equipment, through selecting invasive landscape plants, and eroding disturbed areas. Impacts would be potentially significant.

Mitigation Measures. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects identified in Table 4.2-4. Mitigation measures B-2(c) and B-2(d) also address the potential for impacts due to invasive plant species. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.



- B-2(a)** **Jurisdictional Delineation.** If projects implemented under the RTP 2013/14 Update occur within or adjacent to wetland, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the CDFW, USACE, ~~and/or~~ RWQCB, California Coastal Commission, and/or local governments with regulatory authority granted by the Coastal Act, a qualified biologist shall complete a jurisdictional delineation. The jurisdictional delineation shall determine the extent of the jurisdiction for each of these agencies and shall be conducted according to requirements set forth by each agency. The result shall be a preliminary jurisdictional delineation report that shall be submitted to the implementing agency, USACE, RWQCB, ~~and~~ CDFW, California Coastal Commission, and delegated local governments as appropriate, for review and approval. If jurisdictional areas are expected to be impacted, then the RWQCB would require a Waste Discharge Requirements (WDR) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature falls under federal jurisdiction). If CDFW asserts its jurisdictional authority, then a Streambed Alteration Agreement pursuant to Section 1600 *et seq.* of the California Fish and Game Code would also be required prior to construction within the areas of CDFW jurisdiction. If the USACE asserts its authority, then a permit pursuant to Section 404 of the Clean Water Act would likely be required.
- B-2(b)** **Wetland and Riparian Habitat Restored.** Impacts to jurisdictional wetland and riparian habitat shall be mitigated at a ratio of 1:1 to 4:1 or higher (acres of habitat restored to acres impacted) as applied on a case-by-case project basis by local jurisdictions in consultation with appropriate resource agencies ~~minimum ratio of 2:1 (acres of habitat restored to acres impacted)~~, and shall occur on-site or as close to the impacted habitat as possible. A mitigation and monitoring plan shall be developed by a qualified biologist in accordance with mitigation measure B-1(d) above and shall be implemented for no less than five years after construction of the segment, or until the HCAOG/local jurisdiction and/or the permitting authority (e.g., CDFW or USACE) has determined that restoration has been successful.
- B-2(c)** **Landscaping Plan.** If landscaping is proposed for a specific project, a qualified biologist/landscape architect shall prepare a landscape plan for that project. This plan shall indicate the locations and species of plants to be installed. Drought tolerant, locally native plant species shall be used. The plan shall prohibit planting noxious, invasive, and/or non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List, and/or California Invasive Plant Council



Lists 1, 2, and 4. Species selected for planting shall be similar to those species found in adjacent native habitats.

- B-2(d) Invasive Weed Prevention and Management Program.** Prior to starting construction for each project, a qualified biologist shall evaluate the potential for introduction or spreading of invasive weeds, and if warranted develop an Invasive Weed Prevention and Management Program to prevent invasion of native habitat by non-native plant species. A list of target species shall be included, along with measures for early detection and eradication. All disturbed areas shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding shall occur where no construction activities have occurred within six (6) weeks since ground disturbing activities ceased. If exotic species invade these areas prior to hydroseeding, weed removal shall occur in consultation with a qualified biologist and in accordance with the restoration plan.

Significance After Mitigation. Compliance with the above mitigation measures and existing State, local and/or federal regulations would reduce impacts to a less than significant level.

- Impact B-3 Implementing transportation projects proposed by the RTP 2013/14 Update may impact wildlife movement, including fish migration, and/or impede the use of a native wildlife nursery. This impact would be Class II, significant ~~and unavoidable~~ but mitigable.**

Because of the programmatic nature of the RTP, it is not possible at this time to precisely analyze the individual transportation projects' impacts on wildlife movement and nurseries. In general, the capital improvement projects proposed in the RTP 2013/14 Update involve expanding existing facilities in urbanized or already-developed areas, rather than constructing new or extended infrastructure into undeveloped portions of the county. Several individual projects would however, increase human activity in areas where sensitive biological resources could occur. In particular, proposed bridge, trail and bikeway, and new road construction projects could increase human activity in the vicinity of riparian areas, wildlife nurseries or corridors, and potentially sensitive habitats.

Direct impacts to wildlife include increased noise and human presence during construction, as well as increased trash which may attract predators to the project site and discourage wildlife from using surrounding natural habitat. Indirect impacts include non-native species invading natural habitats and increased presence of humans and domestic animals over the long-term. In addition, transportation improvement projects could include new segments of fencing or walls that that could hinder wildlife movement. Impacts related to the RTP's transportation projects would be potentially significant.

Mitigation Measures. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects identified in Table 4.2-4. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

- B-3(a) Fence and Lighting Design and Wildlife Crossing Structures.** All projects that include long segments (approximately ¼ mile or greater in length) of fencing and lighting shall be designed to minimize impacts to wildlife. Fencing shall not block wildlife movement through riparian or other natural habitat. Where fencing is required for public safety concerns, the fence shall be designed to permit wildlife movement by incorporating design features such as:
- A minimum 16 inches between the ground and the bottom of the fence to provide clearance for small animals;
 - A minimum 12 inches between the top two wires, or top the fence with a wooden rail, mesh, or chain link instead of wire to prevent animals from becoming entangled; and
 - If privacy fencing is required near open space areas, openings at the bottom of the fence measure at least 16 inches shall be installed at reasonable intervals to allow wildlife movement.

If fencing must be designed in such a manner that wildlife passage would not be permitted, wildlife crossing structures shall be incorporated into the project design as appropriate.

Similarly, lighting installed as part of any project shall be designed to disrupt wildlife as little as feasible. This may be accomplished by using hoods to direct light away from natural habitat, using low intensity lighting, and using as few lights as necessary to achieve the goals of the project.

- B-3 (b) Construction Best Management Practices.** The following construction Best Management Practices (BMPs) shall be incorporated into all grading and construction plans. BMPs developed for individual projects could consult the handbooks from the California Stormwater Quality Association.:
- Designate a 20 mile-per-hour speed limit in all construction areas.
 - All vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas. Clearing



vegetation for vehicle access shall be avoided to the greatest extent feasible.

- The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the goal of the project.
- Locate equipment washout and fueling areas within the limits of grading at a minimum of 100 feet from waters, wetlands, or other sensitive resources as identified by a qualified biologist. Washout areas shall be designed to fully contain polluted water and materials to be removed subsequently from the site.
- Daily construction work schedules should be limited to daylight hours only.
- Mufflers shall be used on all construction equipment and vehicles shall be in good operating condition.
- Drip pans shall be placed under all stationary vehicles and mechanical equipment.
- All trash shall be placed in sealed containers and shall be removed from the project site a minimum of once per week.
- No pets are permitted on project site during construction.

Significance after Mitigation. With implementation of the above mitigation measures, potential impacts to wildlife movement and nursery sites would be reduced to a less than significant level, but disruption to wildlife movement is still anticipated. Thus, this impact would remain Class I, significant and unavoidable.

Impact B-4 Implementing transportation projects proposed by the RTP 2013/14 Update may conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. This impact would be Class II, significant but mitigable.

Because of the programmatic nature of the RTP, it is not possible at this time to precisely analyze the individual transportation projects' specific conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As discussed in Section 4.2.1e, four HCPs are currently being implemented within Humboldt County. As such, projects proposed under the RTP 2013/14 Update that are located in these areas may potentially conflict with implemented HCPs if the proposed impacts and activities for a given project are those covered by the HCP.

Mitigation Measures. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measure for all applicable transportation projects proposed in the RTP 2013/14 Update. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation



measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

B-4(a) Habitat Conservation Plan Screening and Compliance. On a project-by-project basis upon completion of final design, a screening analysis shall be performed as part of the environmental review process to determine whether the project is located within an area covered by an adopted HCP. If it is determined that the proposed project is a covered activity under the HCP, HCOAG and sponsor agencies shall ensure that the project complies with the adopted HCP.

Significance After Mitigation. Compliance with the above mitigation measures and existing State, local and/or federal regulations would reduce impacts to a less than significant level.

c. Specific RTP Projects That May Result in Impacts. Table 4.2-4 identifies those projects that may create biological resource impacts, as discussed in Section 4.2.2.b. Table 4.2-4 lists potential impacts given this level of analysis. As stated previously, because of the programmatic nature of the RTP, the proposed projects’ specific impacts to biological resources are not known at this time. In order to determine the actual magnitude of impact, if any, the individual projects will need to be analyzed further when they are implemented and final designs completed. At that time, implementing mitigation measure B-1(a) would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined above could apply to these specific projects.

**Table 4.2-4
RTP 2013/14 Update Projects with Potential to Impact Biological Resources**

Agency	Location	Description	Impact
City of Arcata	Hwy 255 at 101 Roundabouts	Convert clover leaf intersection to 2 roundabouts, ped-bike access across bridge (non-existent), add transit park-and-ride, remove 1 mile paved roadway (mitigation)	B1, B3, B4
City of Blue Lake	South Railroad Ave from Chartin Way to Broderick Ln	Repave and add pedestrian improvements "Annie and Mary" Trail, rehab and reconstruction	B1, B3, B4
City of Blue Lake	Annie and Mary Trail, from Chartin Road to City Limits	Rail/Trail	B1, B3, B4
City of Eureka	Eureka Waterfront Trail from Del Norte to Truesdale St (Phase A)	Class I multi-use trail	B1, B2, B3, B4
City of Eureka	Waterfront Trail from Del Norte to C St (Phase B)	Class I multi-use trail	B1, B2, B3, B4
City of Eureka	Waterfront Trail Adorni to Tydd (Phase C)	Class I multi-use trail	B1, B2, B3, B4
Hoopa Valley Tribal Roads Department	On SR96 at Blue Slide	New bridge crossing the Trinity River to K’ima:w Medical Center	B1, B2, B3, B4
Hoopa Valley Tribal Roads Department	Tish Tang Road from SR 96 to Medical Center & Hoopa Airport	Reconstruct Tish-tang(county road)	B1, B3, B4



**Table 4.2-4
RTP 2013/14 Update Projects with Potential to Impact Biological Resources**

Agency	Location	Description	Impact
City of Ferndale	Rose Ave/Herbert St - East City limits to Main St	Class II bike path	B1, B3, B4
City of Ferndale	5th St - Van Ness Ave to Ocean Ave	Class II bike path	B1, B3, B4
City of Ferndale	Arlington Ave - 5th St to Main St	Class II bike path	B1, B3, B4
City of Ferndale	Ocean Ave - West City limits to East City limits	Class II bike path	B1, B3, B4
City of Ferndale	Wildcat Rd - Ocean Ave to south City limits	Class III bike path	B1, B3, B4
City of Ferndale	Main St - Ocean Ave to north City limits	Class III bike path	B1, B3, B4
City of Ferndale	Van Ness Ave - 5th St to Main St	Class III bike path	B1, B3, B4
City of Ferndale	Shaw Ave - Ocean Ave to Berding St	Class III bike path	B1, B3, B4
City of Ferndale	Ocean Ave - Strawberry Ln heading east towards trailhead	Multipurpose trail (Class 1 bike path)	B1, B3, B4
City of Ferndale	5th St - Van Ness Ave to Ocean Ave	Multipurpose trail (Class 1 bike path)	B1, B3, B4
City of Ferndale	Lincoln St - Grant Ave to East City limits	Multipurpose trail (Class 1 bike path)	B1, B3, B4
City of Rio Dell	Wildwood Avenue, Elko St. to Belleview Ave.	Class III bike lanes including striping and signage.	B1, B3, B4
City of Rio Dell	Davis Street, Between Wildwood Ave. and Rigby Ave.	Pedestrian/Bike Improvements, narrow crossing distance at Hwy 101 on-ramp. Class II bike lanes from Rigby Ave. to Ireland St. Class III bikes lanes from Ireland St. to Wildwood Ave.	B1, B3, B4
City of Rio Dell	Davis Street, Gunnerson Lane to Edwards Drive and Edwards Drive from Water Treatment Plant to Davis Street.	Sidewalk, Class III bikeway and Class I Bike and Pedestrian path along Eel River gravel bar, including two trailheads.	B1, B3, B4
City of Rio Dell	Eel River bar, Davis Street to Eeloa Avenue	Class I bike and pedestrian path along Eel River bar, including two trailheads	B1, B3, B4
Karuk Tribe	Karuk Tribe/Caltrans: Tishawniik Hill, Camp Creek Road to Asip Road	Class I trail (detour project) and Class II bikeway	B1, B3, B4
County of Humboldt	Honeydew Bridge	Replace existing bridge	B1, B2, B3, B4
County of Humboldt	Union Street	Shoulder widening & geometric improvements	B1, B3, B4
County of Humboldt	Central Avenue	Shoulder widening & overlay	B1, B3, B4
County of Humboldt	McKinleyville Avenue Extension	Connect to School Road	B1, B3, B4
County of Humboldt	Central Avenue, McKinleyville	Shoulder widening	B1, B3, B4
County of Humboldt	Hammond Trail Bridge - Mad River	Replace existing bridge	B1, B2, B3, B4
County of Humboldt	Hammond Trail Bridge - Little River	Construct bridge	B1, B2, B4, B3
County of Humboldt	Glendale Drive, Blue Lake	Construct Class I Trail	B1, B2, B3, B4



**Table 4.2-4
RTP 2013/14 Update Projects with Potential to Impact Biological Resources**

Agency	Location	Description	Impact
County of Humboldt	Humboldt Hill to Thompkins Hill	Connector Road	B1, B3, B4
County of Humboldt	Harris to Fern Street, Cutten	Connector Road	B1, B3, B4
County of Humboldt	Alderpoint/Mattole/Maple Creek	Reconstruct rural routes	B1, B3, B4
County of Humboldt	Fern Street, Cutten	Complete Connection	B1, B3, B4
County of Humboldt	Red Cap Road, Orleans	Shoulder Widening	B1, B3, B4
California Department of Transportation	101- Near Rio Dell from Eel River Bridge to S. of Van Duzen Bridge	Median barrier installation	B1, B3, B4
California Department of Transportation	299-Near Willow Creek on Cedar Creek Road	Cedar Gap curve improvement	B1, B3, B4
California Department of Transportation	299-Near Blue Lake near Bair Rd	Acorn curve improvement	B1, B3, B4
California Department of Transportation	299-Near Willow Creek near Redwood Creek Bridge	Sabertooth shoulder widening	B1, B3, B4
California Department of Transportation	299-Near Blue Lake at Mill Creek Bridge	Mad River fish passage mitigation	B1, B3, B4
California Department of Transportation	96 - In Hoopa from Loop Road near Hostler Creek Bridge	Shoulder widen and lighted crosswalk	B1, B3, B4
California Department of Transportation	36 - At Carlotta from Wilson Lane to 0.5 W of Cummings Creek Rd.	Carlotta Left Turn Channelization	B1, B3, B4
California Department of Transportation	254 - Various Locations	Avenue of the Giants - Four Bridges Project	B1, B2, B3, B4
California Department of Transportation	101 - South Fork Eel River Bridge	Eel River Bridges Seismic Retrofit Project	B1, B2, B3, B4
California Department of Transportation	101 - In Trinidad between 6th Street and Trinidad Road Exit	New Interchange	B1, B3, B4
California Department of Transportation	96 - Trinity River Bridge in Downtown Hoopa	Pedestrian and non-motorized vehicle crossing of Trinity River	B1, B3, B4
California Department of Transportation	101 - Near Blue Lake at Various Locations from Lupton Creek to Berry Summitt	Slope Repair and Drainage Improvements	B1, B2, B3, B4
California Department of Transportation	96 - 6.2m E of Willow Creek to 2.6m W of Tish-Tang Campground	Correct curve, shoulder widen, rumble strip, restripe, OGFC	B1, B3, B4
California Department of Transportation	101 and 254 - Various locations in Humboldt County	Upgrade guardrail and bridge approach	B1, B3, B4
California Department of Transportation	101 - Upgrade Bridges (2 Humboldt County Bridges)	Bridge Seismic Retrofit	B1, B2, B3, B4



**Table 4.2-4
RTP 2013/14 Update Projects with Potential to Impact Biological Resources**

Agency	Location	Description	Impact
California Department of Transportation	36 - Hely Creek, Little Larabee Creek and Butte Creek	Bridge Rail Replacement and Upgrade	B1, B2, B3, B4
California Department of Transportation	36 - Little Golden Gate, approx 15m E of Carlotta	Install erosion control measures	B1, B3, B4
California Department of Transportation	36 -Near Hydesville at River Bar Road	Alton Shoulder Widening	B1, B3, B4
HCAOG	California Coastal Trail	<ul style="list-style-type: none"> • Encourage Caltrans to design improvements for pedestrians and bicycles on the bridges crossing the Eel River and Mattole River. • Work towards implementing the <i>Humboldt County Coastal Trail Implementation Strategy</i>, in coordination and cooperation with local jurisdictions, agencies, and other public and private stakeholders to design, locate, fund, acquire, and maintain segments of the California Coastal Trail. • Work with private landowners to acquire public access rights at locations from Centerville Beach to Cape Mendocino. 	B1, B2, B3, B4
Arcata, Blue Lake, Blue Lake Rancheria, Humboldt County	Annie and Mary Rail Trail	6.8-mile trail corridor that would run east from the Aldergrove Industrial Park in Arcata to the City of Blue Lake, following the inactive NCRA railroad corridor and a segment along SR 299.	B1, B2, B3, B4
Arcata, Humboldt County	Arcata Rails with Trail	Trail from West End Road to Samoa Boulevard, with segments along railroad tracks. This trail would link the Annie & Mary Trail and the Humboldt Bay Trail.	B1, B2, B3, B4
Eureka	Eureka Waterfront Trail	From Tydd Street to Herrick Avenue, including along the existing Eureka Boardwalk. The segments still to be built and/or upgraded are: Waterfront Drive from C Street Boardwalk to Del Norte Street; PALCO Marsh Trail improvements.	B1, B2, B3, B4
Arcata, Eureka, Humboldt County	Hammond Trail	Extend the Hammond Trail from the Mad River bridge south, connecting to the City of Arcata (downtown) and Eureka. Extend the trail north to Westhaven and Trinidad. Restore the Hammond Trail pedestrian/bicycle bridge across the Mad River.	B1, B2, B3, B4
Arcata, Eureka, Humboldt County	Humboldt Bay Trail	Arcata to Eureka Segment: A 6.5-mile Class I/multi-use path around the east side of Humboldt Bay, between Arcata and Eureka. The trail would follow the North Coast Railroad rail corridor and parallel U.S. 101.	B1, B2, B3, B4
Humboldt County	Hoopa Valley Trail	A 6-mile segment along SR 96 from the south end of Shoemaker Road northward (in Caltrans right-of-way). The long-term vision is to expand the trail throughout the Hoopa Valley.	B1, B2, B3, B4



**Table 4.2-4
RTP 2013/14 Update Projects with Potential to Impact Biological Resources**

Agency	Location	Description	Impact
Humboldt County	Orick Levee Coastal Trail	Multi-purpose trail on north Redwood Creek levee to the U.S. 101 bridge (0.69 miles), south levee to Redwood National Park Visitor Center (2.45 miles).	B1, B2, B3, B4
Humboldt County	Riverwalk Trail	Fortuna City Limits to Sandy Prairie	B1, B2, B3, B4
Arcata	Baylands Trail	Within Baylands Park – Class I	B1, B2, B3, B4
Eureka	Truesdale Vista Point Trail	Multipurpose Trail from Truesdale Vista Point to Hiffiker Lane Trailhead	B1, B2, B3, B4
Arcata	Foster Avenue Extension	Sunset Avenue to Alliance Avenue – Class I & II	B1, B3, B4
Fortuna	John Campbell Memorial Greenway	Multi-purpose from the Riverwalk Trail to the south entrance of the Headwaters Reserve	B1, B2, B3, B4
Harbor District	Redwood Marine Terminal Modernization (Option B)	Establish a multipurpose, publicly-owned marine terminal with two berths. Develop a single multipurpose berth for the short-term, designed to be integrated into long-term terminal development.	B1, B3, B4
Harbor District and NCRA	Northern Freight Corridor Restoration Project (per 2008 RTP)	Project seeks to reduce shoaling in Humboldt Bay (thereby enhancing navigation efficiency and safety), and rehabilitate the Northern Corridor of the NWP railroad from the Port of Humboldt Bay to South Fork. The project would also open up the potential for excursion passenger train service within the NCRA's Northern Corridor Rail. (per 2008 RTP)	B1, B3, B4
NCRA (NWP Co. secondary)	Northwestern Pacific Railroad Reopening Eel River Division	Repair facilities and resume service on the Eel River Division of the NWP Railroad (far Northern Portion (South Fork to Samoa) and Canyon Portion).	B1, B3, B4



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4.3 ENVIRONMENTAL JUSTICE

4.3.1 Setting

a. Overview. Environmental justice is defined in the California Government Code as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies” (Gov. Code § 65040.12 (e)). In May 2012, the California Attorney General’s office released a report titled “Environmental Justice at the Local and Regional Level – Legal Background,” which interprets the California Environmental Quality Act (CEQA) to include considerations of environmental justice, although environmental justice is not explicitly mentioned in the CEQA guidelines. The report defines “fairness” in this context to mean that “the benefits of a healthy environment should be available to everyone, and the burdens of pollution should not be focused on sensitive populations or on communities that already are experiencing its adverse effects.”

At the federal level, Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations became effective on February 11, 1994. The Executive Order directs every federal agency to make environmental justice part of its mission. Federal agencies are to do this by identifying and addressing the effects of all programs, policies, and activities on minority and low-income populations. Hence, the U.S. Department of Transportation (DOT) issued its own order, 5680.2, to clarify and reinforce environmental justice policies related to transportation planning. A branch of the DOT, the Federal Highway Administration (FHWA), has established policies for integrating environmental justice principles into existing operations. There are three main elements to FHWA’s environmental justice policy:

- Avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects on minority and low-income populations;
- Ensure full and fair participation by all potentially affected communities in the transportation decision-making process; and
- Prevent reduction or significant delay in the receipt of benefits by minority populations and low-income groups.

Issues of environmental justice impact low-income populations, minority individuals and populations, and low-mobility populations, as defined and discussed below. Issues may include, but are not limited to, concerns related to human health and safety, economic development, society and culture, accessibility, and the natural environment.

b. Demographics. Humboldt County consists of seven cities and 28 unincorporated areas. Tables 4.3-1, 4.3-2, and 4.3-3 summarize 2012 demographic information for these regions. For the purposes of this analysis, “communities of concern” were identified by analyzing demographic and socioeconomic data for minority, low-income, and low-mobility populations based on 2010 and 2012 U.S. Census data and 2007-2011 American Community Survey data.



Race/Ethnicity. Table 4.3-1 shows the racial and ethnic composition of Humboldt County incorporated and unincorporated communities in 2012. In 2012, approximately 5.5% of all Humboldt County residents were identified as American Indian by ethnicity. In the unincorporated community of Big Lagoon, 55.9% of residents were identified as American Indian. Therefore, it is considered a minority community, or an Environmental Justice community of concern (EJ community), because it has a minority group that comprises greater than 50% of that area’s total population (See Figure 4.3-1 for a map showing the location of Big Lagoon within Humboldt County).

**Table 4.3-1
 2012 Race and Ethnicity in Humboldt County**

Location	Hispanic	White	Black	American Indian	Asian	Pacific Islander	Other	Two or More
Humboldt County (All)	9.8%	77.3%	1.2%	5.5%	2.5%	0.3%	0.1%	3.3%
<i>Incorporated Areas</i>								
City of Arcata	13.0%	75.6%	1.9%	4.2%	2.3%	0.0%	0.2%	2.8%
City of Blue Lake	5.3%	80.0%	2.8%	7.3%	1.7%	0.3%	0.0%	2.5%
City of Eureka	9.7%	75.5%	2.1%	3.3%	4.9%	0.7%	0.1%	3.7%
City of Ferndale	3.7%	89.9%	0.0%	2.0%	0.2%	0.0%	0.0%	4.2%
City of Fortuna	12.6%	77.6%	0.6%	1.3%	3.9%	0.5%	0.0%	3.4%
City of Rio Dell	13.8%	73.8%	1.5%	4.7%	1.6%	0.1%	0.3%	4.1%
City of Trinidad	2.5%	93.6%	0.0%	1.1%	0.4%	0.0%	0.0%	2.5%
<i>Unincorporated Areas</i>								
Alderpoint CDP	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bayview CDP	25.9%	63.7%	0.0%	4.5%	0.8%	0.6%	0.0%	4.5%
Benbow CDP	13.7%	86.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Big Lagoon CDP	1.3%	42.8%	0.0%	55.9%	0.0%	0.0%	0.0%	0.0%
Cutten CDP	1.0%	86.7%	1.6%	3.0%	5.8%	0.0%	0.0%	1.9%
Fieldbrook CDP	3.2%	81.2%	2.4%	2.9%	1.3%	0.3%	0.9%	7.8%
Fields Landing CDP	0.0%	89.2%	0.0%	0.0%	0.0%	0.0%	0.0%	10.8%
Garberville CDP	2.4%	97.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Humboldt Hill CDP	11.3%	69.5%	3.4%	9.8%	1.9%	0.0%	0.0%	4.1%
Hydesville CDP	6.6%	85.8%	1.3%	1.9%	3.1%	0.0%	0.0%	1.4%
Indianola CDP	8.6%	76.6%	0.0%	6.9%	0.0%	0.0%	0.0%	7.8%
Loleta CDP	7.8%	82.3%	0.0%	0.0%	2.7%	0.2%	1.4%	5.8%
McKinleyville CDP	8.4%	81.0%	0.7%	6.2%	0.9%	0.2%	0.0%	2.7%
Manila CDP	2.3%	93.1%	0.0%	2.7%	0.0%	0.0%	0.0%	1.9%
Miranda CDP	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Myers Flat CDP	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



**Table 4.3-1
 2012 Race and Ethnicity in Humboldt County**

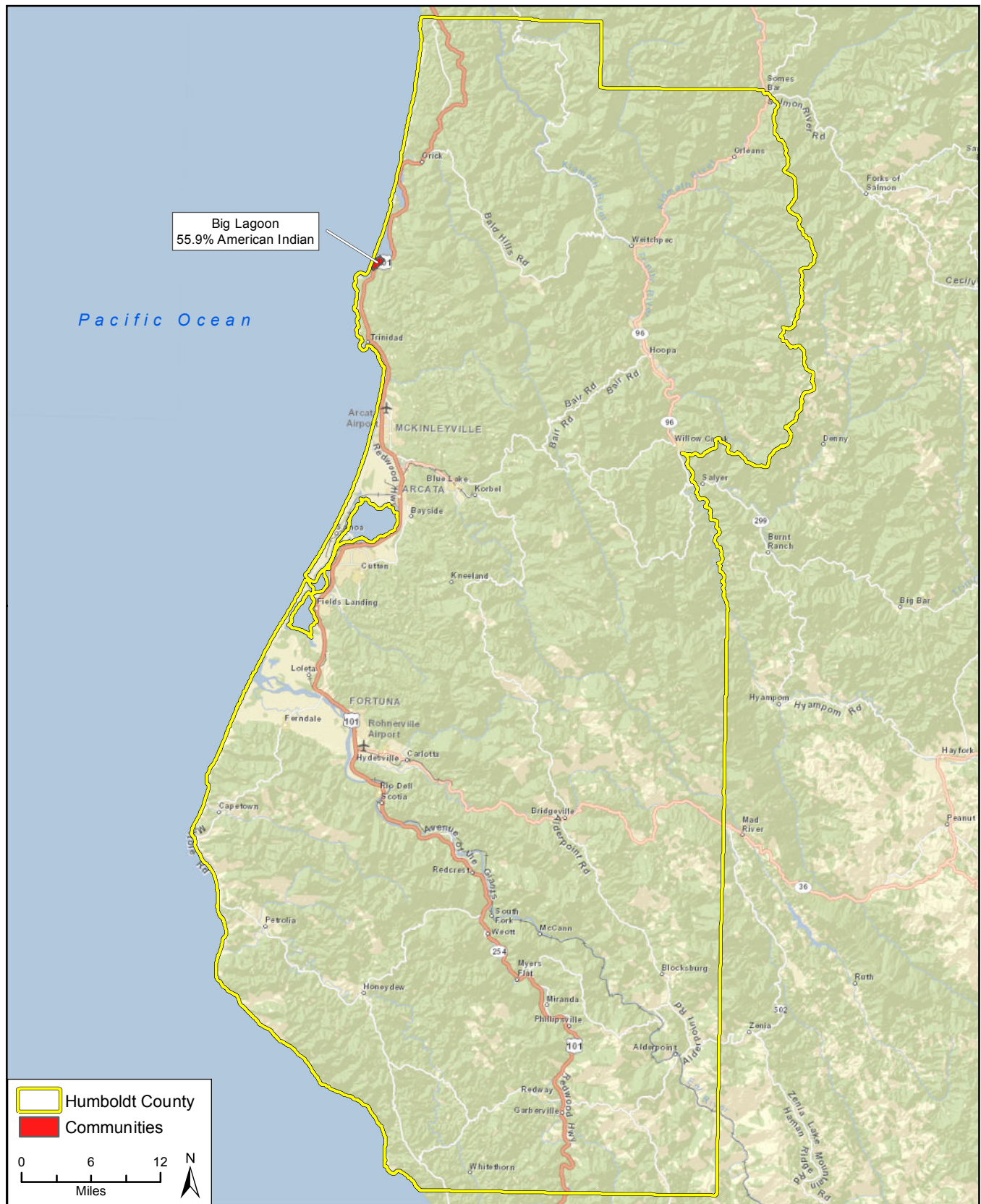
Location	Hispanic	White	Black	American Indian	Asian	Pacific Islander	Other	Two or More
Myrtle town CDP	7.8%	83.7%	0.1%	1.3%	1.1%	0.0%	0.0%	6.2%
Orick CDP	11.2%	76.7%	0.0%	4.5%	0.0%	0.0%	0.0%	7.7%
Phillipsville CDP	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Pine Hills CDP	9.0%	85.1%	0.8%	0.0%	0.3%	0.3%	0.0%	4.5%
Redcrest CDP	0.0%	94.9%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%
Redway CDP	0.0%	96.5%	0.0%	0.0%	0.0%	3.5%	0.0%	0.0%
Samoa CDP	25.0%	52.2%	0.5%	5.1%	0.0%	0.0%	0.0%	17.2%
Scotia CDP	11.5%	79.4%	4.1%	0.2%	0.0%	0.5%	0.0%	4.2%
Shelter Cove CDP	20.1%	79.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Weott CDP	0.0%	71.2%	0.0%	28.8%	0.0%	0.0%	0.0%	0.0%
Westhaven-Moonstone CDP	0.0%	91.3%	0.0%	4.3%	1.2%	0.0%	0.0%	3.3%
Willow Creek CDP	4.8%	92.2%	0.0%	0.8%	0.0%	0.0%	0.0%	2.2%

*Source: US Census 2008-2012 5-Year American Community Survey
 CDP = Census Designated Place*

Income. The average poverty rate for Humboldt County in 2012 was 19.7% (US Census 2008-2012 5-Year American Community Survey). This represents the percent of individuals who fall below the U.S. Department of Health and Human Services (HHS) poverty threshold, which is \$23,550 for a family of four (2013 HHS Poverty Guidelines, January 2013). Table 4.3-2 illustrates the median income, poverty rate, and unemployment rate for each City and unincorporated community in Humboldt County (See Figure 4.3-2 for a map showing the communities of concern with regards to income within Humboldt County).

Mobility. Mobility refers to the movement of people via multiple modes, including individual cars, transit, walking, and cycling, among others. Mobility can be an important indicator of quality of life, as mobility is correlated with accessibility, which is the ease with which individuals can reach their destinations. Enhanced mobility is a means to increase people’s access to desired goods or destinations. Low-mobility populations are less able to access needed goods and services, and/or the means by which they reach their destination are expensive or inconvenient. Auto-oriented cities and communities with few safe or reliable transportation alternatives limit mobility, and do not give individuals a choice in means of transportation. Limited public transit options, few cycling infrastructure improvements, or lack of pedestrian safety measures limit individual mobility. Low-income populations may face restricted mobility if they do not have access to a private vehicle. Elderly populations are frequently limited in individual mobility in auto-oriented transportation systems. As aging populations are less able to drive privately-owned vehicles, it is increasingly important to address multiple modes of transportation to prevent isolation, economic hardship, or reduced quality of life of the expanding senior population.

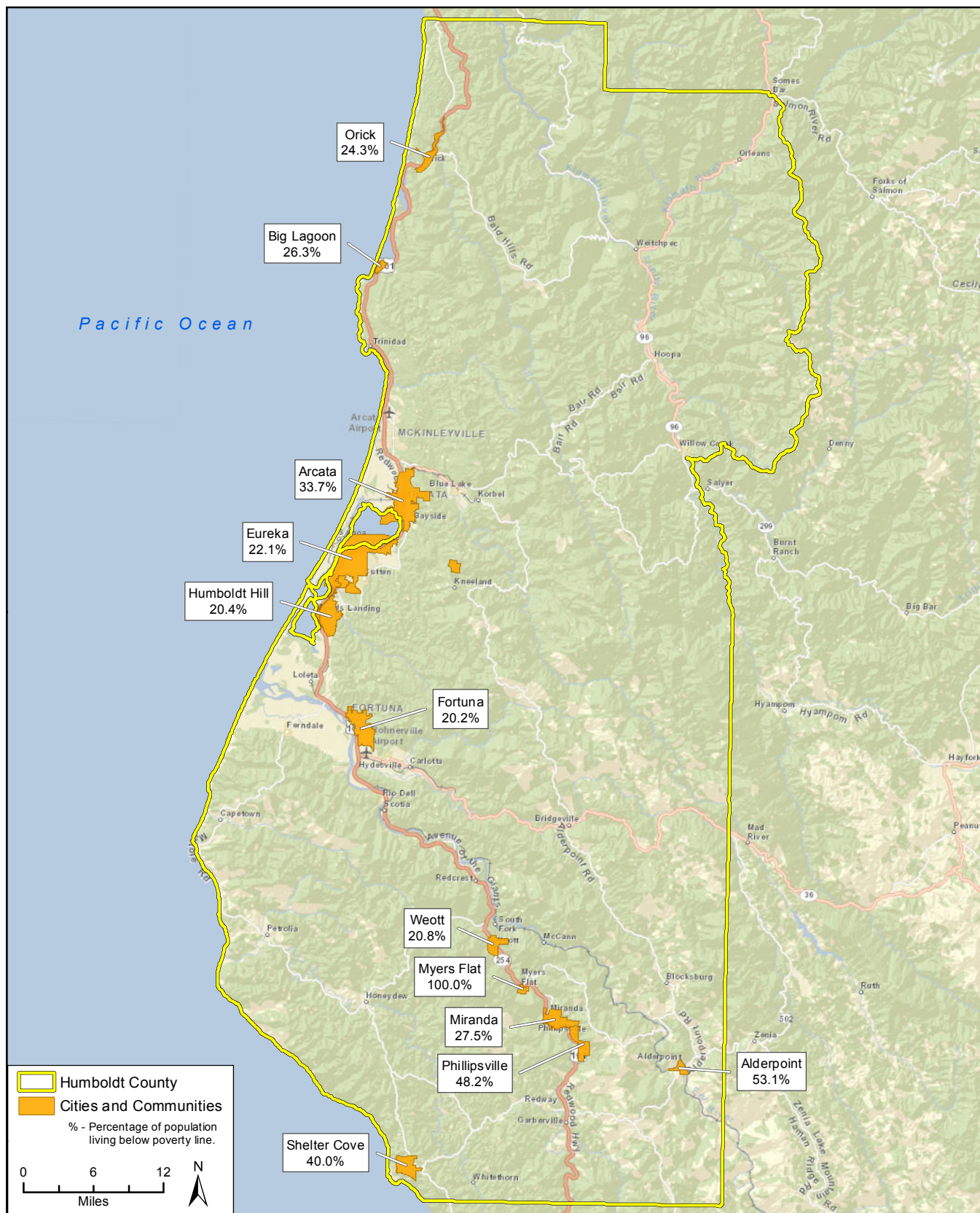




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 City and Community data provided by County of Humboldt, 2014.

Community of Concern: Ethnicity

Figure 4.3-1



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 City and Community data provided by County of Humboldt, 2014.

Communities of Concern: Income

Figure 4.3-2

**Table 4.3-2
Income and Poverty, Humboldt County 2012**

Location	Median Income	Poverty Rate-All People	% Unemployment
Humboldt County (All)	\$40,830	19.7%	6.2%
<i>Incorporated Areas</i>			
City of Arcata	\$32,097	33.7%	7.8%
City of Blue Lake	\$50,329	13.8%	3.8%
City of Eureka	\$36,525	22.1%	5.1%
City of Ferndale	\$51,620	7.3%	6.1%
City of Fortuna	\$38,780	20.2%	4.6%
City of Rio Dell	\$42,443	15.3%	7.6%
City of Trinidad	\$50,625	9.6%	4.9%
<i>Unincorporated Areas</i>			
Alderpoint CDP	\$30,469	53.1%	0.0%
Bayview CDP	\$31,984	24.0%	5.1%
Benbow CDP	\$57,969	0.0%	0.0%
Big Lagoon CDP	\$46,944	26.3%	19.7%
Cutten CDP	\$61,563	12.9%	1.8%
Fieldbrook CDP	\$55,167	10.1%	8.2%
Fields Landing CDP	\$13,906	80.8%	0.0%
Garberville CDP	\$23,636	17.7%	5.9%
Humboldt Hill CDP	\$39,252	20.4%	11.3%
Hydesville CDP	\$54,493	8.6%	4.5%
Indianola CDP	\$50,132	19.3%	6.8%
Loleta CDP	\$38,365	19.5%	6.4%
McKinleyville CDP	\$46,801	13.2%	5.5%
Manila CDP	\$1,804	14.1%	5.6%
Miranda CDP	\$26,543	27.5%	0.0%
Myers Flat CDP	-	100.0%	0.0%
Myrtle town CDP	\$55,994	9.3%	6.7%
Orick CDP	\$24,063	24.3%	9.3%
Phillipsville CDP	\$19,837	48.2%	0.0%
Pine Hills CDP	\$62,181	8.5%	6.5%
Redcrest CDP	\$31,389	0.0%	0.0%
Redway CDP	\$29,054	6.6%	4.7%
Samoa CDP	\$54,423	17.2%	2.8%



**Table 4.3-2
Income and Poverty, Humboldt County 2012**

Location	Median Income	Poverty Rate-All People	% Unemployment
Scotia CDP	\$53,548	3.8%	5.7%
Shelter Cove CDP	\$37,708	40.4%	4.1%
Weott CDP	\$92,688	28.8%	0.0%
Westhaven-Moonstone CDP	\$42,188	12.7%	4.7%
Willow Creek CDP	\$33,208	18.2%	5.2%

Source: US Census 2008-2012 5-Year American Community Survey

CDP = Census Designated Place

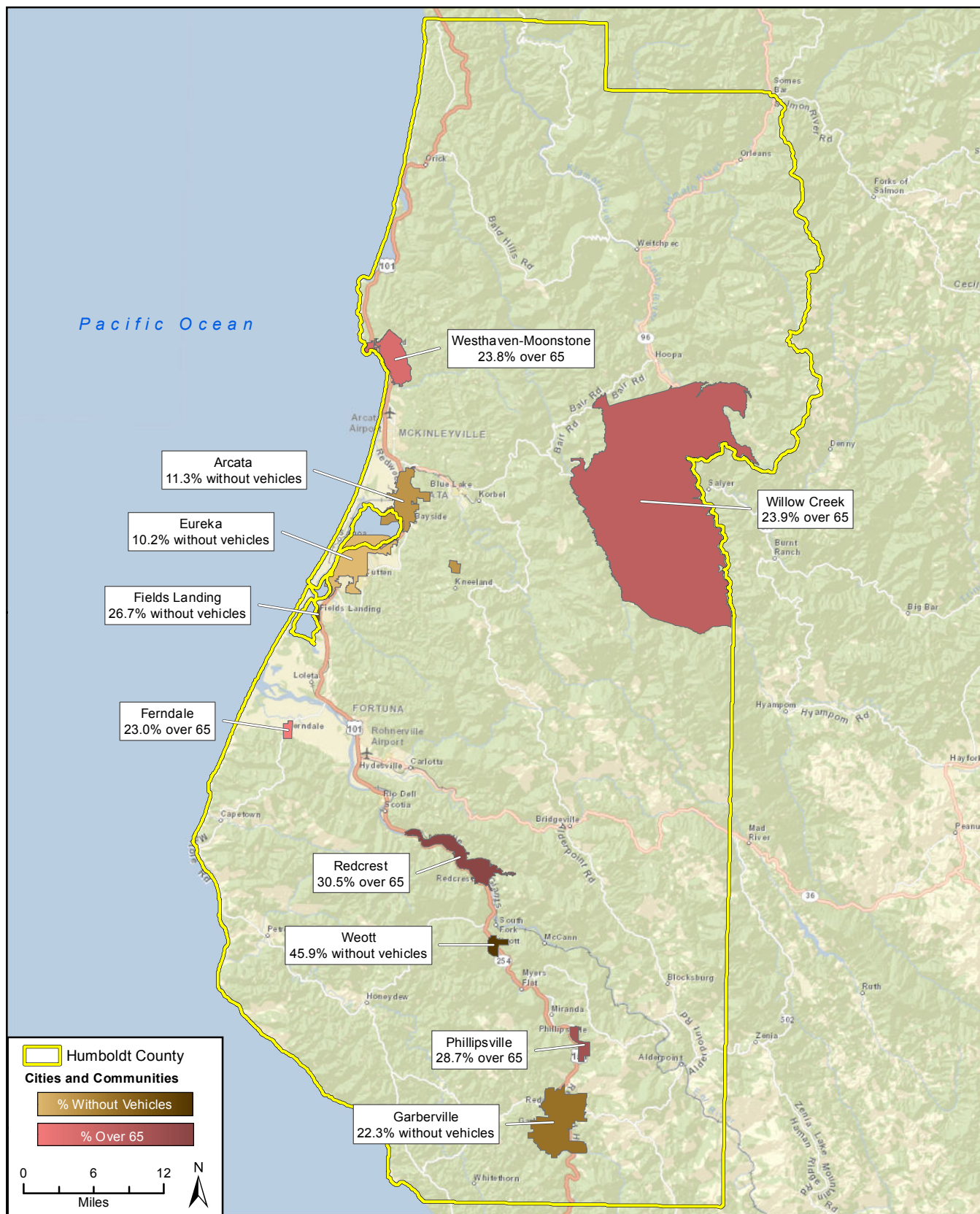
An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.

Table 4.3-3 lists demographic factors that may affect mobility within cities and communities in Humboldt County. For each of the cities and communities in the County, single-occupancy vehicles are the most common choice. The Cities of Ferndale (23.0%) and Trinidad (23.8%) and the communities of Phillipsville (28.7%), Redcrest (30.5%), Westhaven-Moonstone (23.8%), and Willow Creek (23.9%) have considerably higher population percentages of people aged 65 and above. These communities may face a greater need for alternative modes of transportation to ensure elderly populations remain mobile. The Cities of Arcata (11.3%) and Eureka (10.2%) and unincorporated communities of Fields Landing (26.7%), Garberville (22.3%), and Weott (45.9%) have the highest percentages of households without a vehicle (See Figure 4.3-3 for a map showing the communities of concern with regards to mobility within Humboldt County).

Concentrations of Low-Income or Minority Groups. In Humboldt County, the unincorporated community of Big Lagoon is the only region with a high concentration minority population based on ethnicity. Twenty other cities or communities in the County are considered “communities of concern” based on minority status related to income, or mobility.

- The minority and “community of concern” population groups of Humboldt County comprised 15.5 percent of the total population or 19,550 persons.
- Persons of Hispanic ethnicity represented 9.8 percent of the county-wide population, while Black/African-American, Asian, American Indian, and Pacific Islander/Other populations represented 1.2 percent, 2.5 percent, 5.5 percent, and 0.4 percent of the total population, respectively.
- Approximately 0.06 percent of the County population, or 93 persons, live in identified minority communities of concern based on ethnicity and in these communities 44 persons, or 55.9 percent, are minority.





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 City and Community data provided by County of Humboldt, 2014.

Communities of Concern: Mobility

Figure 4.3-3

**Table 4.3-3
 Factors that Affect Mobility in Humboldt County, 2012**

Location	Age 65 and Over	No Vehicle	Disability Status	Work Commute					
				Drive Alone	Carpool	Public Transit	Walk	Other	Work at Home
Humboldt County (All)	13.3%	7.0%	15.5%	72.0%	10.8%	1.2%	5.8%	3.7%	6.5%
Incorporated Areas									
City of Arcata	8.2%	11.3%	11.3%	55.1%	11.7%	1.5%	15.0%	10.9%	5.7%
City of Blue Lake	8.0%	1.9%	16.9%	75.9%	5.4%	0.0%	8.3%	2.6%	7.8%
City of Eureka	12.9%	10.2%	17.0%	73.6%	10.8%	1.3	6.1 %	5.0%	3.2%
City of Ferndale	23.0%	6.1%	18.4%	71.8%	3.9%	2.0%	11.9%	0.5%	9.9%
City of Fortuna	18.8%	8.3%	18.6%	70.3%	12.2%	2.8%	5.6%	2.6%	6.5%
City of Rio Dell	10.1%	7.9%	21.0%	81.2%	16.1%	0.0%	1.8%	0.0%	0.9%
City of Trinidad	23.8%	0.0%	22.4%	60.0%	5.9%	0.0%	10.3%	0.0%	23.8%
Unincorporated Areas									
Alderpoint CDP	0.0%	0.0%	0.0%	42.7%	0.0%	0.0%	33.3%	0.0%	23.9%
Bayview CDP	10.5%	7.5%	15.1%	80.7%	13.3%	1.3%	0.4%	3.2%	1.1%
Benbow CDP	19.6%	0.0%	16.5%	91.5%	8.5%	0.0%	0.0%	0.0%	0.0%
Big Lagoon CDP	16.4%	4.8%	13.8%	35.7%	42.9%	0.0%	21.4%	0.0%	0.0%
Cutten CDP	17.4%	4.9%	21.2%	78.0%	9.4%	0.0%	2.4%	5.9%	4.3%
Fieldbrook CDP	11.1%	2.9%	13.3%	71.0%	10.0%	1.0%	1.0%	5.7%	11.3%
Fields Landing CDP	0.0%	26.7%	55.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Garberville CDP	10.1%	22.3%	13.2%	88.5%	0.0%	0.0%	3.4%	0.0%	8.1%
Humboldt Hill CDP	12.9%	6.2%	19.7%	69.4%	15.6%	2.2%	5.4%	3.8%	3.6%
Hydesville CDP	16.0%	2.2%	11.4%	86.9%	7.9%	2.9%	0.0%	0.0%	2.3%
Indianola CDP	10.7%	1.0%	18.5%	71.4%	25.5%	0.0%	0.0%	0.0%	3.2%
Loleta CDP	13.8%	0.0%	22.0%	86.5%	6.6%	0.0%	0.0%	3.1%	3.8%
McKinleyville CDP	12.3%	5.2%	14.1%	78.9%	10.6%	1.6%	1.9%	1.4%	5.6%
Manila CDP	1.7%	0.0%	6.9%	83.9%	0.0%	0.0%	0.0%	2.9%	13.2%
Miranda CDP	0.0%	0.0%	26.2%	84.2%	0.0%	0.0%	0.0%	0.0	15.8%
Myers Flat CDP	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Myrtle town CDP	19.1%	6.6%	22.6%	78.5%	7.4%	0.9%	6.7%	1.4%	5.2%
Orick CDP	14.1%	3.9%	24.0%	52.5%	10.0%	0.0%	2.5%	0.0%	35.0%

**Table 4.3-3
 Factors that Affect Mobility in Humboldt County, 2012**

Location	Age 65 and Over	No Vehicle	Disability Status	Work Commute					
				Drive Alone	Carpool	Public Transit	Walk	Other	Work at Home
Phillipsville CDP	28.7%	0.0%	40.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Pine Hills CDP	22.4%	0.0%	20.5%	79.3%	8.7%	1.3%	0.0%	1.1%	9.6%
Redcrest CDP	30.5%	0.0%	44.1%	31.8%	0.0%	0.0%	18.2%	0.0%	50.0%
Redway CDP	7.7%	3.5%	11.1%	76.5%	0.0%	0.0%	0.0%	0.0%	23.5%
Samoa CDP	7.0%	0.0%	8.3%	53.1%	42.2%	0.0%	1.9%	0.0%	2.7%
Scotia CDP	1.9%	0.0%	5.9%	63.0%	16.3%	0.0%	13.9%	0.0%	6.8%
Shelter Cove CDP	9.5%	0.0%	5.1%	50.3%	30.7%	0.0%	6.5%	0.0%	12.6%
Weott CDP	0.0%	45.9%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Westhaven-Moonstone CDP	23.8%	5.5%	17.3%	80.2%	9.1%	1.7%	3.3%	0.0%	5.8%
Willow Creek CDP	23.9%	4.3%	16.9%	78.8%	7.4%	1.5%	0.0%	0.0%	12.3%

Source: US Census 2008-2012 5-Year American Community Survey
 CDP = Census Designated Place



Low-Mobility Populations. To estimate populations with low mobility, one factor to look at is the availability of a vehicle. Areas with higher concentrations of people without vehicles are the Cities of Arcata (11.3%) and Eureka (10.2%) and unincorporated communities of Fields Landing (26.7%), Garberville (22.3%), and Weott (45.9%) (US Census 2008-2012 5-Year American Community Survey).

- The percentage of households in Humboldt County that do not have access to a vehicle is 7%, or 964,955 households.
- The total population in identified communities is 45,899; 5,130, or 11%, of the people living in those identified communities are without a vehicle.

Age is another factor for determining existing populations with low mobility. These areas are deemed to have high concentrations of existing population with low mobility due to the percentage of people who over 65 years old: the Cities of Ferndale (23.0%) and Trinidad (23.8%) and the unincorporated communities of Phillippsville (28.7%), Redcrest (30.5%), Westhaven-Moonstone (23.8%), and Willow Creek (23.9%).

- The percentage of the population in Humboldt County aged 65 or older is 13.3%, or 17,932 persons.
- The number of persons over 65 years of age in identified communities is 1,165, or 24% of the 4,882 total.

The communities below were identified as communities of concern through demographic and economic analysis summarized above, the data for which was acquired from the US Census 2008-2012 5-Year American Community Survey.

Arcata. The City of Arcata is located along Highway 101 in the central western region of Humboldt County. The poverty rate (33.7%) is substantially higher than the County's overall poverty rate (19.7%) and 11.3% of the population does not have a car, which is 2.3% higher than the County average.

Eureka. The City of Eureka is located along Highway 101, approximately eight miles south of the City of Arcata. The poverty rate (22.1%) is slightly higher than the County's overall poverty rate (19.7%) and 10.2% of the population does not have a car, which is 1.2% higher than the County average.

Fortuna. The City of Fortuna is located along Highway 101 in central Humboldt County. It is approximately three miles north of State Route 36 and the Rohnerville Airport. There are 20.2% of the City of Fortuna residents who are living below the poverty line.

Trinidad and Westhaven-Moonstone. The City of Trinidad and the unincorporated community of Westhaven-Moonstone are located along Highway 101 in northern Humboldt County. The communities are located less than four miles apart and have high proportions of residents age 65 or older (23.8% for both communities).

Ferndale. The City of Ferndale is located at the terminus of State Route 211, approximately six miles west of Highway 101. There are 23.0% of residents of the City of Ferndale who are age 65 or older.

Alderpoint. The unincorporated community of Alderpoint is located in the southeastern region of Humboldt County, approximately 9 miles west of Highway 101. In Alderpoint, 53.1% of residents are living below the poverty line.

Bayview, Fields Landing, and Humboldt Hill. The unincorporated communities of Bayview, Fields Landing, and Humboldt Hill are located along the Pacific Ocean and Highway 101 in central Humboldt County. All three communities have high proportions of people living under the poverty line (24.0%, 80.8%, and 20.4% respectively).

Big Lagoon. The unincorporated community of Big Lagoon is located in northern Humboldt County adjacent to Highway 101 and the Pacific Ocean. It is ten miles north of the City of Trinidad. There are 93 people living in Big Lagoon, 55.9% of whom are American Indian and 26.3% of whom are below the poverty line.

Garberville, Miranda, Phillipsville, Redcrest, and Weott. The unincorporated communities of Garberville, Miranda, Myers Flat, Phillipsville, Redcrest, and Weott are located along a 29 mile portion of Highway 101 in southern Humboldt County. These communities include populations of which greater than 20%: do not have cars (Garberville and Weott); are over the age of 65 (Redcrest and Phillipsville); and live below the poverty line (Miranda, Phillipsville, Weott).

Orick. The unincorporated community of Orick is located 20 miles north of the City of Trinidad along Highway 101 in northern Humboldt County. There is 24.3% of Orick's population living below the poverty line.

Shelter Cove. The unincorporated community of Shelter Cove is located in the southwestern corner of Humboldt County adjacent to the Pacific Ocean. There are 40.4% of residents in Shelter Cove living below the poverty line.

Willow Creek. The unincorporated community of Willow Creek is located in central Humboldt County at the intersection of State Route 299 and State Route 96. In Willow Creek, 23.9% of residents are age 65 or older.

c. Regulatory Framework

Federal Regulations. HCAOG receives funding for some of its programs and activities from federal agencies such as the Federal Highway Administration and Federal Transit Administration. HCAOG conducts its federally funded programs and activities in accordance with guidance issued by the federal agencies pursuant to federal laws, executive orders, and regulations.



State Regulations.

California Government Code Section 65040.12. Senate Bill 115 of 1999 and Senate Bill 89 of 2000 (Section 65040.12 of the Government Code) required the California Office of Planning and Research (OPR) to:

- Consult with the Secretaries of the California Environmental Protection Agency, the Resources Agency, and the Business, Transportation, and Housing Agency, the Working Group on Environmental Justice established pursuant to Section 72002 (now Section 71113) of the Public Resources Code, any other appropriate State agencies, and all other interested members of the public and private sectors in this State.
- Coordinate OPR's efforts and share information regarding environmental justice programs with the Council on Environmental Quality, the United States Environmental Protection Agency, the General Accounting Office, the Office of Management and Budget, and other federal agencies.
- Review and evaluate any information from federal agencies that is obtained as a result of their respective regulatory activities under federal Executive Order 12898, and from the Working Group on Environmental Justice established pursuant to Section 72002 of the Public Resources Code.

SB 89 also required the formation of an advisory committee, California Environmental Justice Advisory Committee (CEJAC). The CEJAC informs and assists the Secretary of the California Environmental Protection Agency (Cal EPA) and Interagency Working Group on Environmental Justice (IWG) in establishing and implementing an intra-agency strategy to achieve environmental justice. In 2004, the Cal EPA released its Environmental Justice Strategy and Action Plan based on the IWG recommended strategies. The IWG recommends ways to identify and address gaps in existing programs, policies, or activities that may impede achieving environmental justice. The IWG also suggests procedures for collecting, maintaining, analyzing, and coordinating information relating to its environmental justice strategy.

California Government Code Section 11135. California Government Code Section 11135 states that “No person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the State or by any State agency, is funded directly by the State, or receives any financial assistance from the State.”

4.3.2 Impact Analysis

a. Methodology and Significance Thresholds. A significant impact is defined as “a substantial or potentially substantial adverse change in the environment” (CEQA Section 21068). Based on the information provided above, an impact is significant if it would cause disproportionately high and adverse environmental and public health effect and interrelated



difficult social and/or economic effect for minority or low-income populations. Therefore, the RTP 2013/14 Update would have a significant impact on a community of concern if:

- *Implementation of the RTP 2013/14 Update would lead to disproportionately high and adverse human health or environmental impacts to the minority populations, low-income populations, and/or populations with low mobility in the HCAOG region.*
- *The mobility benefits derived from the RTP 2013/14 Update in terms of travel times and accessibility by transit and/or single-occupancy vehicle would be substantially less for minority populations, low-income populations, and/or populations with low mobility in the HCAOG region.*

b. Project Impacts and Mitigation Measures.

Impact EJ-1 Implementation of the RTP 2013/14 Update would proportionately impact EJ communities and non-EJ communities. This would be a Class III, less than significant impact.

Short-Term Impacts. During construction of some transportation improvement projects under the RTP, some minority and/or low-income populations may be affected (see discussion of communities of concern and potential impacts of proposed projects below). These improvement projects may have short-term construction-related impacts on surrounding communities, including impacts on air quality, noise and traffic (refer to Sections 4.1 *Air Quality* and 4.7 *Noise* and 4.8 *Transportation and Circulation*). Specific air quality impacts could include exposure to dust due to the operation of construction vehicles (e.g., scrapers, loaders, dump trucks), and clearing and grading activities. Other air quality impacts include short-term exposure to hazardous air emissions, including diesel emissions from construction equipment. Construction noise impacts from clearing, grading, and laying asphalt could expose nearby receptors to levels up to 88 decibels at 50 feet from the source. Minority populations may be exposed to these impacts; however, such impacts would be mitigated to a less than significant level after implementing mitigation measures listed in Section 4.1 *Air Quality* and 4.7 *Noise*. Temporary traffic impacts include delays during road closures or other disturbances from construction activities; however, due to their temporary nature, traffic delay impacts would not be considered significant.

While it is likely that numerous construction sites of individual improvement projects may experience temporary air quality, noise and construction impacts, mitigation measures have been identified to minimize potential impacts and protect sensitive receptors or special populations located near the individual improvement sites, including low-income or minority communities (refer to Sections 4.1 *Air Quality*, 4.7 *Noise*, and 4.8 *Transportation and Circulation*). These temporary impacts would be distributed to all communities within proximity to the project construction site. All cities and unincorporated communities may experience periods of temporary dust, hazardous air emissions, elevated noise levels, and increased traffic congestion prior to the completion of the roadway, circulation, infrastructure, or transit improvement. As discussed above, minority and/or low-income communities would not be disproportionately affected. As a result, short-term impacts are considered less than significant.



Long-Term Impacts. Minority populations located in proximity to major highways may be exposed to hazardous criteria pollutants. However, as discussed in Section 4.1 *Air Quality*, diesel PM_{2.5}, PM₁₀ and NO_x emissions under the RTP 2013/14 Update would be notably lower than existing conditions, as well as under future conditions without the proposed RTP. As a result, impacts to minority populations close to major freeways would be less than significant. In addition, ambient noise throughout the region, particularly in urbanized areas, would increase due to an overall increase in vehicle activity. Mitigation measures identified in Section 4.7 *Noise* would reduce these potential impacts to a less than significant level. It is also important to note that while some minority populations may be exposed to these conditions, there are many other non-minority populations that may be exposed as well, as non-minority populations also live within close to major highways.

RTP projects are dispersed throughout the region and the RTP 2013/14 Update includes a Needs Assessment and an Action Plan in the Complete Streets, Public Transportation, Aviation, and Goods Movement Elements (required per CTC Guidelines). These Action Plans consist of projects proposed by HCAOG's member jurisdictions (the County of Humboldt and the cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad) and standing committees, as well as tribal governments. An example of such a project with widely dispersed benefits includes the Highway 101 corridor improvement project, which would improve safety at uncontrolled intersections throughout the county. A variety of populations reside along this corridor. Therefore, minority populations would not be disproportionately impacted. In addition, transportation system improvements envisioned by the RTP 2013/14 Update would provide greater mobility for low-income and minority groups.

As stated above, while these communities contain various minority populations and may be impacted by RTP projects, they would not be disproportionately impacted as other non-minority populations have the potential to be impacted by similar projects included in the RTP. In addition, HCAOG has explicitly outlined goals, policies, objectives, and performance measures to address equity and health and safety in the RTP 2013/14 Update in compliance with EO 12898, including:

- Equitable & Sustainable Use of Resources –Advocate for costs and benefits (financial, environmental, health, and social) to be shared fairly. Prioritize projects based on cost effectiveness as well as need and equity for underserved populations. Coordinate transportation systems with land use for efficient, sustainable use of resources.
- Promote citizen involvement at all levels of planning so that local communities and neighborhoods can help determine their particular transportation needs.

Therefore, based on the analysis above and proposed policies, the RTP 2013/14 Update would not disproportionately expose minority populations, low-income population or low-mobility populations to adverse environmental impacts. Impacts would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts would be less than significant without mitigation.



Impact EJ-2 The mobility benefits derived from the RTP 2013/14 Update would be proportional in EJ and non-EJ areas. This impact would be Class III, less than significant.

The RTP 2013/14 Update identifies several performance measures to evaluate the effectiveness of the RTP at achieving HCAOG’s planning goals and objectives. Performance measures related to social equity and mobility include but are not limited to:

- Percentage of RTP/RTIP expenditures in environmental justice tracts.
- Average travel time per person trip (EJ/non-EJ).
- Percentage of homes within half-mile of transit stop (EJ/ non-EJ).

Based on the evaluation of the transportation improvement projects included in the RTP, mobility benefits will not be significantly less for low-income or minority populations. The RTP 2013/14 Update includes projects and associated expenditures in environmental justice tracts that would provide mobility benefits for populations living and working in these areas. Table 4.3-4 and Table 4.3-5 outline mobility benefits that are expected from implementing the RTP. As shown therein, Environmental Justice communities are expected to benefit from the RTP 2013/14 Update to a similar extent as other populations. Specifically, Table 4.3-4 indicates that the RTP 2013/14 Update would slightly reduce the expected 2040 travel time for both Environmental Justice communities and non-EJ communities. Table 4.3-5 indicates that the percentage of homes within 0.5 miles of a transit stop would not be affected by the RTP 2013/14 Update for either EJ or non-EJ communities. As shown in the tables below, EJ communities would experience a reduced average travel time in 2040 with implementation of the RTP.

**Table 4.3-4
Average Travel Time (minutes)**

	EJ Communities	Non-EJ Communities	Overall Average
2010 Baseline	9.85	15.31	10.91
2040 No Project	10.73	16.47	11.93
2040 With Projects	10.70	16.41	11.90

*Notes: - Analysis was performed at the TAZ level using an area-based overlay of buffered transit stops and TAZ polygons. 2040 No Project and 2040 Projects assume the same transit system as 2010 Baseline. If planned transit stops are available, then a 2040 project stop layer could be used to update the "2040 With Projects" numbers.
 Source: Cambridge Systematics, 2014*

**Table 4.3-5
Percentage of Homes within 1/2 Mile of a Transit Stop**

	EJ Communities	Non-EJ Communities	Overall Average
2010 Baseline	81.45%	37.41%	60.47%
2040 No Project	80.47%	33.71%	56.96%
2040 With Projects	80.47%	33.71%	56.96%

Source: Cambridge Systematics, 2014



Overall, the RTP 2013/14 Update would improve mobility benefits for minority populations and communities of concern, as well as non-minority populations. Impacts would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts are less than significant.

c. Specific RTP Projects That May Result in Impacts. Overall, the RTP 2013/14 Update is expected to improve access and mobility throughout the County of Humboldt, including to/from and within the environmental justice communities. No specific projects have been identified that would disproportionately affect environmental justice communities.



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4.4 GEOLOGY AND SOILS

4.4.1 Setting

a. Regional Geology. The State of California is divided into distinct geologic provinces. Each of these provinces displays landscapes that are unique and defining based on geology, topographic relief and climate. There are two geologic provinces in Humboldt County, the Coast Ranges province and the Klamath Mountain province.

The majority of the County is within the Coast Ranges province, which extends along the coast of California from the Oregon border almost to Point Conception in Santa Barbara County. In Humboldt County, this province is drained by the Mad, Eel, and Mattole River drainages. The Coast Ranges are northwest-trending mountain ranges (generally 2,000 to 4,000 feet, and occasionally 6,000 feet in elevation above sea level), and valleys. The ranges and valleys trend northwest, subparallel to the San Andreas Fault. To the west is the Pacific Ocean. The coastline is uplifted, terraced and wave-cut. The Coast Ranges are composed of thick Mesozoic and Cenozoic sedimentary strata. The northern and southern ranges are separated by a depression containing the San Francisco Bay. The northern Coast Ranges are dominated by the irregular, knobby, landslide topography of the Franciscan Complex. The eastern border is characterized by strike-ridges and valleys in Upper Mesozoic strata. In several areas, Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma and Clear Lake volcanic fields. The Coast Ranges are subparallel to the active San Andreas Fault. The San Andreas Fault is more than 600 miles long, extending from Point Arena to the Gulf of California. West of the San Andreas Fault is the Salinian Block, a granitic core extending from the southern extremity of the Coast Ranges to the north of the Farallon Islands (California Department of Conservation, California Geological Survey, 2002). The Franciscan and Yager complexes dominate inland, with sand and other alluvial deposits dominating in the lower reaches of the river basins and the area surrounding Humboldt Bay.

In the northeast portion of Humboldt County lies the Klamath Mountains Province. In Humboldt County, the province is drained by the Klamath and Trinity Rivers, and farther north, by the Smith River. This Province is characterized by rugged topography with prominent peaks and ridges reaching 6,000-8,000 feet above sea level. In the western Klamath Mountains Province, an irregular drainage is incised into an uplifted plateau called the Klamath peneplain. The uplift has left successive benches with gold-bearing gravels on the sides of the canyons. The Klamath River follows a circuitous course from the Cascade Range through the Klamath Mountains. Rocks in the Klamath Mountains province are generally older than those in the Coast Ranges. Rocks of sedimentary origin such as sandstone, chert, slate, and schist occur abundantly, with occasional granite intrusions.

The following summarizes the geology of each planning watershed basin (from *Humboldt County General Plan Update Natural Resources and Hazards Technical Report, 2002*):

Eel River Basin. The four planning sub-watersheds in the Eel River Basin (South Fork Eel, Lower Eel, Middle Main Eel, and Van Duzen) are generally comprised of highly erodible rocks, including substantial amounts of Franciscan Complex rocks. Over 85% of the Middle Main Eel and 65% of the Van Duzen is Franciscan Complex. The Lower Eel and South Fork Eel



planning watersheds contain some Coastal Belt rocks; both the Lower Eel and South Fork Eel are comprised of over 50% Cenozoic Sedimentary rocks. The Eel River basin is a mountainous area uplifted in recent geologic time (post-Miocene) and underlain by a deformed, faulted, locally sheared, and, in part, metamorphosed accumulation of subducted continental margin deposits. About 99 percent of the bedrock underlying the basin is sedimentary and metasedimentary.

Klamath-Trinity Basin. The Klamath-Trinity Basin, composed of the Lower Klamath, Lower Trinity, and South Fork Trinity planning watersheds, is the only basin with notable amounts of plutonic and metavolcanic rocks. The Humboldt County portion of the basin encompasses the North Coast Ranges province. In the North Coast Ranges, landslides and soil slips are common due to the combination of sheared rocks, shallow soil profile development, steep slopes, and heavy seasonal precipitation. Also, both the Lower Klamath and South Fork Trinity have substantial amounts of Franciscan Complex rocks. Jurassic marine sediments are the predominant bedrock type in the Lower Trinity planning watershed.

Mad-Redwood Basin. The geology of the Mad-Redwood Basin is complex and variable. The basin includes the Mad River, Redwood Creek, Eureka Plain, and Trinidad planning watersheds, which all differ in their bedrock composition. Mad River, Redwood Creek, and Trinidad watersheds are composed primarily of Franciscan rock types, while Eureka Plain is mostly younger sedimentary rock.

Cape Mendocino. About 90% of the Cape Mendocino planning watershed is underlain by Tertiary-Cretaceous Coastal Belt rock. A highly active tectonic setting (see below), combined with sensitive terrain and high rainfall amounts, make the Cape Mendocino one of the most erodible watersheds in the state.

b. Geomorphology and Topography. The most prominent topographic feature in Humboldt County is Humboldt Bay. Humboldt Bay was formed approximately 10,000 to 15,000 years ago, when sea level rose rapidly, flooding stream valleys that previously extended into the current site of Humboldt Bay (Schlosser, Susan; Annie Eicher (2012). Humboldt Bay and Eel River Estuary Benthic Habitat Project. University of California San Diego: California Sea Grant College Program Publication No. T -075). Three rivers, the Mad, Elk and Eel, drained into Humboldt Bay during the mid-Pleistocene. Subsequently, the Mad River cut a new outlet to the sea. The flow of the Eel River was diverted by tectonic uplift, but the Elk River continues to drain into Humboldt Bay. Other minor drainages into Humboldt Bay include: Janes Creek; Jolly Giant Creek; Grotzman/Beith Creeks; Jacoby Creek; Washington Gulch; Rocky Gulch; Freshwater Creek; Ryan Creek; and Salmon Creek.

Presently, the Humboldt Bay is split into three regions: the North Bay to the north of Samoa Bridge; the Entrance Bay from Samoa Bridge to South Jetty; and the South Bay which is the remainder of the bay to the south. Daby, Woodley and Indian Island are in the North Bay and all three are within the City of Eureka. Low tides reveal two more islands named Bird Island and Sand Island which were formed from dredge spoils left in the early 20th century. A large eelgrass bed in the South Bay may also be exposed at low tides. At high tide the surface area of the Bay is approximately 24 square miles. However, this surface area is reduced to 10.8 square

miles at low tide. Each tidal cycle replaces approximately 41% of the water in Humboldt Bay (Schlosser, Susan; Annie Eicher, 2012).

Humboldt Bay is the only deep water bay for large ocean-going vessels between the San Francisco Bay and Coos Bay, Oregon. The Port of Humboldt Bay (sometimes also referred to as the Port of Eureka) is a deep water port with harbor facilities including large industrial docks at Fairhaven, Samoa, and Fields Landing.

Soil Characteristics. Soil is generally defined as the unconsolidated mixture of mineral grains and organic material that mantles the land surfaces of the earth. Soils can develop on unconsolidated sediments and weathered bedrock. The characteristics of soil reflect the five major influences on their development topography, climate, biological activity, parent (source) material, and time. Humboldt County is one of the few counties in California in which the Soil Conservation Service has not conducted and published a Soil Survey. According to the Humboldt County General Plan, there are a variety of soil types in Humboldt County:

Agricultural/Lowland Soils. The most abundant agricultural and lowland soils found in the County are of the Ferndale series. The Ferndale series soils are deep and well-drained soils formed on recent flood plains. The Bayside and the Loleta series, both deep but poorly drained soils, are found in depressed areas or on nearly level alluvial fans. The Rohnerville, Carlotta and Hookton soils series, all moderately well-drained soils, are found on relatively flat, high marine terraces. The Hookton soils are on sloping, dissected marine terraces, and the Carlotta soils are found on flat, low-lying terraces. Most of these agricultural soils are rated 80-100 (good to excellent productivity) in the Storie Index of agricultural productivity, except for the poorly-drained Bayside soils.

Forest Soils. The forest soils are medium textured and increasing in acidity with depth. They are permeable and well drained. In the lowlands forest soils are formed on alluvial flood plains or low-lying terraces. Here, they are either unclassified or of the Carlotta and Ferndale groups. The most exceptional old growth redwood groves are found on forest soils.

Grassland Soils. The general characteristics of grassland soils vary widely. They range from shallow loamy soils to deep clay soils. Their permeability ranges from moderate to slow. The general nutrient level of these grassland soils is higher than that of the adjacent forest soils. The major portion of these soils is intermingled with other soils in the Douglas fir zone beyond the fog belt. Some of these soils are formed on Franciscan parent material. Many of these are found in the shear zone or fault gouge material or on the melange material of the Franciscan. This parent material weathers rapidly, forming a grey-blue clay subsoil (commonly called "blue goo") that is slippery when wet. Thus, because of the parent material, these soils are prone to landslides.

Woodland Soils. Most of the woodland soils are in inland portions of the County, beyond the cool fog belt. These soils are intermingled with the conifer forest soils of the Douglas fir belt and the adjacent grassland soils. These are shallow soils, usually well drained, but permeability may be slow in some locations. The natural nutrient level of these soils tends to be somewhat higher than for the neighboring forest soils. Because the parent material is predominantly Franciscan melange, these soils are also considered to be relatively unstable.

Alluvial soils. Alluvial soils with a high clay content may be expansive soils, which means they are subject to volumetric fluctuations (“shrink-swell”) due to changes in moisture levels. Typically, site-specific soils testing in these areas is required to determine the level of risk. Highly expansive soils can damage structures built on them unless appropriate engineering mitigation is incorporated into design.

c. Seismicity. Primary seismic hazards are ground shaking and ground rupture along the surface trace of faults. Secondary seismic hazards occur when ground shaking interacts with soft or unstable soils (resulting in liquefaction, settlement, or landslide), or when it interacts with open water and results in a tsunami. Another secondary hazard would be ground failure. As a result of ground shaking, rocks and debris may fall from cliffs and steep slopes, and even flat ground may crack or tilt.

Fault rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking. The offshore and coastal regions of Humboldt County contain one of the most geologically complex areas in California. Three major faults, including the San Andreas Fault, the Mendocino Fracture Zone and the Cascade Subduction Zone, all meet where three major plates of the Earth's surface come together: the Pacific plate, the Gorda plate and the North American plate. As a result of this unique and highly seismic geologic setting, Humboldt County is vulnerable to earthquakes. Because much of this area lies under the Pacific Ocean, geological information is limited. Most faults located onshore are oriented in a southeast to northwest course.

San Andreas Fault. The San Andreas Fault system is located just offshore from the southern portion of the county, where the Pacific plate is moving at a rate of about two inches per year to the northwest. The irregular sliding motion, which is almost entirely horizontal, deforms the rocks along the plate boundary until the rocks can no longer withstand the strain. Then, when the rocks shift, energy is released along the fault, causing earthquake shaking.

Falor-Korbel (Mad River) Fault. This fault zone also trends northwest-southeast through the central region of the county. Its northern end is on the coast near McKinleyville and the fault roughly parallels the Mad River.

Trinidad and Big Lagoon Faults. The Trinidad Fault is located near Trinidad, extending northwest to the coast near Trinidad State Beach. The Trinidad fault is potentially capable of generating an earthquake with a moment magnitude of 7.3. The Big Lagoon fault bisects Big Lagoon, north of Patrick's Point State Park.

Cascadia Subduction Zone. The Cascadia Subduction Zone is where the Gorda plate and its northern extension, the Juan de Fuca plate, collide with the North American plate. The Gorda plate descends beneath the North American plate along the Cascadia subduction zone, which extends approximately 750 miles north to the Canadian border. Downward and eastward motion of the Gorda plate along this subduction zone, beginning at least 6 million years ago and continuing today, produced the volcanic Cascade Range in Washington, Oregon, and northern California. Near its southern end, the subduction zone curves onshore, exposing nine major

thrust faults along the Humboldt County coastline in the vicinity of Cape Mendocino. The major active fault zones in this area include the Cookskie and Petrolia shear zones. The Cookskie Shear Zone contains sheared and broken rock that extends easterly from Punta Gorda. The Petrolia shear zone extends southeast through Petrolia toward along the Mattole River.

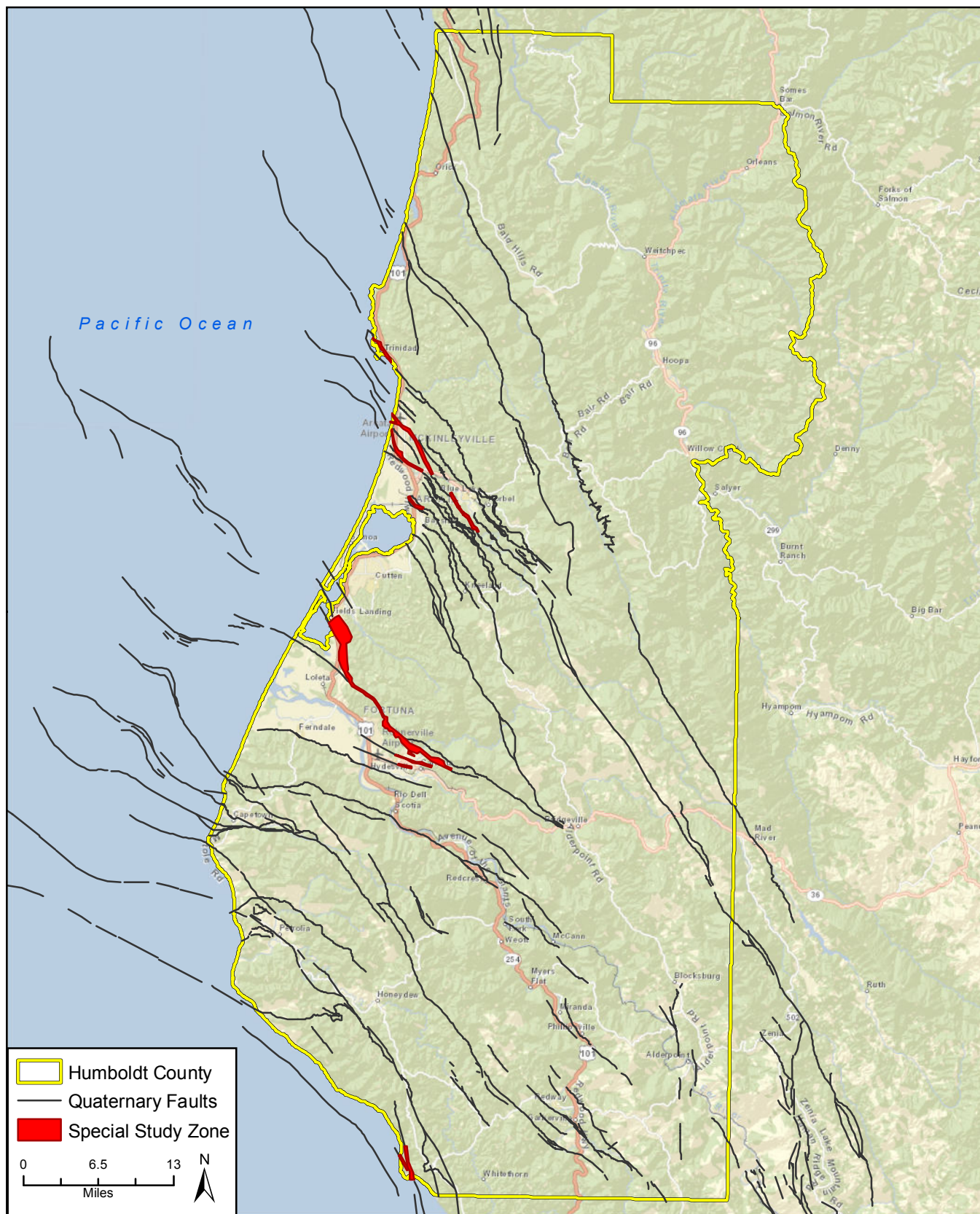
Until recently, scientists did not consider the Cascadia subduction zone as a major earthquake threat. Prior to the April 1992 Cape Mendocino earthquake, the Cascadia plate boundary was not known to have produced a major earthquake during the past 150 years. New evidence, however, indicates that the subduction zone is active and capable of producing magnitude 8-9 earthquakes (David Oppenheimer, Paul Reasenber, Steve Walter, Nan Macgregor-Scott, Barry Hirshorn, and Allan Lindh, U.S. Geological Survey. "Seismicity Report for Northern California, the Nation, and the World for the week of April 23 - 29, 1992).

Alquist-Priolo Special Studies Zones. In 1972, the California Legislature passed the Alquist-Priolo Earthquake Fault Zoning Act. This action was a direct response to the 1971 San Fernando Earthquake, where extensive surface fault ruptures damaged numerous homes, commercial buildings, freeways and other structures. The purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. However, the Seismic Hazards Mapping Act of 1990 does address non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.

Pursuant to the Alquist-Priolo Earthquake Fault Zoning Act, the State Geologist has designated and mapped "Special Studies Zones" and has distributed the maps to all affected cities, counties, and state agencies for their use in planning and controlling development. Before any new development can be permitted within these Special Studies Zones, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally by 50 feet).

Official Maps of Earthquake Fault Zones (EFZ) affecting Humboldt County as of March 1, 2000, are mapped by the Department of Conservation's Division of Mines and Geology (DMG). The maps focus on the cities of Arcata, Fortuna and Trinidad because these are the areas that are most affected by potentially active faults. These are also the areas where Special Studies Zones have been mapped. Figure 4.4-1 shows the general location of earthquake faults and Special Studies Zones in the county.

d. Liquefaction. Ground settlement and soil compaction may occur as a result of seismic ground shaking. When unconsolidated valley sediments are saturated with water, water is forced to the ground surface, where it emerges in the form of mud spouts or sand boils. If soil liquefies in this manner (liquefaction), it loses its supporting capacity, which can result in the minor displacement to total collapse of structures. These types of unconsolidated sediments represent the poorest kind of soil condition for resisting seismic shock waves. Liquefaction potential is based on the depth of groundwater and alluvial thickness. Research into the process and consequences of liquefaction in past earthquakes has linked liquefaction to certain



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Fault zones data provided by the USGS, 2014.

Earthquake Faults and
Special Studies Zones

Figure 4.4-1

HCAOG

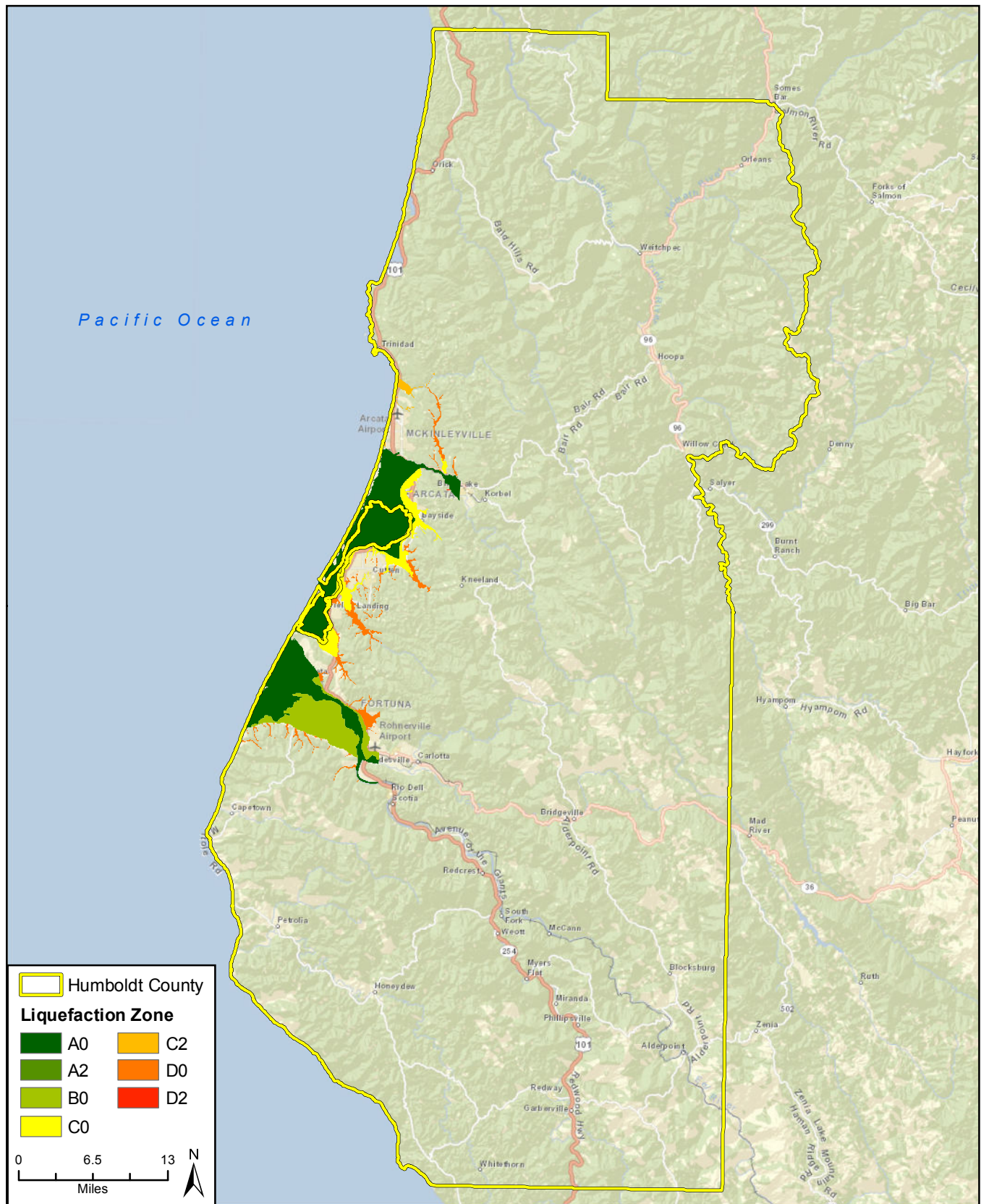
hydrologic and geologic settings, characterized by water-saturated, cohesionless, granular materials situated at depths of less than 50 feet. The following types of areas are those identified as having a high potential for liquefaction:

- Areas known to have experienced liquefaction during historic earthquakes;
- Areas of uncompacted fills that are saturated, nearly saturated or that may become saturated;
- Areas where sufficient existing geotechnical data and analyses indicates a high liquefaction potential.
- Areas containing young (less than 15,000 years) soils where there is limited or no geotechnical data.

Specific areas of high liquefaction potential are located near Humboldt Bay and in the coastal valleys between Ferndale and Arcata, coinciding with the presence of the bay's muds and sands. Much of the county's population resides in these areas that are highly vulnerable to liquefaction. Correspondingly, nearly all of the county's major roadways and urban centers are located in areas where liquefaction could occur in the event of an earthquake. Trinidad does not have a high potential for liquefaction, nor do inland portions of the county. Figure 4.4-2 shows the general location of areas with a high potential for liquefaction.

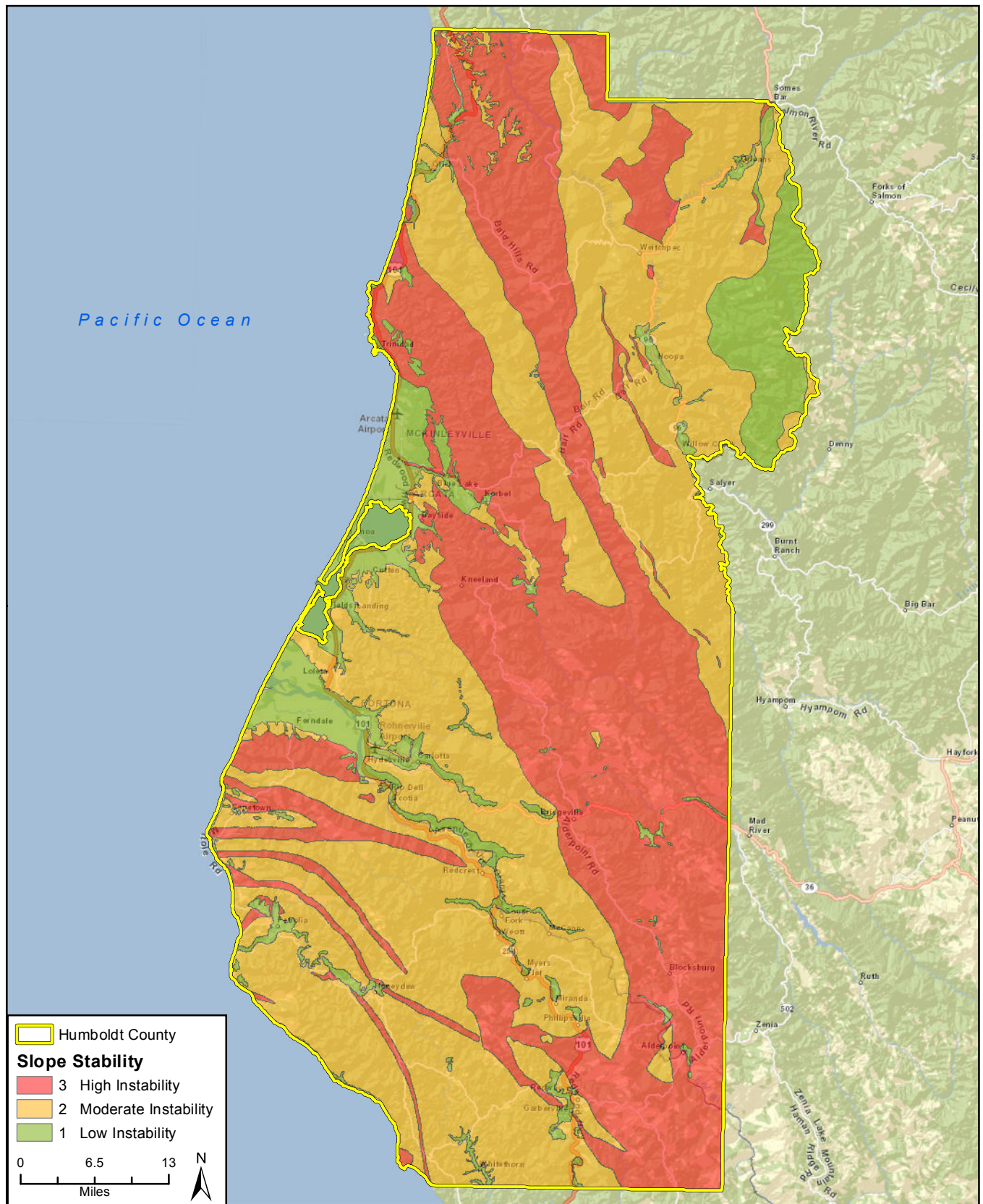
e. Landslides. Landslides may be triggered by both natural and human induced changes in the environment resulting in slope instability. Precipitation, topography, and geology affect landslides and debris flows. Human activities, such as mining, road construction, and altering surface drainage areas, also affect the landslide potential. Landslides often accompany other natural hazard events, such as floods, wildfires, or earthquakes. They can occur slowly or very suddenly and damage and destroy structures, roads, utilities, and forested areas and cause injuries and death. Landslides generally occur in areas of high seismicity, steep slope, and high rainfall, but may be triggered by any combination of the following: (1) type and structure of earth materials, (2) steepness of slope, (3) water, (4) vegetation, (5) erosion, and (6) earthquake-generated groundshaking. The prediction of slope failure at a specific site, however, requires an analysis of all possible factors, some general and some site-specific. Both the County of Humboldt and California Geological Survey maintain maps depicting possible landslide problem areas. These maps must be used with caution, because it is possible that areas that seem stable may in fact be unstable and vice-versa. Figure 4.4-3 shows the general location of high landslide risk areas.

f. Regulatory Setting. The Alquist-Priolo Earthquake Fault Zoning Act, California's Alquist-Priolo Act (PRC 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (Earthquake Fault Zones). It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones. Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if they are "sufficiently active" and "well-defined." A fault is considered



Areas with a High Liquefaction Potential

Figure 4.4-2



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 Slope Stability data provided by County of Humboldt, 2014.

High Landslide Risk Areas

Figure 4.4-3

sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for the purposes of the act as within the last 11,000 years). A fault is considered well-defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Hart and Bryant 1997).

The California Building Standards Code (CBSC) is based on the Uniform Building Code (International Code Council 1997), which is used widely throughout United States (generally adopted on a state-by-state or district-by-district basis). For California conditions, it has been modified with numerous, more detailed or more stringent regulations. The CBSC provides standards for various aspects of construction, including (i.e., not limited to) excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss. In accordance with California law, proponents of specific projects would be required to comply with all provisions of the CBSC for certain aspects of design and construction.

The California Department of Transportation (Caltrans) has Seismic Design Criteria (SDC), which is an encyclopedia of new and currently practiced seismic design and analysis methodologies for designing new bridges in California. The SDC adopts a performance-based approach that specifies minimum levels of structural system performance, component performance, analysis, and design practices for ordinary standard bridges. The SDC has been developed with input from the Caltrans Offices of Structure Design, Earthquake Engineering and Design Support, and Materials and Foundations. Caltrans' "Memo 20-1" outlines the bridge category and classification, seismic performance criteria, seismic design philosophy and approach, seismic demands and capacities on structural components and seismic design practices that collectively make up Caltrans' seismic design methodology.

To protect against geological hazards, the County has adopted policies in its General Plan Safety Element and has adopted the California Uniform Building Code and a Grading Ordinance. Incorporated cities within the County have also done so. These policies and regulations include preventative measures to protect lives, health, property and public welfare from hazards related to geology and soils. In addition, Humboldt County Ordinance 2203 established an integrated Emergency Operations Plan for Humboldt County, including all cities and special districts. The Office of Emergency Services (OES) is responsible for maintaining the Humboldt County Emergency Operations Plan, which serves to address the planned response to extraordinary emergency situations associated with a natural disaster, technological incident, or national security emergency.

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds. In accordance with the Appendix G of the CEQA Guidelines, a project would result in a significant impact if the project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides;
- Result on substantial soil erosion or the loss of topsoil;



- Result in the loss of a unique geologic feature;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Be located on expansive soil, creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

As discussed in the Initial Study (see Appendix A), the proposed RTP 2013/14 Update does not include projects that contain septic systems. Therefore the RTP 2013/14 Update would not result in impacts related to soils incapable of supporting septic systems and these issues will not be further addressed within this EIR.

The RTP 2013/14 Update is also not anticipated to result in any significant impacts on unique geologic features in the county. Therefore, this threshold is not discussed further in this impact analysis. Refer to Section 4.6, *Hydrology and Water Quality*, for a discussion of RTP impacts related to erosion.

b. Project Impacts and Mitigation Measures. This section describes generalized impacts associated with some of the projects anticipated under the RTP 2013/14 Update.

Impact GEO-1 Future seismic events could produce ground shaking throughout Humboldt County as well as surface rupture in some areas. Ground shaking and surface rupture could damage structures and/or create adverse safety effects. However, compliance with local policies, in combination with the requirements of the California Uniform Building Code and Alquist-Priolo legislation, would reduce the risk associated with ground shaking and surface rupture to Class III, less than significant.

In general, groundshaking and fault rupture is a geologic hazard that is prevalent throughout California. Humboldt County is subject to severe ground shaking from any of a number of faults in the region, including those known to exist offshore. As shown in Figure 4.4-1, the County is braided with historic faults. Alquist-Priolo Special Studies Zones have been mapped and the California Department of Conservation has made the maps available to all affected jurisdictions.

Due to the programmatic nature of the RTP 2013/14 Update, a precise, project-level analysis of the specific impacts of individual transportation projects on seismic hazards is not possible at this time. In general, however, implementation of proposed transportation improvements in the RTP 2013/14 Update could be exposed to fault rupture and groundshaking. In essence, all projects under the RTP 2013/14 Update would be subject to some level of groundshaking.

As indicated by Figure 4.4-1, projects located in and between Carlotta, Fortuna, Loleta, and Fields Landing communities, and in the Arcata, McKinleyville and Trinidad areas would be most susceptible to seismic hazards. In particular, large portions of Fields Landing, Arcata and



McKinleyville are within active fault zones. Bridge-type structures are most susceptible to earthquake groundshaking and fault rupture; however, structures as well as roadways may also be damaged by either phenomenon. The RTP 2013/14 Update includes many projects that could be subject to seismic hazards due to their location.

Any new development within the Special Studies Zones would have to be evaluated by a professional geologist and would have to include appropriate design features and setbacks. All public transportation improvements are engineered, and new non-transportation development within the Plan Area would conform to the Alquist-Priolo Earthquake Fault Zoning Act, California Building Code (CBC), and local grading ordinance. This adequately addresses potential impacts relating to surface rupture and ground shaking and would ensure that impacts are less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact GEO-2 Future seismic events could result in liquefaction of soils in portions of the Plan Area. Development in certain areas within the Plan Area could be subject to liquefaction hazards. This impact is considered Class II, *potentially significant but mitigable.*

Liquefaction potential is widespread throughout the county, particularly in lower-lying valleys overlaid by alluvium, as shown on Figure 4.4-2. Such areas are also typically characterized by high groundwater. This condition is most prevalent near Humboldt Bay and in the coastal valleys between Ferndale and Arcata. Many of the County's major roadways and urban centers are located in such areas. Consequently, the majority of RTP 2013/14 Update transportation improvement projects involving structural change or new facilities could be subject to liquefaction. These hazards could be exacerbated through grading associated with transportation projects, and construction of such projects on unconsolidated fill. The identification of on-site geologic hazards would require the preparation of project-specific geotechnical evaluations for proposed RTP projects. Due to the programmatic nature of the RTP 2013/14 Update, such detailed evaluation would only be required upon implementation of a given RTP project. The preparation of project-specific geotechnical evaluations prior to implementation of RTP projects would identify and evaluate geologic hazards for that particular project site. Generally, the analysis would provide recommendations to prepare sites for development to avoid the identified geologic hazards.

Mitigation Measures. HCAOG shall, and sponsor agencies can and should, implement the following mitigation measures for potential impacts associated with liquefaction. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.



GEO-2 If an RTP 2013/14 Update project is located in an area of moderate to high liquefaction potential, the local jurisdiction in which this project is located shall ensure that the project is designed based upon appropriate geology, soils and earthquake engineering studies. Possible design measures include deep foundations, removal of liquefiable materials and dewatering.

Significance After Mitigation. Implementation of Mitigation Measure GEO-2 would reduce potential impacts to a less than significant level.

Impact GEO-3 **Transportation projects in the RTP 2013/14 Update may be located in areas with expansive soils and/or landslide hazards that could damage structures and present safety risks. This impact is considered Class II, significant but mitigable.**

Expansive soils have a clay content and mineralogy that renders them susceptible to volume increase when they absorb water and volume decrease when they dry. RTP 2013/14 Update roadway projects located on expansive clay soils could be damaged by repeated cycles of wetting and drying. In particular, the Bayside Silty Clay Loams (Ba2, Ba3 and Ba6) found in the alluvial lowlands and in the vicinity of Humboldt Bay have a high shrink-swell potential and are therefore considered expansive.

Historically, most landslides in Humboldt County have occurred in remote uninhabited portions of the county where slopes are excessively steep (Historic Landslides Map, Humboldt County GIS Portal, December 26, 2013). The identification of on-site geologic hazards would require preparing project-specific geotechnical evaluations for proposed RTP projects. Due to the programmatic nature of the RTP 2013/14 Update, such detailed evaluation would only be required upon review of a given RTP project. The project-specific geotechnical evaluations prepared prior to implementing RTP projects would identify and evaluate geologic hazards for that particular project site. Generally, the analysis would recommend preparing sites for development to avoid the identified geologic hazards. Nonetheless, because projects under the proposed RTP would potentially be exposed to expansive soils and landslide hazards, potential impacts would be Class II, significant but mitigable.

Mitigation Measures. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measures to reduce potential impacts associated with expansive soils and landslides. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

GEO-3(a) If an RTP 2013/14 Update project involves cut slopes over 15 feet in height, the local jurisdiction in which the project is located shall ensure that specific slope stabilization studies are



conducted. Possible stabilization methods include buttresses, retaining walls and soldier piles.

- GEO-3(b)** If an RTP 2013/14 Update project is located in an area of expansive soils, the local jurisdiction in which the project is located shall ensure that a site-specific geotechnical investigation is conducted. The investigation will identify hazardous conditions and recommend appropriate design factors to minimize hazards. Such measures could include concrete slabs on grade with increased steel reinforcement, removal of highly expansive material and replacement with non-expansive import fill material, or chemical treatment with hydrated lime to reduce the expansion characteristics of the soils.

Significance After Mitigation. Implementation of Mitigation Measures G-3(a) and G-3(b) would reduce potential impacts to a less than significant level.

c. Specific RTP Projects That May Result in Impacts. All RTP 2013/14 Update projects that require new construction or landscaping may create impacts as discussed in Section 4.4.2.b above and are therefore not mentioned in a table format. Individual projects could create significant impacts to geologic resources but would not necessarily do so. Additional specific analysis will need to be conducted as the individual projects are implemented in order to determine the actual magnitude of impact. Mitigation measures discussed above could apply to these specific projects.



4.5 GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

This section discusses potential impacts related to greenhouse gas emissions and climate change. Air quality impacts are discussed in Section 4.1 *Air Quality*.

4.5.1 Setting

a. Climate Change and Greenhouse Gases. Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming;" the former is preferred to the latter because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (90 percent or greater chance) that the global average net effect of human activities since 1750 has been one of warming. The prevailing scientific opinion on climate change is that most of the observed increase in global average temperatures, since the mid-20th century, is likely due to the observed increase in anthropogenic greenhouse gas concentrations (IPCC, 2007).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O), and fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆ (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO₂E), and is the



amount of a GHG emitted multiplied by its GWP. CO₂ has a GWP of one. By contrast, CH₄ has a GWP of 21, meaning its global warming effect is 21 times greater than CO₂ on a molecule per molecule basis (IPCC, 1997).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHG, Earth's surface would be about 34° C cooler (CalEPA, 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO₂ are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [USEPA], April 2012). CO₂ was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the last half of the 20th century. Concentrations of CO₂ in the atmosphere have risen approximately 40 percent since the industrial revolution. The global atmospheric concentration of CO₂ has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC, 2007; National Oceanic and Atmospheric Association [NOAA], 2010). The average annual CO₂ concentration growth rate was larger between 1995 and 2005 (average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA, 2010). Currently, CO₂ represents an estimated 82.8 percent of total GHG emissions (Department of Energy [DOE] Energy Information Administration [EIA], August 2010). The largest source of CO₂, and of overall GHG emissions, is fossil fuel combustion.

Methane. Methane (CH₄) is an effective absorber of radiation, though its atmospheric concentration is less than that of CO₂ and its lifetime in the atmosphere is limited to 10 to 12 years. It has a global warming potential (GWP) approximately 21 times that of CO₂. Over the last 250 years, the concentration of CH₄ in the atmosphere has increased by 148 percent (IPCC, 2007), although emissions have declined from 1990 levels. Anthropogenic sources of CH₄ include enteric fermentation associated with domestic livestock, landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (USEPA, April 2012).

Nitrous Oxide. Concentrations of nitrous oxide (N₂O) began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA, 2010). N₂O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N₂O emissions. The GWP of N₂O is approximately 310 times that of CO₂.

Fluorinated Gases (HFCs, PFCs and SF₆). Fluorinated gases, such as HFCs, PFCs, and SF₆, are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and are phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990. Electrical transmission and distribution systems account for most SF₆ emissions, while PFC emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. Fluorinated gases are typically emitted in smaller quantities than CO₂, CH₄, and N₂O, but these compounds have much higher GWPs. SF₆ is the most potent GHG the IPCC has evaluated.

b. Statewide Greenhouse Gas Emissions Inventory. Worldwide anthropogenic emissions of GHGs were approximately 40,000 million metric tons (MMT) CO₂E in 2004, including ongoing emissions from industrial and agricultural sources, but excluding emissions from land use changes (e.g., deforestation, biomass decay) (IPCC, 2007). CO₂ emissions from fossil fuel use accounts for 56.6 percent of the total emissions of 49,000 MMT CO₂E (includes land use changes) and CO₂ emissions from all sources account for 76.7 percent of the total. Methane emissions account for 14.3 percent of GHGs and N₂O emissions account for 7.9 percent (IPCC, 2007).

Total U.S. GHG emissions were 6,821.8 MMT CO₂E in 2009 (USEPA, April 2012). Total U.S. emissions have increased by 10.5 percent since 1990; emissions rose by 3.2 percent from 2009 to 2010 (USEPA, April 2012). This increase was primarily due to (1) an increase in economic output resulting in increased energy consumption across all sectors; and (2) much warmer summer conditions resulting in an increase in electricity demand for air conditioning. Since 1990, U.S. emissions have increased at an average annual rate of 0.5 percent. In 2010, the transportation and industrial end-use sectors accounted for 32 percent and 26 percent of CO₂ emissions from fossil fuel combustion, respectively. Meanwhile, the residential and commercial end-use sectors accounted for 22 percent and 19 percent, respectively, of CO₂ emissions from fossil fuel combustion (USEPA, April 2012).

Based upon the California Air Resources Board (ARB) California Greenhouse Gas Inventory for 2000-2011, California produced 448 MMT CO₂E in 2011 (ARB, August 2013). The major source of GHG in California is transportation, which contributes 38 percent of the State's total GHG emissions. Industry is the second largest source, contributing 21 percent of the State's GHG emissions (ARB, October 2013). California's relatively high emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, compared to other states, is its relatively mild climate. The ARB has projected statewide unregulated GHG emissions for the year 2020 will be 507 MMT CO₂E (ARB, August 2013). These projections represent the emissions that would be expected to occur absent any actions to reduce GHGs.

c. Potential Effects of Climate Change. Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Scientists have projected that the average

global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and the increase may be as high as 2.2-10°F (1.4-5.8°C) in the next century. In addition to these projections, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic (IPCC, 2007).

According to the CalEPA's 2010 *Climate Action Team Biennial Report*, potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA, April 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Sea Level Rise. According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center (CCCC) (May 2009), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The study identifies a sea level rise on the California coast over the past century of approximately eight inches. Based on the results of various climate change models, sea level rise is expected to continue. The California Climate Adaptation Strategy (December 2009) estimates a sea level rise of up to 55 inches by the end of this century.

Air Quality. Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone; the magnitude of the effect, and therefore its indirect effects, is uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase. This increase, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State (CEC, March 2009).

Water Supply. Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR], 2008; CCCC, May 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during wet winters and releasing it slowly during California's dry springs

and summers. Based upon historical data and modeling, DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR, 2008).

Hydrology. As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise may be a product of climate change through two main processes: expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could jeopardize California's water supply due to salt water intrusion. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a \$30 billion agricultural industry that produces half of the country's fruits and vegetables. Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC, 2006).

Ecosystems and Wildlife. Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan, 2004; Parmesan, C. and H. Galbraith, 2004).

d. Regulatory Setting. The following regulations address both climate change and GHG emissions.

International and Federal Regulations. The United States is, and has been, a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since it was produced by the United Nations in 1992. The UNFCCC is an international environmental treaty with the objective of "stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." This is generally understood to be achieved by stabilizing global GHG concentrations between 350 and 400 ppm, in order to limit the global average temperature increases between 2 and 2.4°C above pre-industrial levels (IPCC 2007). The UNFCCC itself does not set limits on GHG emissions for individual countries or enforcement mechanisms. Instead, the treaty provides for updates, called "protocols," that would identify mandatory emissions limits.

Five years later, the UNFCCC brought nations together again to draft the *Kyoto Protocol* (1997). The Kyoto Protocol established commitments for industrialized nations to reduce their collective emissions of six GHGs (CO₂, CH₄, N₂O, SF₆, HFCs, and PFCs) to 5.2 percent below 1990 levels by 2012. The United States is a signatory of the Kyoto Protocol, but Congress has not ratified it and the United States has not bound itself to the Protocol's commitments (UNFCCC, 2007). The first commitment period of the Kyoto Protocol ended in 2012. Governments, including 38 industrialized countries, agreed to a second commitment period of the Kyoto Protocol beginning January 1, 2013, and ending either on December 31, 2017, or December 31, 2020, to be decided by the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its seventeenth session (UNFCCC, November 2011).

The United States is currently using, in lieu of the Kyoto Protocol's mandatory framework, a voluntary and incentive-based approach toward emissions reductions. The Climate Change Technology Program (CCTP) is a multi-agency research and development coordination effort (led by the Secretaries of Energy and Commerce) that is charged with carrying out the President's National Climate Change Technology Initiative (USEPA, December 2007). However, the voluntary approach to address climate change and GHG emissions may be changing. The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the USEPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act.

EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to facilitate the production of a new generation of clean vehicles, that is, on-road vehicles and engines with lower GHG emissions and better fuel efficiency. This will be done through coordinating GHG emission limits and the NHTSA Corporate Average Fuel Economy (CAFE) standards. In May 2010, the agencies issued joint Final Rules for the first phase of this national program and released the final combined EPA and NHTSA standards for passenger cars, light-duty trucks, and medium-duty passenger vehicles covering model years 2012 through 2016. The CAFE standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO₂ per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO₂ level solely through fuel economy improvements. In October 2010, the agencies each proposed complementary GHG and CAFE standards, under their respective authorities, covering medium and heavy-duty trucks for the model years 2014-2018. In August 2012, the agencies released new emissions limits and CAFE standards for the 2017 to 2025 model years. The 2012 limits set fuel economy to the equivalent of 54.5 mpg for cars and light-duty trucks.

In October 2009, the USEPA issued a Final Rule for mandatory reporting of GHG emissions for facilities that emit more than 25,000 metric tons (MT) CO₂E per year. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines. It also requires those entities to report their emissions annually. The first annual reports for these sources were due in March 2011. Additionally, owners of SF₆- and PFC-insulated equipment must also report emissions if the total nameplate capacity¹ of these insulating gases is above 17,280 pounds.

¹ Nameplate capacity is the maximum rated output of heavy machinery like a large turbine or generator that produces electricity. A metal stamped "nameplate" states the model number and power generation capacity, verified by the International Organization for Standardization (ISO) or other industry standards.



On May 13, 2010, the USEPA issued a Final Rule that took effect on January 2, 2011. This rule, still in effect, sets a threshold of 75,000 MT CO₂E per year for GHG emissions. Effective that date, new and existing industrial facilities that meet or exceed that threshold require a permit. On November 10, 2010, the USEPA published the “PSD and Title V Permitting Guidance for Greenhouse Gases.” The USEPA’s guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act. The guidance is meant to help them understand how to implement GHG reduction requirements while mitigating costs for industry.

On January 2, 2011, the USEPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant, and if they emit at least 75,000 MT CO₂E per year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time new sources were subject to GHG Title V permitting if the source emits 100,000 MT CO₂E per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 MT CO₂E per year.

On July 3, 2012 the USEPA issued the final rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits, under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs, are required for new and existing industrial facilities.

State Regulations. ARB is responsible for coordinating and overseeing State and local air pollution control programs in California. Assembly Bill (AB) 1493 (2002), referred to as “Pavley,” requires ARB to develop and adopt regulations to achieve “the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.” On June 30, 2009, USEPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as “LEV (Low Emission Vehicle) III GHG” will cover 2017 to 2025. In January 2012, ARB approved a new emissions-control program. This program combines the control of smog, soot causing pollutants and GHG emissions into a single coordinated package of requirements for passenger cars and light trucks model years 2017 through 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules would be fully implemented, new automobiles would emit 34 percent fewer GHGs. Statewide CO₂E emissions would be reduced by 3 percent by 2020 and by 12 percent by 2025. The reduction increases to 27 percent in 2035 and even further to a 33 percent reduction in 2050 (ARB, 2013).²

In 2005, former Governor Schwarzenegger issued Executive Order (EO) S-3-05, which established statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, overall GHG emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent of 1990 levels (CalEPA, 2006).

² Percent reductions are from 2008 baseline emissions levels.



In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the “2006 CAT Report”) (CalEPA, 2006). The 2006 CAT Report identified a recommended list of strategies that the State could pursue to reduce GHG emissions. These are strategies that could be implemented by various State agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met within the existing authority of the State agencies. The strategies include reducing passenger and light duty truck emissions, reducing idling times for diesel trucks, overhauling shipping technology/infrastructure, and increasing the use of alternative fuels, recycling, landfill methane capture, etc.

California’s major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the “California Global Warming Solutions Act of 2006,” signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires ARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO₂E. The Scoping Plan was approved by ARB on December 11, 2008, and includes measures to address GHG emission reduction strategies related to energy efficiency, water use, recycling and solid waste, among other measures. The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms.

In early 2013, ARB initiated activities to update the AB 32 Scoping Plan. The 2013 Scoping Plan update (Public Review Draft, October 2013) defines ARB’s climate change priorities and the groundwork to reach post-2020 goals set forth in EO S-3-05. The update highlights California’s progress toward meeting the “near-term” 2020 GHG emission reduction goals defined in the original Scoping Plan (2008). It also evaluates how to align the State’s longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy, transportation, and land use.

EO S-01-07 was enacted on January 18, 2007. The order mandates that a Low Carbon Fuel Standard (“LCFS”) for transportation fuels be established for California to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020.

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

ARB Resolution 07-54 establishes 25,000 metric tons of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

In early 2010, ARB adopted a regulation for reducing SF₆ emissions from electric power system gas-insulated switchgear (17 CCR 95350). The regulation requires owners of such switchgear to: (1) annually report SF₆ emissions; (2) determine the emission rate relative to the SF₆ capacity of the switchgear; (3) provide a complete inventory of all gas-insulated switchgear and their SF₆ capacities; (4) produce a SF₆ gas container inventory; and (5) keep all information current for ARB enforcement staff inspection and verification. Changes to relevant facilities owned by PG&E and any gas insulated switchgear associated with the project would be subject to this regulation.

The California Renewables Portfolio Standards (RPS) pursuant to SB 1038, SB 1078, SB 1250, and SB 107 previously required investor-owned utilities, electric service providers, and community choice aggregators to increase the portion of energy that comes from renewable sources to 20 percent by 2010. Subsequently, in April 2011, Governor Brown signed SB 2X, which requires California to generate 33 percent of its electricity from renewable energy by 2020.

Executive Order S-13-08, signed in November 2008, called on state agencies to develop California's first strategy to identify and prepare for the expected impacts from sea level rise, increased temperatures, shifting precipitation and extreme weather events. The order requires that prior to release of the final Sea Level Rise Assessment Report from the National Academy of Sciences (NAS), all state agencies that are planning construction projects in areas vulnerable to future sea level rise shall, for the purposes of planning, consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. This requirement is applicable to state agencies (such as Caltrans). Regional and local agencies (including HCAOG and any local agencies reviewing individual transportation projects) may choose to assess such impacts, but are not required to do so.

For more information on the Senate and Assembly bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

Local Regulations and CEQA Requirements. Pursuant to the requirements of SB 97, the California Resources Agency has amended the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance for analyzing and mitigating GHG emissions in CEQA documents, but contain no suggested thresholds of significance for GHG emissions. Instead, they give lead agencies the discretion to set quantitative or qualitative thresholds for assessing and mitigating GHGs and climate change impacts.

The general approach to developing a Threshold of Significance for GHG emissions is to identify the emissions level at which a project would not be expected to substantially conflict with existing California legislation adopted for the purpose of sufficiently reducing statewide



GHG emissions to move the state towards climate stabilization. If a project would generate GHG emissions above the threshold level, its contribution to cumulative impacts would be considered significant. To date, the Bay Area Air Quality Management District (BAAQMD), the South Coast Air Quality Management District (SCAQMD), the San Luis Obispo Air Pollution Control District (SLOAPCD), and the San Joaquin Air Pollution Control District (SJVAPCD) have adopted quantitative significance thresholds for GHGs. However, in March 2012 the Alameda County Superior Court (*California Building Industry Association v. Bay Area Air Quality Management District*) issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds contained in the BAAQMD's 2010 CEQA Guidelines.³ The NCUAQMD has not established CEQA significance criteria to determine the significance of impacts that would result from projects such as those included in the RTP.

Local Climate Action Plans. Three of HCAOG's member jurisdictions have adopted or have pending climate action plans that set goals and targets for reduced GHG emissions, and outline policies to help achieve those goals. The Cities of Arcata (Community Greenhouse Gas Reduction Plan, August 2006), and Trinidad (Draft Climate Action Plan, April 2010), as well as Humboldt County (Draft Climate Action Plan, January 2012), have conducted baseline emissions inventories and completed plans for reducing GHG emissions. To date, only the City of Arcata has an adopted plan. The cities of Blue Lake and Eureka are in the process of developing climate action plans. To date, the Cities of Ferndale, Fortuna, and Rio Dell do not have climate action plans.

The climate action planning documents completed locally address issues related to emissions produced by transportation, energy usage, and other operational emissions such as water supply and conveyance, wastewater treatment, and solid waste disposal. The types and quantity of emissions produced in the HCAOG region vary among jurisdictional boundaries. However, for most jurisdictions, transportation and energy usage produce a majority of GHG emissions. Climate action planning policies in the region establish a framework for improved circulation networks and energy conservation. Transportation policies aim to reduce vehicle miles traveled (VMT) by offering more opportunities for alternative transportation modes, such as bicycling and transit use. In addition, many of the documents include policies to promote transit-oriented development. In order to reduce emissions caused by energy usage, jurisdictions have established policies that will facilitate and encourage energy efficiency for both residential and commercial land uses. Cities and counties include programs to improve energy efficiencies in old and new buildings and decrease the use of fossil fuels by providing incentives for use of renewable energy.

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds. Pursuant to SB 97's requirements, the California Resources Agency, in March, 2010, adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. These

³ In August 2013, the First District Court of Appeal overturned the trial court and held that the thresholds of significance adopted by the BAAQMD were not subject to CEQA review. In view of the trial court's order which remains in place pending final resolution of the case, the BAAQMD is no longer recommending that the thresholds be used as a generally applicable measure of a project's significant air quality impacts. BAAQMD states that lead agencies will need to determine appropriate air quality thresholds of significance based on substantial evidence in the record (BAAQMD, 2013).



guidelines are used to evaluate cumulative significance of GHG emissions from the proposed project.

According to the adopted *CEQA Guidelines*, impacts related to GHG emissions from the proposed project would be significant if the project would:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or*
- *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project contributes to an impact in a manner that is cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when connected with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional or State GHG reduction plan (such as a Climate Action Plan). To date, neither the County, HCAOG member jurisdictions, nor the NCUAQMD has developed or adopted permanent GHG significance thresholds.

Construction Emissions. Although construction activity is addressed in this analysis, the California Air Pollution Control Officer Association (CAPCOA) does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, “more study is needed to make this assessment or to develop separate thresholds for construction activity” (CAPCOA, 2008). Additionally, neither NCUAQMD nor any of HCAOG’s member jurisdictions has adopted any construction-related GHG standards. Construction-related emissions are speculative at the RTP level because such emissions depend on the characteristics of individual development projects. However, because implementing some RTP projects would generate temporary GHG emissions, primarily due to the operation of construction equipment and truck trips, a qualitative analysis is provided below.

HCAOG Methodology for Estimating GHG Emissions. Two basic quantities are required to calculate a given emissions estimate: an emission factor and an activity factor. In general, the emission factor is the amount of emissions generated by a certain amount of motor vehicle activity. County-wide VMT estimates were obtained from Caltrans, who modeled the RTP projects into the County TransCAD model. Emissions estimates used the EMFAC2011 model emissions rates provided by the California Air Resources Board. Local vehicle population characteristics were used rather than the defaults assumed in the EMFAC2011 model. The EMFAC 2011 model generates an output of carbon dioxide (CO₂) emissions, which were used as the overall indicator of GHG emissions, per the recommendations of the ARB SB 375 Regional Targets Advisory Committee. In order to calculate the CO₂ emissions within EMFAC 2011, VMT, vehicle trips, and VMT by speed class distributions were extracted from the



TransCAD model for the baseline (2013) and target year (2035), based on the preferred and alternative transportation scenarios. This extracted information was then entered into the EMFAC 2011 model. The CO₂ emissions associated with vehicle starts are accounted for in the EMFAC 2011 model based on the distribution of vehicle starts by vehicle classification, vehicle technology class, and operating mode. EMFAC 2011 adds these vehicle starts to the running emissions to compute total on-road mobile source emissions. The CO₂ emissions for the vehicle classes were then extracted from the EMFAC 2011 output and reported. CO₂ emissions reported herein account for State regulations, including Pavley I and the Low Carbon Fuel Standard, both AB 32 Scoping Plan measures. Per capita emissions rates were calculated by dividing total CO₂ emissions for each scenario by the region's population (provided by HCAOG) in each respective year.

b. Project Impacts and Mitigation Measures. Implementation of the RTP could generate GHG emissions which could exceed existing levels and potentially conflict with applicable plans and policies.

Impact GHG-1 Construction of the transportation improvement projects included in the RTP Update 2013/14 would generate temporary short-term GHG emissions. Impacts would be Class II, significant but mitigable.

Construction activities associated with transportation improvement projects included in the RTP would generate temporary short-term GHG emissions, primarily due to truck trips and operating construction equipment. Construction-related emissions are speculative at the RTP level because such emissions depend on the characteristics of individual development projects. However, GHG emissions would be emitted from travel to and from the worksite and operating construction equipment such as graders, backhoes, and generators. During construction, preparing and grading sites typically emit the most GHG, due to the use of grading equipment and soil hauling. The precise construction timing and construction equipment for individual projects is not specifically known at this time. Nonetheless, construction activities would result in GHG emissions. Impacts would be potentially significant.

Mitigation Measures. The following mitigation measures are required by HCAOG to reduce, minimize or avoid significant adverse environmental impacts. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects to minimize GHG emissions during construction for applicable projects-. Project-specific environmental impacts may require these mitigation measures to be revised or expanded in response to site-specific conditions. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

GHG-1 The project sponsor shall ensure that applicable GHG-reducing diesel particulate and NO_x emissions measures for off-road



construction vehicles are implemented during construction. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. Applicable GHG-reducing measures include the following:

- Using diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and complying with the State Off-Road Regulation;
- Using on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and complying with the State On-Road Regulation;
- All on and off-road diesel equipment shall not idle for more than 5 minutes at any one time. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the 5 minute idling limit;
- Using electric equipment when feasible;
- Substituting gasoline-powered in place of diesel-powered equipment, where feasible; and
- Using alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

Significance after Mitigation. With the implementation of the above mitigation measures, impacts related to short-term GHG emissions would be less than significant.

Impact GHG-2 Implementing the RTP Update 2013/14 would decrease GHG emissions compared to both the 2013 baseline and future “no project scenario.” Impacts would be Class III, less than significant.

GHG emissions on the HCAOG transportation network were projected for the year 2035 assuming implementation of the RTP, and were compared to both the 2013 baseline and to GHG emissions projected under the future “no project scenario.” (The “no project scenario” assumes that the RTP’s identified transportation improvements are not implemented.) As discussed above, GHG emissions for the proposed RTP 2013/14 Update were calculated using the CARB’s EMFAC 2011 model based on the VMT that would be generated as a result of the proposed RTP (refer to Section 4.8, *Transportation and Circulation*).

As previously discussed, the AB 32 Scoping Plan outlines the main State strategies for reducing GHGs to meet the 2020 target. Many of these strategies contribute to reducing transportation-related emissions at the regional and local levels. The projections discussed below include reductions in emissions resulting from applying Pavley fuel efficiency standards and low carbon fuel standards. Table 4.5-1 summarizes the 2013 baseline, 2035 No Project and 2035 with RTP per-capita transportation-related emissions from all vehicles classes.



**Table 4.5-1
 Per Capita Carbon Dioxide Equivalent Comparison**

Scenario	Per Capita CO ₂ Emissions (lbs/day)
2013 Baseline	28.96
2035 No Project Scenario	24.90
2035 with RTP	24.89

The on-road mobile source CO₂ emissions estimates for the RTP 2013/14 Update were calculated using CARB's EMFAC2011 emission inventory model.

As shown in Table 4.5-1, implementing the proposed RTP would not increase GHG emissions. The 2013 per capita GHG emissions for the plan area were estimated to be 28.96 pounds per day. With the proposed RTP, the 2035 per capita GHG emissions for the plan area were modeled to be 24.89 pounds per day, a reduction of 14 percent from 2013. In addition, as shown in Table 4.5-1, GHG emissions under the “no project scenario” would be higher compared to GHG emissions under the RTP. As such, the RTP would contribute to reducing per capita transportation-related GHG emissions.

Despite population growth, GHG emissions under the 2035 “no project scenario” also reduce per capita transportation-related GHG emissions compared to the 2013 baseline. This is likely a result of the GHG reductions associated with Pavley fuel efficiency standards and low carbon fuel standards discussed above, which reduce transportation-related emissions independent of reductions in vehicle or fuel usage. It is important to note that transportation-related GHG emissions would continue to occur throughout the County regardless of whether the RTP is adopted or not. However, as demonstrated above, the RTP would contribute to an overall reduction in transportation-related emissions when compared to both the 2013 baseline and future “no project scenario.” Impacts would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts are less than significant.

Impact GHG-3 Implementing the RTP would be consistent with the goals of applicable GHG reduction plans and policies, including the adopted GHG Reduction Plan for the City of Arcata, as well as AB 32. Impacts would be Class III, less than significant.

As discussed above, one of HCAOG’s member jurisdictions (the City of Arcata) has adopted a GHG Reduction Plan that sets goals and targets for reducing GHG emissions, and outlines policies to help achieve those goals. This local GHG Reduction Plan was adopted in an effort to comply with the GHG emissions reduction goals that the AB 32 Scoping Plan recommends for local governments.

One of the goals of AB 32 is to reduce statewide GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05). ARB’s Scoping Plan outlines the main State strategies for reducing GHGs to meet the



2020 deadline and encourages local governments to similarly implement these strategies to meet the 2020 targeted emissions level.

As discussed in Impact GHG-2 above, the proposed RTP would reduce per capita GHG emissions from 2013 by 14 percent. In addition, GHG emissions under the “no project scenario” would be higher when compared to GHG emissions under the RTP. As such, the RTP would contribute to reducing per capita vehicle-related GHG emissions. It is important to note that vehicle-related GHG emissions would continue to occur throughout the County regardless of whether the RTP is adopted or not. However, as demonstrated above, the RTP would contribute to an overall reduction in vehicle related emissions. Therefore, implementation of the RTP helps the region achieve GHG emissions reductions consistent with AB 32 targets.

Furthermore, the projects and policies identified in the RTP are designed to align transportation planning to reduce VMT and transportation-related GHG emissions. Therefore, implementing the RTP would help the region reduce GHG emissions, thereby contributing to the State’s overall GHG emissions reduction goals identified in AB 32. Since the RTP is consistent with the goals of AB 32, it would not conflict with the goals of local reduction plans designed to meet the same state goals.

Impacts would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts are less than significant.

c. Specific RTP Projects That May Result in Impacts. The proposed projects in Tables 2-1 through 2-6 (in Section 2, Project Description), would have the potential to emit GHGs. However, the RTP as a whole is designed to reduce VMT and per capita transportation-related GHG emissions. Since plan level emissions are below baseline per-capita emissions levels and future “no project scenario/” all planned RTP projects remain below the thresholds of significance.



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4.6 HYDROLOGY AND WATER QUALITY

4.6.1 Setting

a. Watershed and Water Resources. The California Water Resources Control Board (State Water Board) has the primary responsibility for the protection and enhancement of water resources in California. The State Water Board establishes statewide policies that implement both state and federal laws and regulations related to water resources and water quality. The state is divided into nine (9) regions. Within each of these regions is a regional water quality control board (RWQCB) that adopts and enforces water quality control plans, called “basin plans.” The basin plans recognize the unique characteristics of each region with regard to water quality and identify beneficial uses of water and any water quality problems.

Humboldt County is within the State Water Board’s North Coast Region. The North Coast Regional Water Quality Control Board’s (NCRWQCB’s) jurisdiction includes all watersheds draining into the Pacific Ocean from the Oregon border on the north to the Russian River on the south. The Humboldt County General Plan identifies twelve (12) watersheds within the County that range from 73,000 acres to 333,000 acres. The watersheds are grouped into four (4) larger basins: the Klamath-Trinity Basin; the Mad-Redwood Basin; the Eel Basin and the Mattole Basin.

All surface waters within the County drain into the Pacific Ocean, either directly or through another watershed that drains into the Pacific Ocean. According to the County General Plan, annual precipitation in the County ranges from more than 40 inches in the driest areas to more than 100 inches in the coastal mountains and ridges. The watersheds in Humboldt County support some of the largest remaining Coho and Chinook salmon populations in California, and they support many other beneficial uses. However, all of the watersheds in Humboldt County have problems, or “impairments,” related to water quality.

Groundwater. The rivers and streams in Humboldt County convey approximately 23 million acre feet per year; over 80 percent of this (from rainfall) occurs from November through March (Humboldt County General Plan Draft EIR, 2012). Heavy seasonal rainfall and steep topography limit infiltration and recharge. Humboldt County is in the north Coast Hydrologic Area, which contains four (4) main groundwater basins: the Hoopa Valley Basin; the Mad River Basin; the Eureka Plain Basin; and the Eel River Valley Basin. Within these large basins, there are numerous sub-basins and aquifers.

Groundwater quality problems in Humboldt County include contamination from seawater intrusion and nitrates in shallow coastal groundwater aquifers (California Department of Water Resources, California Water Plan Update 2005). The wells can have very high levels of iron and manganese and can have insufficient production during the late summer and fall, especially in low rainfall years. Therefore, many wells rely on a hydrologic connection to rivers and streams. These shallow wells placed in the sand and gravel beds of nearby rivers and streams are used with success. These water wells that are heavily influenced by surface waters are the types of wells that support the cities and towns where the majority of the County’s population resides. The quality of surface and ground water within the County is affected by land uses within the watershed and the composition of subsurface geologic materials. In Humboldt County, non-



point source pollution is the primary cause of water quality impairments, and it affects both surface water and groundwater.

Surface Water Quality. Non-point source pollution (i.e., polluted run-off) includes erosion and sedimentation into rivers and streams, and runoff from urban and agricultural areas (including roads). Septic systems are also sources of non-point source pollution, if not properly designed, installed and maintained.

Section 303(d) of the federal Clean Water Act and 40 CFR §130.7 require states to identify water bodies that do not meet water quality standards to support their beneficial uses. These waters are placed on the Section 303(d) List of Impaired Water Bodies. The 303(d) list identifies the Total Maximum Daily Load (TMDL) for each of these water bodies and the associated pollutant(s) responsible for the listing. There are 15 water bodies within Humboldt County that are on the 303(d) list, representing six (6) of the twelve (12) watersheds. Table 4.6-1 lists the impaired water bodies, the impairment source, and area affected:

**Table 4.6-1
 Impaired Water Bodies in Humboldt County**

Water Body	Impairment Source	Area Affected
South Fork Trinity	Sedimentation/Siltation/Temperature	1161 miles
Lower Trinity	Sedimentation/Siltation	1256 miles
Klamath	Nutrients/ Organic Enrichment/Low Dissolved Oxygen/ Temperature	609 miles
Mattole River	Sedimentation/Siltation/Temperature	503 miles
Redwood Creek	Sedimentation/Siltation/Temperature	332 miles
Mad River	Sedimentation/Siltation/Temperature/Turbidity	654 miles
Freshwater Creek	Sedimentation/Siltation	84 miles
Jacoby Creek	Sediment	19 miles
Elk River	Sedimentation/Siltation	88 miles
Humboldt Bay	PCBs	16,075 acres
Lower Eel	Sedimentation/Siltation/Temperature	426 miles
South Fork Eel	Sedimentation/Siltation/Temperature	943 miles
Middle Main Fork Eel	Sedimentation/Siltation/Temperature	674 miles
Van Duzen River	Sedimentation/Siltation	585 miles
Clam Beach, Luffenholtz Beach, Moonstone County Park, Trinidad State Beach	Indicator Bacteria	2.54 miles

Source: Humboldt County General Plan Draft EIR, April 2, 2012.

On November 15, 1988, the State Water Board adopted a Nonpoint Source Management Plan pursuant to Section 319 of the Clean Water Act. This management plan establishes the framework for statewide non-point source activities. The plan identifies non-point source control programs and milestones for their accomplishment. The plan emphasizes cooperation with local governments and other agencies to promote the voluntary implementation of Best Management Practices and remedial projects in a three-tiered approach: 1) voluntary implementation, 2) regulatory-based encouragement, and 3) effluent limitations. Part of the



management plan is the National Pollutant Discharge Elimination System (NPDES) Nonpoint Source Program, which regulates the quality of runoff in developed/developing areas. The NPDES Nonpoint Source Program is administered by the RWQCBs and its objective is to control and reduce pollutants to water bodies from nonpoint discharges. For projects in urbanized areas, the Municipal Storm Water Permitting Program regulates stormwater discharges from municipal storm sewer systems (MS4s) and contains provisions for low-impact development standards that apply to road projects creating 5,000 square feet or more of newly constructed contiguous impervious surface.

Surface waters continue to support numerous beneficial uses in the North Coast region, including: municipal and domestic supply; agricultural supply; industrial service supply; groundwater recharge; freshwater replenishment; navigation; hydropower generation; water contact recreation; non-contact water recreation; commercial and sport fishing; aquaculture; warm freshwater habitat; cold freshwater habitat; inland saline water habitat; estuarine habitat; marine habitat; wildlife habitat (WILD); preservation of areas of special biological significance; rare, threatened, or endangered species; migration of aquatic organisms; spawning, reproduction, and/or early development; shellfish harvesting; water quality enhancement; flood peak attenuation/flood water storage; wetland habitat; Native American culture; and subsistence fishing. However, measures must be taken to control and reduce non-point source pollution.

Groundwater Quality. Groundwater quality varies within the County. In general, seawater intrusion and high nitrate levels are a problem in shallow aquifers within coastal groundwater basins, and high levels of total dissolved solids (TDS) -- iron, boron, and manganese in particular -- can be a problem in the inland basins of the County.

Several of the groundwater basins in Humboldt County have been monitored for Total Dissolved Solids (TDS), including Hoopa Valley, Mad River Valley Lowland, Eureka Plain, Eel River Valley, Lower Klamath River Valley, and the Redwood Creek Area (2003 California Groundwater Update, Bulletin 118). Total Dissolved Solids were observed from 43 mg/L to 469 mg/L in the basins sampled. Total dissolved solids (TDS) comprise inorganic salts (principally calcium, magnesium, potassium, sodium, bicarbonates, chlorides and sulfates) and some small amounts of organic matter that are dissolved in water. In Humboldt County, elevated TDS levels are due to natural environmental features such as carbonate deposits and sea water intrusion, but other sources include urban runoff, agricultural runoff, and other point/non-point pollution discharges (Winzler & Kelly Consulting Engineers, November 2007). The areas with higher TDS levels have hard water that leads to scale buildup in pipes, water filters, water heaters, etc., and a bitter or salty taste. However, the high TDS levels are not considered a primary pollutant or health hazard.

Beneficial uses of the North Coast Basin groundwater aquifer include: municipal and domestic water supply; industrial water supply; industrial process water supply; agricultural water supply; and freshwater replenishment to surface waters.

b. Flood Hazards. The primary indicator of potential flooding is the presence of a floodplain as defined by the Federal Emergency Management Agency (FEMA). Floods are commonly described as having a 10-, 50-, 100-, or 500-year recurrence interval, meaning that floods of these magnitudes have a 10, 2, 1, or 0.2 percent chance of occurring on average in any



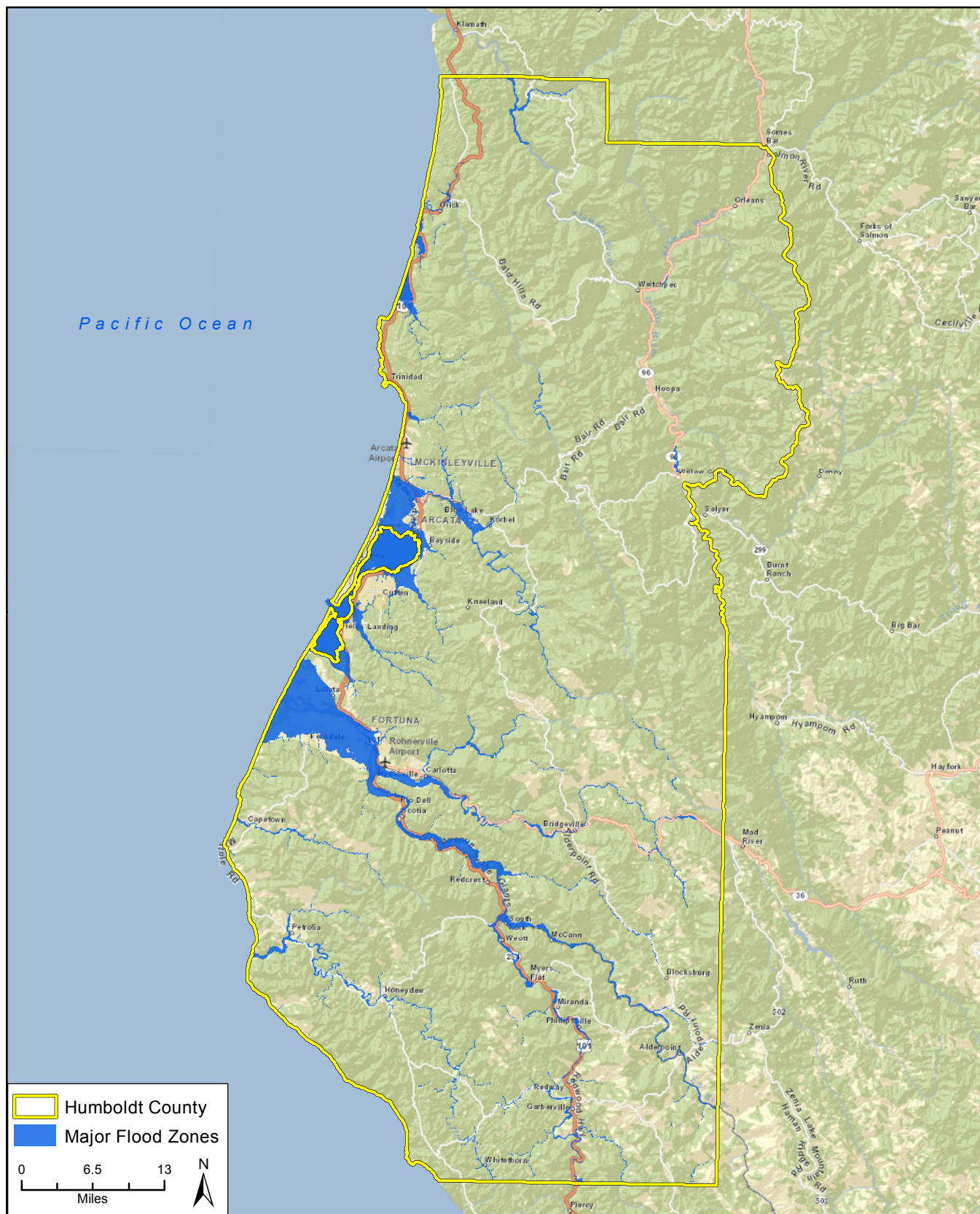
given year. These measurements reflect averages of likelihood of occurrence, but it is possible that two or more rare floods (with a 100-year or higher recurrence interval) could occur within a short time.

A floodplain is defined by FEMA as the area of land adjacent to the water course that may be submerged by flood water during a 100-year storm. Floodplains are identified on FEMA Flood Insurance Rate Maps (FIRM). Humboldt County maintains a Floodplain Management Program based on information and maps published by FEMA, and therefore continues to participate in the federal flood insurance program. The largest 100-year floodplain areas are: the Eel delta and Lower Eel up to its confluence with the South Fork Eel; the Van Duzen, upstream of its confluence with the Lower Eel; the area between the lower five miles of the Mad River and the northern end of Humboldt Bay; the Mad River, ten miles upstream of its mouth; the downstream ends of the Elk River, Salmon Creek, and Freshwater Creek; and the Maple Creek delta in the Trinidad planning watershed (see Figure 4.6-1).

c. Tsunamis. A tsunami, or large sea wave, may be produced by movement of the ocean floor resulting from an earthquake. Very large earthquakes in other areas of the world may generate tsunamis. Waves caused by these earthquakes travel at hundreds of miles per hour, reaching California several hours after the earthquake. Since 1812, California has experienced fourteen (14) tsunamis with wave heights greater than 3 feet. Ten (10) of these were generated by distant earthquakes near Alaska, Chile or Japan. The worst damage in California resulted from the 1964 Alaskan earthquake, when the harbor area at Crescent City was severely damaged by a tsunami produced 1,500 miles away. A tsunami resulting from the April 1992 Cape Mendocino earthquake reached Eureka in about 20 minutes with wave heights of about one foot. The tsunami reached Crescent City in 50 minutes and was detected in Oregon, the San Francisco Bay Area, Santa Barbara, and Hawaii. Although not destructive, this event illustrates both how quickly a wave can arrive at nearby coastal communities and how long the danger period can last. The first wave arrived at Crescent City in less than an hour, but the highest waves arrived nearly four hours later. Abnormally large waves continued for more than eight hours.

When the magnitude 9.0 earthquake struck near the town Tohoku on the eastern coast of Honshu Island in Japan in 2011, a large tsunami was generated that traveled over 10 kilometers inland in places. A teletsunami (a tsunami that travels a great distance across the ocean) was also generated, that put the entire Pacific Ocean region at risk. Approximately three hours after the Tohoku earthquake struck, the West Coast and Alaska Tsunami Warning Center (WC/ATWC) placed the California coast north of Point Conception in a tsunami warning. The range of forecasted tsunami amplitudes varied from 0.3 to 2.5 meters, with the highest surge forecasted for Crescent City. Peak amplitudes at tide gauge locations in the state ranged from a low of 0.15 meters to a high of 2.47 meters at Crescent City (http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Pages/2011_tohoku.aspx). Nearly 15 hours after first arrival, at high tide, some of the highest tsunami levels were recorded on the tide gauge. Large sea-level oscillations caused dangerous strong currents that lasted for over 24 hours. All docks within the small boat basin were heavily damaged or destroyed during the tsunami. Although dozens of boats made it out of Crescent City harbor prior to the tsunami, 16 boats were sunk and 47 were damaged according to the Coast Guard.





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 Flood data provided by County of Humboldt, 2014.

Major Flood Zones

Figure 4.6-1

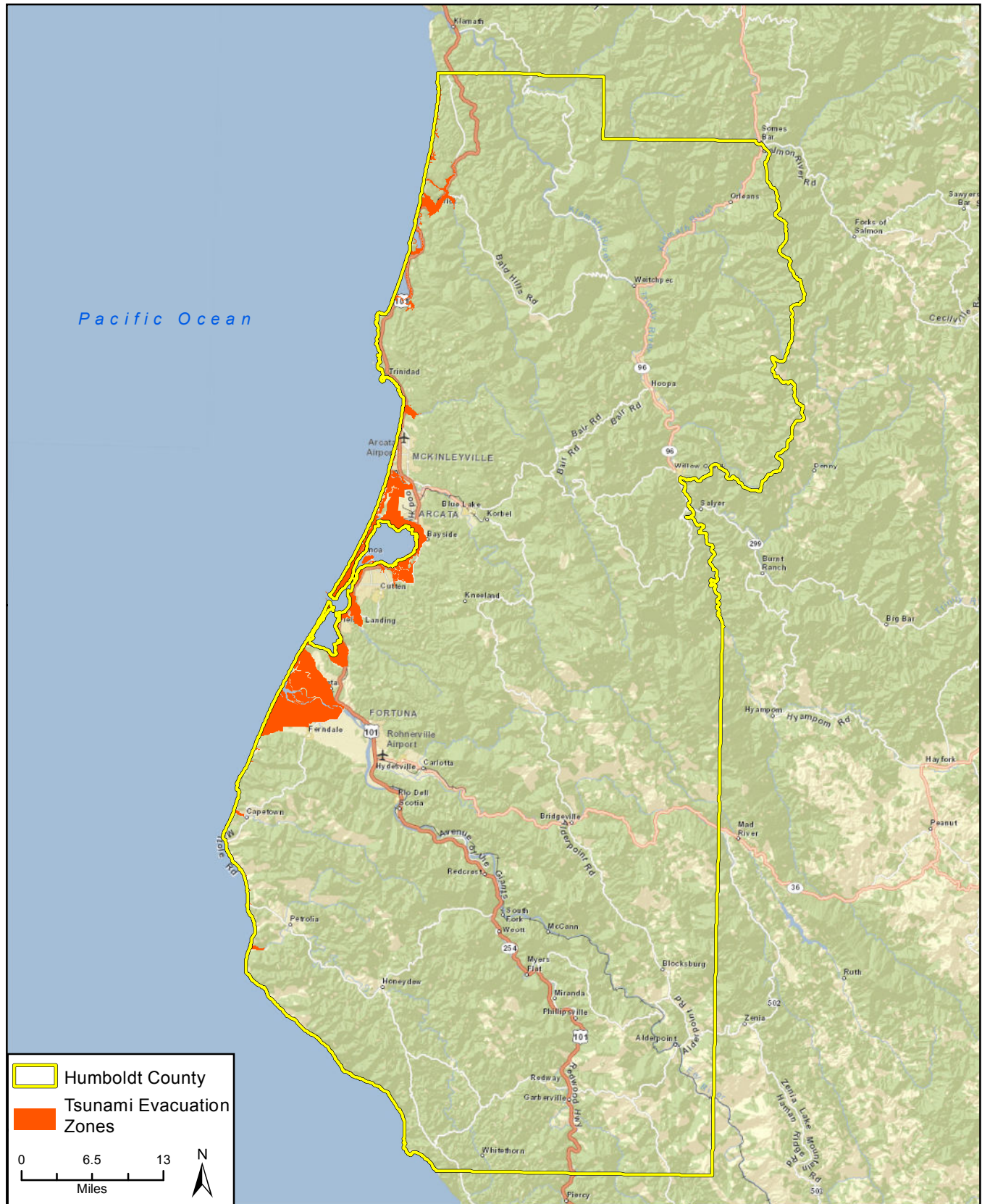
The International Tsunami Warning System monitors ocean waves after any Pacific earthquake with a magnitude larger than 6.5. If waves are detected, warnings are issued to local authorities, who can order evacuation of low lying areas if necessary. Geological records indicate that the Cascadia Subduction Zone has been a near-shore source for a number of major tsunami events affecting Humboldt County, the most recent occurring about 300 years ago. The geologic record shows that tsunami flood heights can reach over 30 feet above mean sea level.

In Humboldt County, the areas that are at risk of inundation during a tsunami are generally the beaches and low coastal bluffs on the open coast and low-lying areas adjacent to Humboldt Bay and major river deltas. The high hazard zones generally coincide with the coastal areas that are mapped as zone A or zone V on the FEMA Flood Insurance Rate Maps. For the populated portions of the Humboldt County Coast, Tsunami Inundation Maps have been prepared by the California Department of Conservation (See Figure 4.6-2).

d. Dam Failure. Dams provide flood control but they also present a possible flood hazard downstream in the unlikely event of dam failure. Other than small earthen impoundments in Arcata, Scotia, Big Lagoon, and Benbow, there are no dams located within Humboldt County. However, there are five (5) dams located in adjacent counties, on rivers that drain into Humboldt County. The failure of any one of these structures could cause major damage in Humboldt County. The Trinity Dam and Ruth Dam pose the most substantial risk because of their relatively large volumes of water and short downstream warning times. The County maintains emergency response plans (called Operational Area Hazard Mitigation Plans) for the areas subject to inundation. Figure 4.6-3 shows dam failure inundation areas.

e. Regulatory Framework. Development in the County and in the seven (7) incorporated cities is subject to various local, state, and federal regulations and permits regarding the use of water resources. The federal government administers the NPDES permit program (via the State Water Boards), which regulates discharges into surface waters. Section 404 of the Clean Water Act prohibits the discharge of dredged or fill materials into Waters of the United States or adjacent wetlands without a permit from the U.S. Army Corps of Engineers. As discussed under *Flood Hazards*, FEMA establishes base flood heights for 100-year and 500-year flood zones. Within these areas, the County's Floodplain Management Program regulations apply.

The primary regulatory control relevant to protecting water quality is the Federal NPDES permit administered by the North Coast Regional Water Quality Control Board (RWQCB). This board establishes requirements prescribing the quality of point sources of discharge and establishes water quality objectives. These objectives are established based on the designated beneficial uses (e.g, water supply, recreation, and habitat) for a particular surface water or groundwater. The NPDES permits are issued to entities that discharge pollutants from a point source to surface waters. Examples include, but are not limited to, public wastewater treatment facilities, industries, power plants, and groundwater cleanup programs discharging to surface waters. The NPDES permits are issued pursuant to Water Code Chapter 5.5 that implements the Federal Clean Water Act. The RWQCB establishes and regulates, under the NPDES permits, discharge limits for minerals and pollutants.



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 Flood data provided by County of Humboldt, 2014.

Tsunami Evacuation Zones

Figure 4.6-2



Imagery provided by ESRI and its licensors © 2014.
 Flood data provided by County of Humboldt, 2014.

Dam Failure Inundation Areas

Figure 4.6-3

Projects disturbing more than one acre of land during construction are required to file a Notice of Intent (NOI) with the RWQCB, in order to be covered under the State NPDES General Construction Permit for discharges of storm water associated with construction activity. A Storm Water Pollution Prevention Plan (SWPPP) must be developed and implemented for each site covered by the general permit. A SWPPP should include Best Management Practices (BMPs) designed to reduce potential impacts to surface water quality through the life of the project.

The control of non-point source runoff from industrial sources and associated pollutants is regulated in California by the SWRCB under the statewide General Permit for Stormwater Discharges Associated with Industrial Activities Order No. 97-03-DWQ. The General Permit presents the requirements for compliance of certain industries with the NPDES. A wide range of industries is covered under the general permit, including mining operations, lumber and wood products facilities, petroleum refining, metal industries, and some agricultural facilities.

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds. Pursuant to the State CEQA guidelines, potentially significant impacts would result if the project would do, or result in, the following:

- a. *Violate any water quality standards or waste discharge requirements.*
- b. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).*
- c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.*
- d. *Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.*
- e. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.*
- f. *Otherwise substantially degrade water quality.*
- g. *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.*
- h. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows.*
- i. *Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.*
- j. *Inundation by seiche, tsunami, or mudflow.*

It should be noted that the Initial Study (see Appendix A) determined that the proposed RTP 2013/14 Update would not result in housing that would be placed within a flood hazard area



and thus no impacts would result. Therefore, impacts related to housing within a 100-year flood hazard area are not further addressed within this EIR.

b. Project Impacts and Mitigation Measures. This section describes generalized impacts associated with some of the projects anticipated under the RTP 2013/14 Update.

Impact W-1 Construction and maintenance of RTP 2013/14 Update projects may introduce impervious surfaces in undeveloped areas, which could result in increased surface runoff that has the potential to affect surface water quantity, ~~result in changes to~~ absorption rates or discharge, and degraded surface water and nearby coastal water quality. In addition, projects could result in erosion and contaminants in runoff. Operational pollutant discharges due to RTP 2013/14 Update transportation improvements could result in adverse impacts on water quality. This impact would be Class II, *significant but mitigable.*

Short-term adverse impacts to surface water quality may occur during the construction periods of individual improvement projects. Areas of disturbed soils can be highly susceptible to being eroded by water, and depositing downstream as sediment. This impact is of particular concern where projects are located on previously contaminated sites. Without effective erosion and storm water control, contaminated soils exposed during construction activities may result in surface water contamination. In addition, when constructing, widening, or repairing bridges, associated grading and vegetation removal in proximity to creeks could increase erosion and sedimentation of creek banks. This could affect both water quality and the stability of slopes along the creeks. Regulations under the federal Clean Water Act require that a National Pollutant Discharge Elimination System (NPDES) storm water permit be obtained for projects that would disturb greater than an acre. Acquisition of the General Construction permit is dependent on preparing a Storm Water Pollution Prevention Plan (SWPPP) that contains specific actions, termed Best Management Practices (BMPs), to control the discharge of pollutants, including sediment, into the local surface water drainages. Several RTP projects would be subject to these regulations. BMP methods may include, but would not be limited to, the use of temporary retention basins, straw bales, sand bagging, mulching, erosion control blankets and soil stabilizers. The BMPs to be implemented during construction would be developed as part of the SWPPP, ensuring that construction associated with the RTP 2013/14 Update would not violate applicable water quality standards or otherwise have a significant adverse impact on water quality. BMPs developed for individual transportation projects could reference handbooks such as those prepared by the California Stormwater Quality Association.

However, implementation of the RTP 2013/14 Update transportation improvements could result in significant water quality impacts during operations. Certain transportation improvements, such as road widening and expansion projects, would increase overall impervious surface area throughout the County. These projects may generate significant adverse impacts to surface water quality and possibly to nearby coastal waters. Pollutants and chemicals associated with urban activities and fertilizer/pesticide applications to landscaping would run off new roadways and other impervious surfaces flowing into nearby bodies of water during storm events. These pollutants would include, but are not limited to: heavy metals from auto emissions, oil, grease, debris, and air pollution residues. Such contaminated urban



runoff may remain largely untreated, thus resulting in the incremental long-term degradation of water quality.

Mitigation Measures. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measures may apply for applicable transportation projects to reduce potential impacts to water quality. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

W-1(a) The sponsor of an RTP project that contains or would implement landscaping and that would need the use of fertilizers or pesticides shall ensure that fertilizer/pesticide application plans for any new right-of-way landscaping are prepared to minimize deep-percolation of contaminants. The plans shall specify the use of products that are safe for use in and around aquatic environments.

W-1(b) The sponsor of an RTP widening or roadway extension project shall ensure that the improvement directs runoff in a manner that would allow into subsurface percolation basins and traps which would allow for the removal of urban pollutants, fertilizers, pesticides, and other chemicals and shall implement best management practices (BMPs) for erosion control and runoff management of drainage into nearby bodies of water including but not limited to creeks, rivers, wetland and/or coastal waters. BMPs developed for individual projects could consult the handbooks from the California Stormwater Quality Association.

Significance After Mitigation. Implementation of the above measures would reduce potential impacts to a less than significant level.

Impact W-2 **Construction and maintenance of RTP 2013/14 Update projects would incrementally increase countywide water demand that may impact groundwater supplies. In addition, new development may result in additional impermeable surface throughout the county that would reduce groundwater recharge potential. Such impacts are considered Class II, significant but mitigable.**

Implementation of proposed transportation improvements in the RTP 2013/14 Update would result in both short-term and long-term impacts to the County's water supply. Due to the programmatic nature of the RTP 2013/14 Update, a precise, project-level analysis of the specific impacts of individual transportation projects on water supply is not possible at this time. However, the general nature of water supply impacts is described below.



During grading and general construction activities, water would be needed to suppress fugitive dust generated by construction equipment. The majority of transportation improvements involve modifying existing facilities. As such, a substantial increase in landscaped areas, and thereby increase in water demand, is not anticipated for these projects. There are projects, however, that specifically involve tree planting or landscaping, such as the raised center medians along Wildwood Avenue in the City of Rio Dell and along Central Avenue in McKinleyville. Irrigation of landscaping associated with these projects, and other projects in the proposed RTP 2013/14 Update, would require long-term commitments of water. The majority of RTP 2013/14 Update transportation improvement projects would be located in areas served by municipal water supplies, but they all rely on groundwater or groundwater under the influence of surface water.

Major RTP projects, particularly roadway extensions and park and ride lots, could also affect groundwater supplies by incrementally reducing groundwater recharge potential. This reduction in groundwater recharge could occur because the impermeable surfaces associated with the proposed improvements would increase surface water runoff at the expense of natural infiltration. The magnitude of impacts associated with individual RTP projects cannot be accurately determined at this programmatic stage of analysis. Nevertheless, given the documented problems with the quantity and quality of groundwater in Humboldt County, further reduction in groundwater recharge is considered to be potentially significant.

Mitigation Measures. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects for to minimize potential impacts to water supplies. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.:

- W-2(a)** The sponsor of an RTP 2013/14 Update project shall ensure that, where economically feasible and available, reclaimed water is used for dust suppression during construction activities. This measure shall be noted on construction plans and shall be spot checked by the local jurisdiction.

- W-2(b)** The sponsor of an RTP 2013/14 Update project shall ensure that low-water-use landscaping (i.e., drought tolerant plants and drip irrigation) is installed. When feasible, native plant species shall be used.

- W-2(c)** The sponsor of an RTP 2013/14 Update project shall ensure that, if feasible, landscaping associated with proposed improvements is maintained using reclaimed water.



- W-2(d)** The sponsor of an RTP 2013/14 Update project shall ensure that porous pavement materials are utilized, where feasible, to allow for groundwater percolation. Rural bicycle trails shall be left unpaved where appropriate.
- W-2(e)** The sponsor of an RTP 2013/14 Update project that requires potable water service should coordinate with water supply system operators to ensure that the existing water supply systems have the capacity to handle the increase. If the current infrastructure servicing the project site is found to be inadequate, infrastructure improvements for the appropriate public service or utility should be provided by the project sponsor. In addition, wherever feasible, reclaimed water should be used for landscaping purposes instead of potable water.

Significance After Mitigation. Implementation of the above measures would reduce potential impacts to a less than significant level.

Impact W-3 Proposed RTP 2013/14 Update improvements could be subject to flood hazards due to storm events and/or dam failure. In addition, future tsunami events could temporarily inundate coastal transportation facilities. These impacts are considered Class II, significant but mitigable.

Implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the RTP 2013/14 Update could be subject to flooding hazards due to storm events and/or dam failure. Figures 4.6-1, 4.6-2 and 4.6-3 generally show the areas potentially subject to flooding. Due to the programmatic nature of the RTP 2013/14 Update, a precise, project-level analysis of the specific impacts of individual transportation projects on flooding hazards is not possible at this time. Nevertheless, some RTP projects may be located in an area with high flooding potential due to a storm event or dam inundation and may be subject to flooding hazards. Flood impacts are considered potentially significant.

The potential for impacts due to tsunami and seiche are considered relatively low throughout the County. Coastal regions would be most susceptible to tsunami, especially in the areas surrounding Humboldt Bay. Some of the RTP projects may occur in areas that may be subject to flooding either from a rare major storm event or from an even rarer earthquake-induced tsunami. The RTP 2013/14 Update includes transportation infrastructure such as roads and sidewalks, not structures for human habitation. Nevertheless, although potential tsunami impacts are low, they are potentially significant.

Mitigation Measures. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects to minimize the potential for tsunami impacts. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site.



Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

- W-3(a)** If an RTP project is located in an area with high flooding potential due a storm event or dam inundation, the project sponsor shall analyze the flood risk and ensure that the project complies with the applicable local ordinance for flood risk reduction. The potential for flooding shall be analyzed considering potential impacts from sea level rise.
- W-3(b)** In areas subject to potential tsunami effects, the project sponsor shall ensure that RTP projects involving new transportation infrastructure are located outside the tsunami hazard area or are designed to resist tsunami forces, consistent with Designing for Tsunamis (NOAA et al, 2001; or subsequent revisions). The area of potential tsunami inundation shall be analyzed considering potential impacts from sea level rise.

Significance After Mitigation. Implementation of the above measure would reduce potential impacts to a less than significant level.

c. Specific RTP Projects That May Result in Impacts. All RTP 2013/14 Update projects that require new construction or landscaping may create impacts as discussed above and are therefore not mentioned in a table format. Individual projects could create significant impacts to water resources but would not necessarily do so. Additional specific analysis will need to be conducted as the individual projects are implemented in order to determine the actual magnitude of impact. In addition, many of the proposed RTP 2013/14 Update projects occur near the coast, near Humboldt Bay or in other low lying areas shown on Figures 4.6-1, 4.6-2 and 4.6-3. Mitigation measures discussed above would apply to these projects.



4.7 NOISE

4.7.1 Setting

a. Overview of Sound Measurement. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). In addition to the actual instantaneous measurement of sound levels, the duration of sound is important because sounds that occur over a long period of time are more likely to annoy people or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, Leq is summed over a one-hour period.

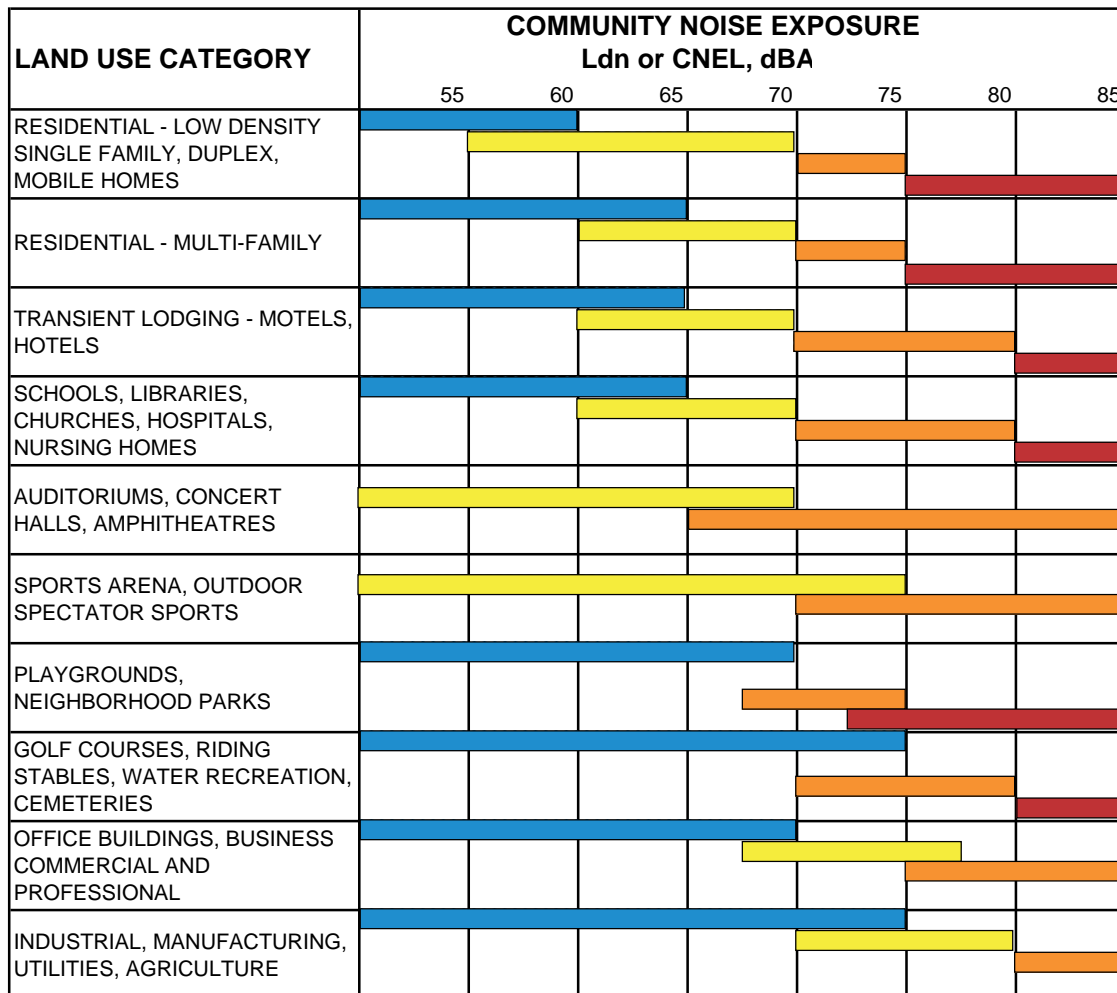
Sound pressure is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB. A sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while noise levels along arterial streets are generally in the 50 to 60+ dBA range. Normal conversational levels are in the 60-65 dBA range and ambient noise levels greater than that can interrupt conversations.

Noise levels typically attenuate at a rate of 6 dBA per doubling of distance from point sources such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance.

The actual time period in which noise occurs is also important. Noise that occurs at night tends to be more disturbing than when it occurs during daytime. To evaluate community noise on a 24-hour basis, the day-night average sound level was developed (Ldn). Ldn is the time average of all A-weighted levels for a 24-hour period with a 10 dB upward adjustment added to those noise levels occurring between 10:00 PM and 7:00 AM, to account for the fact that people are generally more sensitive to nighttime noise levels. The Community Noise Equivalent Level (CNEL) is identical to the Ldn with one exception. The CNEL adds 5 dB to evening noise levels (7:00 PM to 10:00 PM). Thus, both the Ldn and CNEL noise measures represent a 24-hour average of A-weighted noise levels with Ldn providing a nighttime adjustment and CNEL providing both an evening and nighttime adjustment.

b. Land Use Compatibility. The State Office of Noise Control established guidelines to provide the community with a noise environment deemed to be generally acceptable. Figure 4.7-1 depicts ranges of noise exposure levels considered compatible with various types of land





NORMALLY ACCEPTABLE
 Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

NORMALLY UNACCEPTABLE
 New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design

CONDITIONALLY ACCEPTABLE
 New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

CLEARLY UNACCEPTABLE
 New construction or development should generally not be undertaken.

Guidelines for the Preparation and Content of Noise Elements of the General Plan, California Office of Planning and Research, 2003.

uses. Where a land use is denoted as “normally acceptable” for the given Ldn noise environment, the highest noise level in that range should be considered the maximum desirable for conventional construction that does not incorporate any special acoustic treatment. The acceptability of noise environments classified as “conditionally acceptable” or “normally unacceptable” will depend on the anticipated amount of time that will normally be spent outside the structure and the acoustic treatment to be incorporated in structural design.

With regard to noise-sensitive residential uses, the recommended exterior noise limits are 60 dBA CNEL for single-family residences and 65 dBA CNEL for multi-family residences. The recommended maximum interior noise level is 45 dBA CNEL, which could normally be achieved using standard construction techniques if exterior noise levels are within the levels described above.

c. Noise Control Measures. Noise can be controlled at its source, along its transmission path, at the receiver or through a combination of these measures. Federal and State regulations provide certain controls on noise sources, like motor vehicles. The Noise Element of the Humboldt County General Plan recommends a maximum exterior noise level of 60 dBA Ldn and a maximum interior noise level of 45 dBA Ldn for noise-sensitive land uses.

d. Noise Sources. Ambient noise levels in Humboldt County vary widely depending upon proximity to noise generators, such as highways, airports, rail, construction, and industrial activities. The major noise sources in the County are described below.

Motor Vehicle Traffic. Motor vehicles are a substantial source of noise in most of Humboldt County. Roadways, in particular federal and State highways, are a major source of ambient noise, especially because most developed communities are located adjacent to these transportation corridors. The noisiest road corridor in the County is U.S. 101, due to both the high traffic volumes experienced and the high speed of traffic, which can create noise in areas up to 500 feet away from the source. In 2012, daily traffic on U.S. 101 ranged from 46,000 vehicles on the segment in Arcata (between Sunset Avenue and the Route 299 East Junction) to 4,400 vehicles on the segment between Davidson Road and the Prairie Creek State Park entrance in the northern region of the County (Caltrans, 2013). Noise levels along the Highway 101 corridor exceed 65 dBA CNEL within varying distances from the centerline of the freeway.

The Noise Element of the County’s Draft General Plan Update (completed in 2012) includes noise surveys that were conducted at various locations along the U.S. 101 corridor over a 24-hour period. Monitored sites included urban and rural areas of Humboldt County. The study shows that distances from the center of the highway’s outer lane to the 60- and 65-dB CNEL contours vary widely throughout the County, as shown in Table 4.7-1.

As shown in the table, sensitive receptors between 121 and 823 feet from the centerline of the US 101 may be exposed to noise levels above 60 dB CNEL and receptors between 56 and 382 feet from the centerline may be exposed to noise levels above 65 dB CNEL. Therefore, noise-sensitive land uses in the vicinity of the freeway corridor have the potential to be exposed to noise in excess of what the County normally considers acceptable. While transportation along U.S. 101, as well as along State Highway 299 and State Highway 255, creates the greatest noise

impacts, sensitive receptors located near other roadways may also experience noise that exceeds normally acceptable standards for noise sensitive uses.

**Table 4.7-1
 Noise Contour Distances along U.S. 101**

Region	Distance to 60 dB CNEL Contour (feet)	Distance to 65 dB CNEL Contour (feet)
Arcata	823	382
McKinleyville	400	361
Eureka	305	141
Richardson Grove	121	56
Singley Road	500	323

Source: County of Humboldt Noise Element, Draft General Plan Update 2012

Aircraft Operation. There are nine airports that are sources of noise in Humboldt County. The airports and a summary of each airport’s existing operations is provided below (information accessed online and available at: <http://www.airnav.com/airport/13K>):

- Eureka/Arcata Airport: 53% military traffic, 20% air taxi traffic, and 5% commercial traffic and an average of 132 flights/day;
- Dinsmore Airport: general aviation airport, with no commercial traffic and an average of 31 flights/week;
- Garberville Airport: local and transient general aviation airport, day-use only, with no commercial traffic and an average of 45 flights/day;
- Kneeland Airport: general aviation airport, with no commercial traffic and an average of 27 flights/day;
- Murray Field: general aviation airport with limited military and air taxi operations and an average of 179 flights/day;
- Rohnerville: general aviation airport, with no commercial traffic and an average of 75 flights/day;
- Eureka Municipal Airport: general aviation airport, with no commercial traffic and an average of 48 flights/week;
- Shelter Cove Airport: general aviation airport with limited military traffic and an average of 42 flights/days;
- Hoopa Airport: general aviation airport with an average of 20 flights/week.

The Eureka/Arcata Airport has commercial, military and general aviation activities. Because of the level of activity at the airport, noise generated at the airport is audible in the surrounding communities. Therefore, land use in the surrounding area has been planned to ensure that noise levels remain at acceptable levels for the various uses.

The remaining airports in the County are general aviation airports, with little commercial traffic and no jet operations. While these general aviation airports do not generate as much noise as the Eureka/Arcata Airport, flight operations have had impacts on the nearby residential areas because of their location.

In addition to airplanes, helicopter flights occur throughout the County. These flights typically follow major and primary arterials with the exception of police patrol activities. Two hospitals



in the County, Mad River Community Hospital and Saint Joseph Hospital, have heliports. Although single-event noise exposure resulting from helicopter operations may be considered a nuisance, the relatively low frequency and short duration of these operations do not substantially affect average daily noise levels anywhere in the County (http://www.dot.ca.gov/hq/planning/aeronaut/helipads/dataplates/pdfs/Saint_Joseph_Hospital_HP.pdf).

Railroad Operations. Noise is generated during rail operations by locomotives starting and stopping, trains braking, the connection and disconnection of cars, train whistles, and track noise (the trains' wheels running on the track). Noise-sensitive land uses within approximately 150 feet of the tracks could be exposed to noise levels above 65 dBA. However, the Northwestern Pacific (NWP) Railroad line, which formerly served Humboldt Bay, has been out of service since 1998, and service is not expected to resume within the RTP 2013/14 Update's 20-year planning horizon (HCAOG, Public Draft RTP, September 2013).

4.11.2 Impact Analysis

a. Methodology and Significance Thresholds. The analysis of noise impacts considers the effects of both temporary construction-related noise and long-term noise associated with proposed transportation system improvements. Temporary construction noise was estimated based upon levels presented in the May 2006 Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment*. Long-term traffic-related noise was estimated using a modification of the Federal Highway Traffic Noise Model.

Pursuant to the State CEQA guidelines, potentially significant impacts would result if the project would result in:

1. *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*
2. *Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;*
3. *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;*
4. *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*
5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; and/or*
6. *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.*

State of California General Plan Guidelines. The State of California General Plan Guidelines (California Governor's Office of Planning and Research 2003) identifies guidelines for the Noise Elements of city and county General Plans, including a sound level/land-use compatibility chart that categorizes, by land use, outdoor Ldn ranges in up to four categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable). These guidelines provide the State's recommendations for city and county General Plan Noise Elements, as shown in Figure 4.7-1 above. Compliance with the guidelines



by the cities and counties is not required, but nonetheless is common because many General Plan Noise Elements are based on these guidelines. These guidelines are not applicable to HCAOG. The Noise Element Guidelines in Figure 4.7-1 identify the normally acceptable range for low-density residential uses as less than 60 dB, and the conditionally acceptable range as 55–70 dB. The normally acceptable range for high-density residential uses is identified as Ldn values below 65 dB, and the conditionally acceptable range is identified as 60–70 dB. For educational and medical facilities, Ldn values below 70 dB are considered normally acceptable, and Ldn values of 60–70 dB are considered conditionally acceptable. For office and commercial land uses, Ldn values below 70 dB are considered normally acceptable, and Ldn values of 67.5–77.5 are categorized as conditionally acceptable. These overlapping Ldn ranges are intended to indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land-use compatibility at specific locations.

County Thresholds. Chapter 13 of the September 2002 Background Report for the County of Humboldt General Plan includes the following standards:

- The land use noise compatibility matrix (see Figure 4.7-1) shall be utilized as the standard for General Planning and zoning purposes.
- The County Zoning Code identifies noise as a performance requirement for cottage industries in the Coastal Zone, stating that “all noise generating operations shall be buffered so that they do not exceed the exterior ambient noise level anywhere on the site by more than 5 dB, or an equivalent standard which achieves comparable results.

Long-term noise level increases are considered a result of the RTP 2013/14 Update if RTP implementation involves an improvement project that introduces a new noise source or moves an existing noise source closer to a sensitive receptor (extension of a road through a residential area, for example).

Local Thresholds. Humboldt County has seven incorporated cities each with its own noise standards. The applicable noise standards for the RTP 2013/14 Update projects include, but are not limited to, the policies described below in each jurisdiction¹. Noise standards for the County and the cities within the County typically apply land-use compatibility criteria of 60-65 dBA Ldn as being the normally acceptable range for new residential developments, and interior noise criteria of 45 dBA Ldn, consistent with the overall State recommendations in Figure 4.7-1.

Eureka. The Eureka General Plan Policy Document, Part II (February 1997) includes the following policies regarding noise compatibility:

- Where noise sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in the City’s General Plan or the performance standards [see Figure 4.7-1 above], an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

¹ Please note that not all applicable policies are summarized. Each jurisdiction may have additional noise standards not included in the list below. The policies listed below are intended to provide a summary of general noise standards within the local jurisdictions where RTP projects may be located.



- Where noise mitigation measures are required to achieve the standards, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.

Arcata. The Arcata General Plan: 2020 Noise Element includes five policies relating to the following aspects of noise: noise attenuation; stationary noise sources and levels; transportation noise sources and levels; requirements for acoustical analysis; and intrusive and intermittent noise sources.

Fortuna. The City of Fortuna General Plan 2030 also includes the noise standards illustrated in Figure 4.7-1 and included in the County of Humboldt General Plan. Noise policies include but are not limited to noise source isolation, noise reduction mechanisms, construction hours, and stationary source measures.

Rio Dell. The City of Rio Dell General Plan Noise Element contains a description of noise definitions and measurement techniques; descriptions of the noise generators and noise sensitive land uses; a noise contour map; and noise related land use policies and implementation programs. The Land Use Compatibility Standards are identical to those included in the County of Humboldt General Plan and shown in Figure 4.7-1.

Ferndale. The General Plan for the City of Ferndale is in the process of being updated as of May 2014. The existing City of Ferndale General Plan Noise Element is included with the Public Safety and Scenic Highway Elements from 1975 and policies for single event noises and ambient noise levels, among other items.

b. Project Impacts and Mitigation Measures. This section describes generalized impacts associated with some of the projects anticipated in the RTP 2013/14 Update. Table 4.7-4 in Section 4.7.3.c lists the specific projects that could result in the impacts discussed in this section.

Impact N-1 **Construction activity associated with transportation improvement projects envisioned by the RTP 2013/14 Update would create temporary noise level increases in discrete locations throughout the County. Impacts would be Class II, significant but mitigable.**

Operating equipment during the construction of roadway infrastructure projects would temporarily increase noise in the immediate vicinity of individual construction sites. As shown in Table 4.7-2, average noise levels associated with using heavy equipment at construction sites can range from about 76 to 89 dBA at 50 feet from the source, depending upon the types of equipment in operation at any given time and the phase of construction. The highest noise levels generally occur during excavation and foundation development, which involve using such equipment as backhoes, bulldozers, shovels, and front-end loaders.

**Table 4.7-2
 Typical Construction Noise Levels (in dBA)**

Equipment	Typical Level 25 Feet from the Source	Typical Level 50 Feet from the Source	Typical Level 100 Feet from the Source	Typical Level 200 Feet from the Source	Typical Level 800 Feet from the Source
Air Compressor	87	81	75	69	57
Backhoe	86	80	74	68	56
Concrete Mixer	91	85	79	73	61
Grader	91	85	79	73	61
Paver	95	89	83	77	65
Saw	82	76	70	64	52
Scraper	95	89	83	77	65
Truck	94	88	82	76	64

Source: Typical noise level 50 feet from the source was taken from FTA, May 2006. Noise levels at 25 feet, 100 feet, 200 feet, and 800 feet were extrapolated using a 6 dBA attenuation rate for the doubling of distance. Noise levels are measured in Leq for the expected duration that each piece of equipment is expected to operate. Each noise level assumes the piece of equipment is operating at full power for the expected duration to complete the construction activity. The duration varies widely between each piece of equipment. Noise levels also depend on the model and year of the equipment used. The noise levels assume simultaneous construction activities associated with the respective phase of construction and equipment being used.

Noise levels from point sources such as construction sites typically attenuate at a rate of about 6 dBA per doubling of distance. Therefore, only areas within 800 feet of construction sites would be expected to be exposed to unacceptable noise levels over 65 dBA. Nevertheless, construction activity associated with transportation improvement projects envisioned by the RTP 2013/14 Update could create temporary noise level increases affecting nearby sensitive receptors. Impacts would be significant but mitigable.

Mitigation Measures. Local noise and vibration general plan policies and ordinance requirements would apply to construction activity associated with RTP 2013/14 Update implementation. The following mitigation measures are recommended by HCAOG to reduce, minimize or avoid significant adverse environmental impacts. HCAOG shall implement, and sponsor agencies can and should implement, the following mitigation measures for applicable projects that result in noise impacts. Project-specific environmental impacts may require these mitigation measures be revised or expanded in response to site-specific conditions. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

- N-1(a) Project sponsors of RTP 2013/14 Update projects shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites, appropriate measures are implemented to ensure consistency with local noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restricting construction timing,



using sound blankets on construction equipment, and using temporary walls and noise barriers to block and deflect noise.

- N-1(b) If a particular project within 800 feet of sensitive receptors requires pile driving, the local jurisdiction in which this project is located shall require the use of pile drilling techniques instead, where feasible. This shall be accomplished by placing conditions on the project during its individual environmental review.
- N-1 (c) Project sponsors shall ensure that equipment and trucks used for project construction utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds).
- N-1(d) Project sponsors shall ensure that impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, using an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can reduce noise 5 dBA. Whenever feasible, quieter procedures shall be used, such as drilling rather than operating impact equipment.
- N-1(e) Locate stationary noise sources as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors will be adequately muffled.

Significance After Mitigation. With implementation of local noise control requirements and the mitigation measures described above, impacts would be reduced to a less than significant level.

Impact N-2 Implementation of the RTP 2013/14 Update would increase traffic-generated noise levels in the County of Humboldt on highways, roadways and railways which could expose sensitive receptors to noise in excess of normally acceptable levels. This is a Class II, significant but mitigable impact.

Traffic Noise. The RTP 2013/14 Update includes several projects that would potentially increase traffic noise levels by increasing the traffic itself. Such projects include the construction of new bridges and connector roads, as well as improvements to roads that would allow increased traffic volumes (See Table 4.7-4). Such projects would not in themselves introduce new traffic, but rather are intended to relieve current or projected future traffic congestion or unacceptable safety conditions. However, in some cases, widening and extension projects would accommodate additional traffic volumes and/or relocate noise sources closer to



receptors. It should be noted that while traffic may increase in certain locations, the expected number of vehicle miles traveled (VMT) in 2035 would be reduced from 4,347,511 miles without the RTP to 4,347,007 miles with the RTP, a reduction of 504 VMT. As the VMT decreases, noise associated with VMT would also decrease.

Airports. The RTP 2013/14 Update includes some minor airport improvement projects or programs that could directly or indirectly increase aircraft operations at the airports in the County, though none of the improvements are anticipated to drastically increase airport use. Projects include construction and improvements for hangars, runways, and fences at Samoa Field and Garberville Airport. The associated noise increases would be intermittent; therefore, though individual airplanes may cause periodic annoyance, the overall change in the noise environment would not be significant.

Rail Operations. One of the goals of the RTP 2013/14 Update is to enhance the region's goods movement system, including enhancing rail operations over time. According to the North Coast Railroad Authority (NCRA) this would not occur before 2030. Therefore, although individual trains may cause periodic annoyance, the overall change in the noise environment would not be significant and would not begin to occur until 2030.

Bus Operations. The RTP 2013/14 Update includes projects to expand bus service. New transit services along new routes may expose new sensitive receptors to bus noise. Increased frequency of bus service along existing corridors would also increase noise exposure. However, the addition of local buses and shuttles to existing streets and routes is unlikely to increase noise by significant levels. The RTP 2013/14 Update also includes projects to replace older buses, which would have the effect of replacing the existing fleet with newer more efficient buses that do not produce as much noise. Impacts would be less than significant.

Mitigation Measures. The following mitigation measures are recommended by HCAOG to reduce, minimize or avoid significant adverse environmental impacts. HCAOG shall implement and sponsor agencies can and should implement the following mitigation measures for applicable projects that result in noise impacts. Project-specific environmental impacts may require these mitigation measures be revised or expanded in response to site-specific conditions. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined below could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.:

- N-2(a)** If an RTP 2013/14 Update project is located within 1,000 feet of sensitive uses, the project sponsor shall ensure that a noise survey is conducted to determine potential alternate alignments which allow greater distance from, or greater buffering of, noise-sensitive areas. The noise survey shall be sufficient to indicate existing and projected noise levels, which shall be used to determine how much



to attenuate noise to reach an exterior noise level of 65 dBA or less for sensitive uses. This survey shall be accomplished during the project’s individual environmental review pursuant to the regulations of the applicable agency.

N-2(b)

Where new or expanded roadways are found to expose receptors to noise exceeding normally acceptable levels, the project sponsor shall consider various sound attenuation techniques. The preferred methods for mitigating noise impacts will be to use appropriate setbacks and sound attenuating building design, including retrofitting existing structures with sound attenuating building materials where feasible. In instances where using these techniques is not feasible, using sound barriers (earthen berms, sound walls, or some combination of the two) will be considered. Long expanses of walls or fences should be interrupted with offsets and enhanced with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements should be used, including solid fences, walls, and landscaped berms. Appropriate noise attenuation measures will be assessed on a case-by-case basis during a project’s individual environmental review, pursuant to the regulations of the applicable agency.

Significance After Mitigation. Implementation of the recommended programmatic measures would reduce potential impacts to a less than significant level.

c. RTP Projects That May Result in Impacts. Table 4.7-3 identifies those projects that may create impacts as discussed in Section 4.7.2(b). The individual projects involve construction activities and/or would accommodate additional roadway, freeway, or rail traffic such that they could create significant noise impacts but would not necessarily do so. Additional specific analysis will need to be conducted as the individual projects are implemented in order to determine the actual magnitude of impact. Mitigation measures discussed above would apply to these specific projects.

**Table 4.7-3
 RTP 2013/14 Update Projects with Potential Impacts**

Location/Agency	Project Description	Impact	Description of Impact
City of Eureka: TBD	Eureka Intermodal Transit Center	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
On SR96 at Blue Slide	New bridge crossing the Trinity River to K'imaw Medical Center	N-1, N-2	Potential impacts to nearby noise-sensitive receptors, including the medical center, during construction and operation



**Table 4.7-3
RTP 2013/14 Update Projects with Potential Impacts**

Location/Agency	Project Description	Impact	Description of Impact
City of Fortuna: 12th Street – Riverwalk Drive/ U.S. 101 South On-ramps, Dinsmore Drive	Reconfigure intersection to accommodate increased traffic, pedestrian and bike demand	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
City of Fortuna: Newburg Road and 12th Street/North bound 101 ramps re-alignment	Reconfigure intersection to accommodate increased traffic, pedestrian and bike demand	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Hoop Valley Tribal Roads Department: Bair Ranch Road, Humboldt County Road	Reconstruction of roadway for emergency access	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Tish Tang Road from SR 96 to Medical Center & Hoopa Airport	Reconstruct Tish-tang (county road)	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Ogle Avenue, River Street to Creek Street	Road reconstruction and drainage improvements	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
City of Trinidad: Van Wycke Street Trail and Edwards Street	Reconstruction	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
New Navy Base Road	Reconstruct from SR 255 to Bay	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Alderpoint/Mattole/Maple Creek	Reconstruct rural routes	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Fern Street, Cutten	Complete connection	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Red Cap Road, Orleans	Shoulder widening	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
McKinleyville Avenue Extension	Connect to School Road	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Hammond Trail Bridge - Little River	Construct bridge	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
County of Humboldt: Humboldt Hill to Thompkins Hill and Harris to Fern Street, Cutten	Construct connector roads	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Highway 101 in Trinidad between 6 th Street and Trinidad Road Exit	New interchange	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Various Locations	Park-and-Ride lots with multi-modal facilities (e.g. bike lockers, bus shelter), located near transit stops	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Various Locations	RTS increased frequency & late night service	N-2	Potential impacts to nearby noise-sensitive receptors during operation
Various Locations	Feeder bus lines to McKinleyville and Fortuna to connect to the RTS commuter line	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
City of Eureka	City Ambulance of Eureka - Expand service hours and to Sundays	N-2	Potential impacts to nearby noise-sensitive receptors during operation



**Table 4.7-3
RTP 2013/14 Update Projects with Potential Impacts**

Location/Agency	Project Description	Impact	Description of Impact
City of Arcata	Redwood Marine Terminal Modernization: Establish a multipurpose, publicly-owned marine terminal with two berths. Develop a single multipurpose berth for the short-term, designed to be integrated into long-term terminal development.	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
NCRA	Repair facilities and resume service on the Eel River Division of the NWP Railroad (far Northern Portion (South Fork to Samoa) and Canyon Portion).	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
County of Humboldt and City of Eureka	Aviation construction and improvements (hangars, runways, fences, etc.)	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation



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4.8 TRANSPORTATION AND CIRCULATION

4.8.1 Setting

a. Freeway, Highway, and Road Network. The Humboldt County regional road system is a network of highways and roads connecting cities and unincorporated communities. The regional road system also provides access to adjacent counties, numerous recreational resources and natural areas including Redwood National and State Park, and other destinations. The system moves people and goods throughout the County. The County's regional road network is illustrated on Figure 2-2 in Section 2.0, *Project Description*.

The roadway network in Humboldt County includes 1,400 miles of County roads and city streets, 378 miles of State highways (including U.S. Highway 101), and roadways on federal lands and tribal land. The Humboldt County-maintained roadway system is primarily made up of two-lane roads that traverse varying degrees of flat, rolling, and mountainous terrain (Humboldt County General Plan Update Draft EIR, April 2012). Regional roads that connect cities or provide access to cities in the County include:

- U.S. 101 from the Mendocino County line through Humboldt County to the Del Norte County line.
- State Route (SR) 36 from U.S. 101 near Alton east to U.S. Route 395 near Susanville in Lassen County.
- SR 96 from SR 299 (Trinity Highway) northeast to the terminus with Interstate 5.
- SR 169 from U.S. 101 near Klamath to SR 96. It is located entirely within the Yurok Indian Reservation.
- SR 200 from U.S. 101 to SR 299.
- SR 211 from Ferndale to U.S. 101.
- SR 254 (Avenue of the Giants), which is an old segment of the U.S. 101 alignment that runs through Humboldt State Park;
- SR 255 between Eureka and Arcata west of U.S. 101.
- SR 271, which is a scenic alternative to U.S. 101 that travels through several old growth redwood groves.
- SR 283 extending 0.36 miles between U.S. 101 and the Eel River Bridge in Rio Dell.
- SR 299 from U.S. 101 in Arcata to the Nevada state line (Humboldt County General Plan Update Draft EIR, April, 2012).

Operations. A variety of performance measures are used to assess transportation systems. Depending on the type of performance evaluation required, performance measures may be very specific and focus on intersections or roadway segments. Performance measures may be aggregated to evaluate the overall operation of a regional transportation system. A regional travel model typically only contains information on the number of lanes and link capacity on roadway segments, and lacks information detailed enough to calculate accurate intersection information.

Because of the programmatic nature of the proposed RTP 2013/14 Update, the performance measures discussed herein apply county-wide to evaluate overall transportation system



performance. Transportation performance measures that address performance goals in the RTP 2013/14 Update consist of the following:

- Vehicles miles traveled;
- Vehicle hours traveled; and
- Per capita vehicle miles traveled.

Vehicle Miles Traveled (VMT) defines the number of miles traveled daily within Humboldt County. Vehicle hours traveled (VHT) measures the total amount of time needed to travel between the origin and destination. Per capita VMT (PCVMT) is the number of miles traveled daily by each person.

To analyze potential impacts, we have determined these performance measures under baseline conditions, and then project (through modeling) how those numbers would change in future years under conditions with and without implementing the RTP 2013/14 Update.

Increased VMT is anticipated with regional growth that would occur with or without the project; thus, the data do not reflect deficient traffic operations. Rather, it shows how many miles would be traveled county-wide under varying scenarios. Baseline (2013) data (as shown in Table 4.8-1) demonstrates that the current VMT in Humboldt County is 3,645,700; the VHT is 106,391; and the per capita VMT is approximately 27 (California Department of Transportation HCAOG 2013/14 RTP Update Performance Metrics, May, 2014).

**Table 4.8-1
 Existing Humboldt County VMT, VHT and PCVMT**

	2013
Total VMT	3,645,700
Total VHT	106,391
Total PCVMT	26.97

Source: California Department of Transportation HCAOG 2013/14 RTP Update Performance Metrics, May, 2014
 VMT = Vehicle Miles Traveled
 VHT = Vehicle Hours Traveled
 PCVMT = Per Capita Vehicle Miles Traveled

b. Transit Service. Interregional transit services transport people into and out of Humboldt County. Greyhound Bus Lines and Amtrak Thruway Motorcoach serve the County. Greyhound provides scheduled service between Arcata (Intermodal Transit Center) and San Francisco; Greyhound connecting buses are available in Oakland and San Francisco. The Amtrak Thruway bus route runs from McKinleyville to the Martinez Train Station, where passengers can board a connecting train to Emeryville and then a shuttle bus to San Francisco. Interregional service is provided seven days a week.

Redwood Coast Transit (RCT) is Del Norte County’s public transit system. RCT provides bus service between Arcata and Smith River, Del Norte County, weekdays and Saturdays. The RCT bus runs along the U.S. 101 corridor. Scheduled bus stops in Humboldt County include the Redwood National Park, Klamath, Orick Post Office, Trinidad Park and Ride, and the Arcata Transit Center.



Trinity Transit (TT) is Trinity County's public transit system. TT provides services between the communities of Douglas City, Hayfork, Junction City, Lewiston, Redding, Weaverville, and Willow Creek. TT's regional services connect with neighboring systems, weekdays only: Redding Area Bus Authority in Redding, and Redwood Transit System and Klamath-Trinity Non-Emergency Medical Transportation in Willow Creek.

Bus/van service is the only form of transit serving Humboldt County. Existing transit service is summarized as follows:

Redwood Transit System (RTS) – Humboldt Transit Authority (HTA) operates Redwood Transit System (RTS) which is the primary intercity public transit system in the county. The RTS line is a fixed-route commuter service, along the U.S. 101 corridor, between the cities of Scotia and Trinidad. Key trip origins and destinations include Humboldt State University, College of the Redwoods, the Intermodal Transit Center in Arcata (commonly referred to as Arcata Transit Center), Downtown Eureka and the Bayshore Mall. RTS runs seven days a week.

Southern Humboldt Transit System – HTA operates Southern Humboldt Transit Systems, which includes an intercity and a local transit service in the southern portions of the county. The Southern Humboldt Intercity Transit Service runs between Garberville and Eureka with stops including Briceland/Redway Drive, Phillippsville, Miranda, Myers Flat, Weott, Fortuna, and College of the Redwoods. The Southern Humboldt Local Transit System provides deviated fixed-route service in areas between Garberville and Miranda. Service runs during weekday peak travel times (morning and afternoon).

Willow Creek Transit System – HTA also operates the fixed-route Willow Creek Transit System along State Route 299, between Willow Creek and the Arcata Transit Center. This bus runs weekdays and Saturdays.

Eureka Transit Service (ETS) – The City of Eureka contracts HTA to operate ETS. ETS runs fixed-route service primarily within the City of Eureka, and also some adjacent areas of the unincorporated County. ETS provides service on weekdays and Saturdays.

Arcata & Mad River Transit System (A&MRTS) – The City of Arcata's Public Works Department operates A&MRTS. A&MRTS provides fixed-route transit service within the Arcata city limits; service runs weekdays and Saturdays. Its hub is the Arcata Transit Center. A&MRTS contracts HTA to maintain its fleet vehicles.

Blue Lake Rancheria Transit System (BLRTS) – The Blue Lake Rancheria Transit System (BLRTS) is operated by the Blue Lake Rancheria, a federally recognized tribe in Humboldt County. The service is offered in partnership with the City of Blue Lake, which provides partial funding through its TDA fund allocation. Funding sources for operations are also provided through grant funding awarded via the Tribal Transportation Program administered by FTA, and other tribal funds.

The BLRTS has deviated fixed-route service, on weekdays, between Blue Lake/Glendale and the Arcata Transit Center. BLRTS also operates a Dial-a-Ride system three days per week and once a month on Saturday.



Klamath Trinity Non-Emergency Transportation (K-T NeT) – K-T NeT is a non-profit, community-based organization K-T NeT provides fixed-route services between Willow Creek and areas north along Highways 96 and 169, including Hoopa Valley, Weitchpec, Pecwan/Wautec and Orleans. K-T NeT schedules the Hoopa-Willow Creek service to connect with the Willow Creek Transit System bus (for trips to the Humboldt Bay Area), and with Trinity Transit (for trips east to Redding).

Public Para-Transit Services. Paratransit services in Humboldt County are operated by HTA, BLRTS, City Ambulance of Eureka, the City of Fortuna, and Humboldt Community Access and Resource Center (HCAR). Paratransit providers not addressed above are described briefly below.

City Ambulance of Eureka (CAE) – City Ambulance of Eureka provides emergency and non-emergency medical transportation, taxi cab, shuttle, and DAR/DAL services. Within HCAOG's region, City Ambulance provides service for areas in the City of Arcata, City of Eureka, and unincorporated County of Humboldt.

Humboldt Community Access and Resource Center (HCAR) – HCAR serves as the Consolidated Transportation Service Agency (CTSA) for Humboldt County, and in that capacity helps coordinate paratransit services. HCAR's Care-A-Van program is a non-emergency medical transportation service for the greater Humboldt Bay area. This service covers Scotia north to Trinidad and east to Blue Lake in areas that do not have paratransit services. Care-A-Van service is available Monday through Saturday. HCAR also provides Dial-A-Ride (DAR) service Monday through Saturday. Their DAR service area includes Ridgewood, Fields Landing, King Salmon, Elk River Road, and College of the Redwoods.

Fortuna Senior Bus Transit – Fortuna Senior Transit is administered and operated by the City of Fortuna's Parks and Recreation Department. It provides curb-to-curb transportation, Monday through Saturday, within Fortuna City limits (Humboldt County 2013/14 RTP Update, Draft Public Transportation Element, October, 2013).

c. Air Transportation. Humboldt County has nine public use airports. Six are owned and operated by the County of Humboldt. The other three are owned and operated by the City of Eureka, the Hoopa Tribe, and Shelter Cove Resort. Airports located in Humboldt County are summarized as follows:

California Redwood Coast-Humboldt County Airport (formerly Arcata-Eureka Airport) – The Redwood Coast Airport is located in McKinleyville within unincorporated Humboldt County, approximately seven miles north of Arcata and 15 miles north Eureka. The County of Humboldt owns and operates this airport. The airport has commercial passenger air service (the only such airport in the region) and freight service. The airport building houses the U.S. Coast Guard Search and Rescue Base and offices of the Humboldt County Airports Division Offices, the Federal Aviation Administration (FAA), and the Transportation Security Administration (U.S. Department of Homeland Security).

Dinsmore Airport – The Dinsmore Airport is located a quarter- mile east of Dinsmore, in an isolated area of eastern Humboldt County. Airport property includes 23 acres owned in fee-simple plus 426 acres in easements. This airport operates during the daytime only.

Garberville Airport – Garberville Airport is located approximately two miles southwest of downtown Garberville. The airport’s major aviation use is for private planes.

Hoopa Airport – The Hoopa Airport is located one mile southeast of Hoopa, serving the Hoopa-Willow Creek area. It is owned and operated by the Hoopa Valley Tribe. The airport is open for day use only; however, in the case of emergencies the airport can place battery-powered lights along the edge of the runway to allow landings.

Kneeland Airport – Kneeland Airport is on a butte approximately 15 miles southeast of the City of Eureka. Because of its elevation, it principally serves as an alternate landing site when other airports in the Humboldt Bay area are temporarily closed due to fog. The airport supports flight training and small-package delivery services. The California Department of Forestry’s heliport and associated buildings are located immediately west of the airport.

Murray Field Airport – Murray Field is located immediately east of Humboldt Bay. It is less than two miles from Eureka and approximately five miles from Arcata. Murray Field Airport supports public, private, and commercial aviation services, including air freight transport businesses.

Rohnerville Airport – Rohnerville airport is located 0.8 miles south of Fortuna. A California Department of Forestry and Fire Protection (Cal Fire) station has been operating on the east side of Rohnerville Airport since 1964. The Cal Fire station is an air attack base and a fire-fighter training facility.

Samoa Field Airport – Samoa Field Airport is located on a peninsula, west of downtown Eureka and Humboldt Bay. Samoa Field, formerly called Eureka Municipal Airport, is owned and managed by the City of Eureka. The airport serves primarily recreational and personal business purposes. No aviation services are available (Humboldt County 2013/14 RTP Update, Draft Aviation Systems Element, October, 2013).

d. Rail Freight. The Northwestern Pacific (NWP) Railroad was acquired by the North Coast Railroad Authority (NCRA) through State and federal funds. The NWP’s Eel River Division of rail lines north of Willits was purchased with State funds in 1992. The Russian River Division line south of Willits was purchased with federal funds in 1996. The NWP Railroad line, which formerly served Humboldt Bay, has been out of service since 1998.

The NCRA “Strategic Plan and Progress Report” (February 2007) calls for eventually reopening the entire line from Lombard to Arcata/Samoa. Reopening the line north of Willits (Eel River Division) depends on funding, permitting and construction improvements to stabilize the railroad tracks through Eel River Canyon. Service is not expected to resume within the RTP’s 20-year planning horizon. At this time, Humboldt County currently does not have an active freight or passenger rail system (Humboldt County 2013/14 RTP Update, Draft Goods Movement Element, October, 2013).



e. Bicycle/Pedestrian Facilities. HCAOG's 2008 *Humboldt County Regional Pedestrian Plan* and the 2012 *Humboldt Regional Bicycle Plan Update* are the latest assessments of pedestrian and bicycle conditions and needs in the County. Most facilities dedicated to bicycles and pedestrian are located in urban areas of the county. The Hammond Trail is Humboldt County's preeminent bicycle and pedestrian facility. The trail presently consists of a 2.4 mile hiking/ biking/ equestrian trail linking Arcata with McKinleyville from the Arcata Bottoms to Murray Road in McKinleyville. A hiking/equestrian loop is located north of Murray Road and just north of Vista Point on Highway 101 to Strawberry Creek and the Widow White Creek crossing (Humboldt County General Plan Update Draft EIR, April, 2012).

In rural areas, pedestrians and bicyclists typically use County roads that lack sidewalks and bicycle lanes. Cyclists also use Caltrans-maintained state routes. Major new trails are in the planning stages along the Annie and Mary Rail Line from Arcata to Blue Lake, along U.S. Highway 101 between Arcata and Eureka, around Humboldt Bay. The primary countywide bicycle system is defined in the 2012 Humboldt Regional Bicycle Plan calls for implementing approximately 515 miles of bikeways to connect all cities and unincorporated areas in Humboldt, as well as adjacent counties. The estimated cost is approximately \$27.26 million over the Plan's 20-year life (2012 to 2032) (Humboldt Regional Bicycle Plan – Update 2012).

f. Regulatory Setting.

Federal.

MAP-21. The most recent federal transportation legislation, the Moving Ahead for Progress in the 21st Century Act (MAP-21), was enacted in 2012. Through the RTP development process, MAP-21 encourages HCAOG to:

Consult with officials responsible for other types of planning activities that are affected by transportation in the area (including State and local planned growth, economic development, environmental protection, airport operations, and freight movements) or to coordinate its planning process, to the maximum extent practicable, with such planning activities.¹

Specifically, MAP-21 requires that the RTP planning process provide for consideration of projects and strategies that will:

- (A) *support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;*
- (B) *increase the safety of the transportation system for motorized and non-motorized users;*
- (C) *increase the security of the transportation system for motorized and non-motorized users;*
- (D) *increase the accessibility and mobility of people and freight;*
- (E) *protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;*

¹ 23 U.S.C. §134(g)(3)(A).



- (F) *enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;*
- (G) *promote efficient system management and operation; and*
- (H) *emphasize the preservation of the existing transportation system.²*

The RTP 2013/14 Update discusses in detail how these requirements are met.

National Environmental Policy Act (NEPA). The National Environment Policy Act of 1969 (42 U.S.C. § 4321 et seq.) requires federal agencies to assess the possible environmental consequences of projects which they propose to undertake, fund, or approve. While the RTP not subject to NEPA, individual federally-funded programs or projects requiring federal approval will be subject to a NEPA evaluation at the time of project implementation.

State. State requirements for long-range transportation plans are similar to the federal regulations. However, key additional requirements described in Government Code Section 65080 include:

- Compliance with CEQA;
- Consistency with State Transportation Improvement Program;
- Use of program level performance measures that include goals and objectives; and
- RTPs must include a policy element, an action element, and a financial element.

California Transportation Commission Regional Transportation Plan Guidelines. The CTC publishes and periodically updates guidelines for the development of long range transportation plans that include the HCAOG RTP. Pursuant to Government Code Section 65080(d), each regional transportation planning agency (RTPA) is required to adopt and submit an updated regional transportation plan (RTP) to the California Transportation Commission (CTC) and the Department of Transportation (Caltrans) every five years. HCAOG is the designated RTPA for Humboldt County.

Under Government Code Section 14522, the CTC is authorized to prepare guidelines to assist in the preparation of RTPs. The CTC's RTP guidelines suggest that projections used in the development of an RTP should be based upon available data (such as from the Bureau of the Census), use acceptable forecasting methodologies, and be consistent with the Department of Finance baseline projections for the region. The guidelines further state that the RTP should identify and discuss any differences between the agency projections and those of the Department of Finance. The most recent update to the RTP guidelines was published in 2010, and includes new provisions for complying with Senate Bill 375, as well as new guidelines for regional travel demand modeling. The regional travel demand model guidelines are "scaled" to different sizes of MPO's. HCAOG is included in the "B" grouping of all MPO's. Groupings range from A through E with E being the most complex and A being the least complex. Because HCAOG is included in the "B" grouping, HCAOG is not required to implement a Sustainable Communities Strategy in accordance with Senate Bill 375.

² 23 U.S.C. §134(h)(1).



Regional.

2008 Regional Transportation Plan for Humboldt County (RTP). The RTP was updated in 2006 and most recently in 2008 (and amended in 2013). A comprehensive program environmental impact report addendum was prepared for the 2008 RTP update to satisfy CEQA requirements. The RTP 2013/14 Update lists roadway projects to improve the transportation system during the 2015-2035 planning period. Although a number of projects from the 2008 RTP have been completed, many have not and have been incorporated into the RTP 2013/14 Update.

Bicycle and Pedestrian Facilities Standards. HCAOG released its *Humboldt Regional Bicycle Plan Update* in 2012. The primary goal of the regional plan is to support the development of fully integrated active transportation network. The plan updates the bikeway network, creates uniformity in policies and design, identifies funding opportunities, and evaluates programs. The recommended bikeway network in the 2012 Bicycle Plan Update identifies attractors (i.e., destinations that residents would want to reach such as parks and schools) and both existing and proposed future bikeways. Among the municipalities in the region, only the City of Arcata has developed a *Pedestrian and Bicycle Master Plan* (2010). The City of Eureka, however, has a “Neighborhood Traffic Calming Program,” which is a supplement to the City’s draft “Transportation Safety Action Plan” (July 2013). The “Neighborhood Traffic Calming Program” recommends (in addition to education and enforcement measures) engineering measures that can be applied to different pedestrian and/or bicycle facilities. Because they are drafts and not yet adopted, however, the measures cannot be considered standards.

4.8.2 Impact Analysis

a. Methodology and Significance Thresholds. Thresholds of significance are used to determine whether or not implementing the RTP 2013/14 Update would result in significant traffic/circulation impacts. Thresholds of significance were chosen based on parameters against which the effects of the RTP 2013/14 Update can be measured by available modeling tools. The thresholds of significance outlined in this section are derived from the policies and practices of HCAOG, as well as the performance standards detailed in the RTP 2013/14 Update.

Traffic Performance Standards and Thresholds. Traffic projections for the RTP 2013/14 Update were generated by HCAOG’s network travel demand model. Regional travel demand models typically do not have sufficient network and zone detail to be able to predict intersection turning volumes and delays when estimating travel time and transportation system performance. A regional travel model typically only contains information on the number of lanes and link capacity on roadway segments, which is not detailed enough to calculate accurate intersection information. As such, the analysis is primarily based on VMT for the region.

The travel demand model allows HCAOG to understand the transportation network’s performance characteristics, such as vehicle speeds, volume to capacity relationships, travel time, vehicle miles of travel, fuel consumption, and vehicle emissions. It also helps estimate how socio-economic changes, such as population increases and land development, will impact travel demand in the County. Furthermore, the travel demand model can analyze the

consequences of future changes, or absence of change, to the transportation system itself (e.g., building new transportation facilities, improving existing facilities, or doing nothing at all) .

The RTP 2013/14 Update establishes performance indicators for the overall regional transportation system based on model outputs of the Travel Model. For this analysis, VMT, VHT, and per capita VMT are the performance indicators used to determine potential impacts to the transportation system.

It is important to emphasize that population growth, urbanization and volume of average daily traffic generated in the HCAOG region will increase by 2035 with or without implementing the RTP 2013/14 Update. Growth will occur due to a range of demographic and economic factors, independent of policy and land use decisions by HCAOG and its member agencies. In light of this, the analysis below describes operational changes relative to both a year 2035 baseline scenario and a current (2013) baseline. The evaluation describes the full effect of the proposed RTP 2013/14 Update combined with future growth that would already occur, as compared to existing baseline conditions. However, impacts and mitigation measures for these environmental issue areas are based on the increment of physical change resulting from the RTP 2013/14 Update, rather than the future regional growth that would occur regardless of whether the plan is adopted and implemented.

The criteria for determining whether the RTP 2013/14 Update would have significant environmental impacts related to transportation and traffic were based in part on the environmental checklist in Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.) and performance measures established by HCAOG. According to the State CEQA Guidelines, significant impacts to transportation and traffic would occur if the plan would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

In accordance with thresholds established by HCAOG, the RTP 2013/14 Update would have a significant impact if the plan would result in:

- A change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

These additional criteria are related to project specific analyses that would occur in the future as projects within the RTP undergo environmental review. Thus, they are not used herein to determine whether significant traffic/transportation impacts would occur as a result of the RTP 2013/14 Update.

Transit Performance Standards. Of the County’s transit providers, only the HTA has developed publicly-available transit performance standards. The transit performance standards are:

- Miles between preventable accidents – greater than 60,000;
- Passenger injuries per 100,000 miles – less than 1;
- Percentage of on-time departures – Goal is 100% (minimum is 90% peak and 94% off-peak);
- Dial-A-Ride Wait Time – less than 30 minutes;
- Number of service refusals on demand-response service – Goal is zero; minimum is less than 1 per day;
- Operating subsidy per passenger – \$2.00 for fixed route;
- Farebox recovery ratio – greater than/equal to 18.8% for fixed route; greater than/equal to 5% for para-transit; and
- Percentage of capacity used by subscription trips – greater than 50% per hour (HCAOG Board Meeting, February, 2013, Item 6a Enclosure).

The specific performance standards for HTA are provided for reference. Projects in the RTP 2013/14 Update that affect transit providers would be evaluated on a project-specific basis to determine whether service improvements would have adverse environmental impacts.

b. Project Impacts and Mitigation Measures.

Impact T-1 **With implementation of the RTP 2013/14 Update, total vehicle miles traveled on freeways and roadways in 2035 would increase compared to existing (2013) baseline conditions. However, implementation of the RTP 2013/14 Update would reduce overall VMT and VHT, and per capita VMT when compared to the year 2035 conditions without the RTP 2013/14 Update. Thus, impacts would be Class III, less than significant.**

Two forecasts were generated for the RTP 2013/14 Update; the 2035 ‘without project’ scenario, which accounts for future growth without implementation of the RTP 2013/14 Update, and the 2035 ‘with project’ scenario, which accounts for future growth and all transportation projects envisioned by the RTP 2013/14 Update.

Table 4.8-2 show total system-wide VMT and vehicle hours traveled (VHT) in 2013 and 2035 for roadways throughout the County. Table 4.8-3 shows per capita VMT (PCVMT) for 2035 conditions with the RTP 2013/14 Update compared to “no project” conditions. The VMT increase would result primarily from population growth anticipated throughout the region by 2035. Growth projections indicate that population in the HCAOG region is expected to grow by 11,946 people (approximately 8%) between 2013 and 2035. Thus, the increase in VMT is not necessarily attributed to the RTP 2013/14 Update when compared to existing conditions.



As indicated in Table 4.8-2, implementing the RTP 2013/14 Update would result in 504 less vehicle miles traveled (VMT) and 310 less vehicle hours traveled (VHT) in 2035 than not implementing the RTP 2013/14 Update. Similarly, Table 4.8-3 shows that the total PCVMT would be less with the RTP 2013/14 Update compared to 2035 conditions without the plan. The proportional differences are consistent with estimated difference in overall regional VMT. Overall, implementing the RTP 2013/14 Update would reduce VMT, VHT, and PCVMT within Humboldt County. Transportation/circulation impacts related to VMT, VHT and PCVMT would be Class III, less than significant.

**Table 4.8-2
 Total Vehicle Miles Traveled and Vehicle Hours Traveled**

	2013	2035 without 2013/14 RTP Update	2035 with RTP 2013/14 Update	Net Savings With 2013/14 Update
Total VMT	3,645,700	4,347,511	4,347,007	504
Total VHT	106,391	127,051	126,741	310

VMT = Vehicle Miles Traveled
 VHT = Vehicle Hours Traveled

**Table 4.8-3
 Total Per Capita Vehicle Miles Traveled**

2013 Total PCVMT	2035 Total PCVMT without RTP 2013/14 Update	2035 Total PCVMT with RTP 2013/14 Update
26.97	29.551	29.548

PCVMT = Per Capita Vehicle Miles Traveled
 Assumes population of 135,172 for year 2013 and an estimated population of 147,118 for the year 2035. California Department of Transportation. HCAOG 2013/14 RTP Update Performance Metrics, May, 2014

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts related to operational metrics would be less than significant without mitigation.

Impact T-2 The RTP 2013/14 Update would be consistent with applicable alternative transportation plans and policies. This is a Class III, less than significant impact.

Transit. As discussed above, HTA has developed transit performance standards. However, a project-level analysis of the potential conflicts with performance standards is not possible at this time. Transit projects included in the RTP 2013/14 Update would be consistent with applicable plans and policies because the transit improvements support the use of alternative modes of transportation. Further, transit authorities in the region were consulted during preparation of the RTP 2013/14 Update to ensure consistency with their policies. Based on a projected reduction in VMT and PCVMT, it is inferred that transit-related improvements would increase access to and use of transit services. Impacts would be less than significant.

Bicycle and Pedestrian Facilities. The RTP 2013/14 Update contains a number of projects focused on bicycle and/or pedestrian facilities. These projects would be consistent with



HCAOG's 2008 Pedestrian Master Plan and 2012 Regional Bicycle Plan summarized above. In addition, HCAOG consulted with member agencies during preparation of the RTP 2013/14 Update to ensure consistency with local plans. Impacts would be less than significant.

Rail Transportation. As discussed, there are no active passenger or freight rail services operating within Humboldt County. Thus, the RTP 2013/14 Update does not contain projects that address rail transportation. No impact would occur.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Induced Travel. Induced travel is a measure of vehicle trips generated in response to new infrastructure capacity. Induced travel includes new trips or diversion of existing trips to new, farther, destinations. Unless otherwise noted, induced travel typically refers to automobile or truck traffic generated in response to increased highway capacity. Induced travel does not include trips that are generated by socioeconomic growth, or trips that do not cause a net increase in trips (e.g., trips that are diverted from one roadway to another as a result of roadway improvements).

The theory behind induced travel and increased travel demand is that increased highway capacity (i.e., a new or widened roadway) reduces the "cost" of travel (i.e., travel time), and therefore increases the demand for travel. Induced travel, however, is only one potential component of increased travel demand. Schiffer, Steinvorth, & Milam (2004) notes that travelers may respond to reduced travel time in several different ways: diverting their route; changing their travel mode, destination or schedule; consolidating trips, and possibly making new trips.

The relationship between increases in highway capacity and traffic is very complex. It involves "various travel behavior responses, residential and business location decisions, and changes in regional population and economic growth." Schiffer et al. (2003, p. 5) reach similar conclusions from their literature review: "[t]he statistical relationship between road supply and traffic is not the result of a simple, one-way, causal link" and it is "[d]ifficult to disentangle the many contributors to increased travel."

As Parthasarathi et al. (2003, p. 1335) state, "considerable controversy has existed over the existence and importance of the response of demand to supply." Schiffer et al. (2003, p. 4) conclude that "the research of induced travel is still evolving and that researchers are just beginning to unravel the complex relationships between investments in roadway capacity and the resulting travel demand effects." Induced travel may occur, but "[t]o what degree and under what circumstances these increases occur is a matter of debate" (Schiffer et al., 2003, p. 4).

In *Generated Traffic and Induced Travel: Implications for Transport Planning*, Litman (2009, Abstract) argues that adding capacity to a roadway increases "generated traffic," which "fills a significant portion of capacity added to [a] congested urban road." Litman, however, defines "generated traffic" as "diverted traffic (trips shifted in time, route and destination), and induced vehicle travel (shifts from other modes, longer trips and new vehicle trips)" (Abstract). Similarly, although Noland (2001, Abstract) finds "that added lane mileage can induce significant



additional travel,” his definition of induced travel includes “mode shifts, route shifts, redistribution of trips, generation of new trips, and long run land use changes that create new trips and longer trips.”

When the types of travel demand are clearly differentiated, most studies conclude that trips related to socio-economic growth and trips diverted from other facilities account for the majority of increased travel demand experienced along major highways. *Effects of Increased Highway Capacity on Travel Behavior* (CARB by Dowling and Associates, 1995) and *Expanding Metropolitan Highways, Implications for Air Quality and Energy* (Transportation Research Board Report 245) conclude that if new highway capacity does fill up, it is due *not to* induced travel, but rather to travelers diverting from other facilities or other time periods in the short term, and to socio-economic growth in the long term.

Other literature confirms the prominence of diverted trips in the short-term. The Atlanta Regional Commission (2006), in *ARC Analysis of Induced Travel Effects and VMT Diversion*, explains that the change in VMT compared to the change in lane-miles “inherently contains several different changes in travel demand. Probably the most important is the change of path, whereas a trip which used to use an arterial now is re-routed to the freeway” (p. 5). *The South Coast Highway 101 Deficiency Plan* generalizes the findings from *Effects of Increased Highway Capacity on Travel Behavior* (CARB by Dowling and Associates, 1995) and *Expanding Metropolitan Highways, Implications for Air Quality and Energy* (Transportation Research Board Report 245) as follows: “Most of the increase in peak period traffic observed (90+ percent) when capacity of a congested highway is increased is the result of shifts in traffic from other routes or time periods rather than new increases in highway system use.” The FHWA (2007) states: “While some of these [traveler] responses [to increased highway capacity] do represent new trips, much of the observed increase in traffic comes from trips that were already being made before the increase in highway capacity, or reflect predictable traveler behavior that is accounted for in travel demand forecasts.”

Another complication in drawing conclusions from the literature is that many studies have not differentiated between the impacts of new roads versus widened roads, or the difference between roads in urban/developed areas versus roads in rural/undeveloped areas. Schiffer et al. (2003) found in their literature review that “[i]nduced travel effects for constructing new roadways versus widening existing roadways were not definitive” and “[u]rban versus rural differences in induced travel are unknown” (p. 5). Those who have specifically studied the differentiations have confirmed that the differences are important. The results of a study by Parthasarathi, Levinson, & Karamalaputi (2003) “indicate that larger stable jurisdictions do not produce a change in VKT [vehicle kilometers traveled], while growing MCDs [Minor Civil Divisions] do” (p. 1345). The same study highlights “the importance of separating new construction from the expansion of existing links” (Summary). The authors found that most previous studies had not made the differentiation between new roads and widened roads, and, not surprisingly, their results showed that any impacts from widening would likely be less than any impacts from new roads.

Major transportation projects proposed in the RTP 2013/14 Update emphasize widening existing roadway rather than constructing new roadways. Therefore, it is likely that any

potential induced travel impacts from the RTP would not be as great as the studies cited above would suggest.

The complexities of the topic of induced travel have led to a variety of conclusions in the literature. “Depending upon methodologies and data sources, analyses of induced travel provide differing results” (Strathman et al., 2000, p. 5). The wide variety of values calculated for the elasticity of travel demand highlights this problem.

The FHWA (2007) defines demand elasticity as “the percentage change in the quantity demanded for a good, divided by the associated percentage change in the price of the good.” In the case of travel, the “demand” is usually VMT and the “price” (or “supply”) is usually lane-miles. There are several ways to calculate elasticities; the most commonly used equation is:

$$\text{Elasticity} = \frac{\Delta \text{VMT}}{\Delta \text{Lane Miles}}$$

An elasticity of 0.0 means that any increase in lane-miles does not cause any increase in VMT, while an elasticity of 1.0 means that every percentage increase in lane-miles causes an equal percentage increase in VMT. Schiffer et al. (2003, p. 5) found that “As measured by the increase in VMT with respect to an increase in lane-miles, short-term effects have an elasticity range from near zero to about 0.40, while long-term elasticities range from about 0.50 to 1.00.” Similarly, Noland (2001, Abstract) found elasticities “of about 0.3–0.6 in the short run and between 0.7 and 1.0 in the long run.” The ARC (2006) found the elasticity for increasing freeway capacity to be approximately 0.40.

The FHWA (2007) further advises that:

“extreme caution should be used when interpreting the results of these studies to make inferences about the magnitude of induced travel. ...despite the large number of empirical studies involving travel demand elasticities, there is very little agreement among researchers or transportation planning professionals on acceptable values of demand elasticities to use in estimating induced travel. ...indiscriminate application of demand elasticities can significantly over-estimate induced travel impacts.”

Conclusion. Travel demand in Humboldt County may increase in the future, but data indicate demand will be driven primarily by socio-economic growth. If any induced travel does occur, it will likely be insignificant. It is speculative to quantify induced increases in travel demand based on the proposed projects in (and the programmatic nature of) the RTP 2013/14 Update. However, based on the preceding analysis, significant impacts on infrastructure, services or congestion relating to induced travel are not anticipated.

d. Specific RTP 2013/14 Update Projects That May Result in Impacts. This section analyzes the potential transportation- and circulation-related impacts associated with the transportation improvement projects and the land use scenario envisioned by the RTP 2013/14 Update. The proposed projects that comprise the RTP are evaluated herein as a whole; all are intended to improve traffic circulation rather than adversely impact transportation. No specific projects that are likely to have an adverse impact on traffic/transportation system would be implemented; thus, none are specified within this section.



5.0 LONG-TERM EFFECTS

5.1 GROWTH-INDUCING IMPACTS

Section 15126(g) of the *State CEQA Guidelines* requires a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove obstacles to growth.

Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant environmental effects. The proposed project's growth-inducing potential is therefore considered significant if growth generated by the project could result in unavoidable significant effects in one or more environmental issue areas.

5.1.1 Removal of an Impediment to Growth

The majority of the transportation improvements identified in the RTP 2013/14 Update are located in existing urbanized areas; however, there are projects proposed in outlying unincorporated areas. Such transportation improvements can be perceived as removing obstacles to growth by either creating additional traffic capacity (e.g., road widening) or improving access to undeveloped areas (e.g., road extensions). These improvements would not necessarily remove obstacles to growth. Rather, they are designed to support the transportation needs associated with a growing population. The nature and magnitude of impacts related to such growth are speculative, and would be largely a function of local agency control, prevailing community attitudes, and future market conditions. The environmental impacts of any additional growth would depend upon the type, location, and magnitude of new development. Further, all transportation improvement projects are anticipated by applicable General Plans, as all improvements have been coordinated with the applicable local jurisdiction. Therefore, the RTP 2013/14 Update is consistent with projected and planned growth.

5.1.2 Economic and Population Growth

Implementation of the proposed RTP 2013/14 Update would create short-term economic growth in the County as a result of construction-related job opportunities. RTP implementation would also generate additional employment opportunities for roadway, vehicle, and landscape maintenance, and transportation facility clean-up. The potential employment increase may subsequently increase the demand for support services and utilities, which could generate secondary employment opportunities. This additional economic growth would likely raise the existing revenue base for Humboldt County. Although such growth may incrementally increase economic activity in the county, significant physical effects are not expected to result from economic growth generated by the proposed projects. The proposed projects under the RTP 2013/14 Update are designed and intended to accommodate anticipated growth. The projects under the RTP 2013/14 Update would be phased to respond to growth as it occurs under adopted General Plans. As a result, the RTP 2013/14 Update is not expected to induce growth beyond that anticipated by 2035. Rather it is intended to accommodate growth projected to occur during the planning period. It is important to note that employment, population and



household growth would occur within the County regardless of whether the RTP 2013/14 Update is implemented.

5.2 IRREVERSIBLE EFFECTS

Section 15126(e) of the CEQA Guidelines requires a discussion of significant irreversible environmental changes that would occur as a result of a proposed project.

The RTP 2013/14 Update proposes projects for a 20-year planning horizon (although not all of the plan's proposed projects will necessarily be completed within 20 years, due to a lack of funds). Because the proposed improvements would be located primarily in areas where transportation facilities already exist (or in areas where transportation facilities have already been planned for), most are not generally expected to dramatically alter development patterns in the county. Instead, the RTP 2013/14 Update would provide a foundation for local, regional, and state officials in making decisions aimed at achieving a coordinated and balanced transportation system.

In the absence of the programmed and planned capital improvements under the RTP 2013/14 Update, traffic conditions throughout the County would continue to worsen as the County's population grows. The increasing traffic may also worsen safety problems on some county roads. However, implementation of the RTP 2013/14 Update would involve certain tradeoffs as implementing it would create impacts in other issue areas that would not occur without the programmed and planned improvements.

Many of the potential adverse impacts that could occur from implementing the RTP 2013/14 Update are short-term in nature, due mostly to construction of the proposed transportation projects. In addition, though construction projects would not be carried out in a wasteful manner, all construction activity would require the use of energy and materials.

Long-term environmental impacts are associated with increased paving and the resultant loss of agricultural soils, other land use impacts, biological impacts, and associated water quality impacts. In general, with implementation of mitigation measures, impacts associated with individual projects are not anticipated to be significant. However, impacts in certain instances (biological resources) would remain significant. Finally, the programmed and planned capital improvements would incrementally contribute to a gradual urbanization of many parts of the County. The overall cumulative visual effect of project implementation would be to create a somewhat more urbanized character throughout the County.

6.0 ALTERNATIVES

As required by Section 15126(d) of the *State CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the proposed project, alternatives that could feasibly achieve similar objectives. Because the RTP's primary objective is to guide long-range transportation improvements countywide, discussing alternate sites is not appropriate. Instead, the analysis of alternatives focuses on including or excluding particular projects envisioned under the RTP 2013/14 Update.

This analysis examines three alternatives to the Proposed Project, as follows:

- **No Project alternative**
HCAOG does not fund or implement new capital improvement projects after 2014.
- **Financially Constrained Project alternative**
Only currently funded improvements (for the RTP's Financially Constrained project list, refer to Tables 2-1 through 2-6 in Section 2.0, *Project Description*).
- **Top Priority Regional Complete Streets Projects Plus Transit-Related Projects alternative**
Only projects included in the RTP's "*Top Priority Regional Complete Streets Projects*" table (Table *Streets-5* in the Draft RTP) plus any transit-related projects listed in the "*Complete Streets Regional Projects*" table or the "*Public Transportation Proposed Regional Projects*" (Tables ~~CS-4~~*Streets-6* or *Transit-4* in the Draft RTP) would be included as part of the RTP.

Each alternative is described and analyzed below.

6.1 NO PROJECT ALTERNATIVE

6.1.1 Description

This alternative assumes that HCAOG does not update the 2008 RTP, and no new capital improvement projects are funded or implemented after 2014, except from monies that jurisdictions can fund without the RTP. Consequently, the countywide transportation system would primarily not change after this year, except for wear and tear and limited maintenance. Jurisdictions would have to perform project-level environmental impact assessment without the aid of this Program EIR.

6.1.2 Impact Analysis

This alternative would have none of the environmental impacts of the proposed RTP, either adverse or beneficial. Consequently, the potentially significant but mitigable impacts of the proposed RTP in the areas of air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hydrology and water quality, and noise would not occur. Thus, no mitigation measures would be required as part of this project.

On the other hand, the project's beneficial impacts, including reducing idling and congestion and improving traffic flow, would not occur, and the project's objectives (described in Section



2.3.2, *Project Objectives*) would not be achieved. Traffic levels of service would continue to decline throughout the county as traffic levels rise without improvements to the countywide transportation system. Although the lack of additional road capacity may ultimately restrict land development and associated increases in air pollutant and greenhouse gas emissions in the county, the increased traffic congestion that would likely occur under this alternative would potentially increase engine idling and associated air pollutant and GHG concentrations to some degree. In addition, safety concerns that exist on a number of county roads would remain and would likely worsen as traffic levels rise. Further, this alternative would not improve mobility or accessibility for Humboldt County residents, visitors, and goods, which is a central purpose of the RTP 2013/14 Update.

6.2 FINANCIALLY CONSTRAINED PROJECT ALTERNATIVE

6.2.1 Description

This alternative assumes that only financially constrained (i.e. funded) projects would be constructed. None of the financially unconstrained (i.e. not funded) projects would be constructed. Thus, all projects listed in tables 2-1 through 2-6 in Section 2.0, Project Description, that are not currently funded have been removed. The projects that would be implemented under this alternative are listed below in Tables 6-1 through 6-6.



Section 6.0 Alternatives

**Table 6-1
Funded Complete Streets Proposed Regional Projects**

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Agency: City of Arcata											
Old Arcata Road Buttermilk to Jacoby Creek Rd	ST	X	X	X	X	X	X	Rehab, ped-bike and calming improvements, gateway at Jacoby Creek Road	Measure G	2014-16	\$950
Residential streets citywide	ST				X	X	X	Annual residential streets improvement program (see City's PMP)	Measure G	2014-24	\$2,500
Guintoli Lane-Hwy 299 intersections, Valley West and Valley East to West End Rd	ST	X	X			X	X	Rehab, restripe and improve LOS (roundabouts or channelization). Potential bus park-and-ride at Wymore Road	Measure G, apply for grant funds*	2018-22	\$2,200
Annual Roadway Improvements Project (based on city pavement management program)	ST			X	X	X	X	Principally on city bus routes; arterial and collectors (refer to City PMP)	Measure G, apply for grant funds*	2014-24	\$8,000
Agency: City of Blue Lake											
NONE											
Agency: City of Eureka											
Waterfront Dr from G St to J St	ST	X	X		X		X	Connection Phase 2	STIP	2015/16	\$4,059
Eureka Waterfront Trail from Del Norte to Truesdale St (Phase A)	ST		X	X			X	Class I multi-use trail	Non-Freeway Funds (ENFY)	2015/16	\$1,450
Waterfront Trail from Del Norte to C St (Phase B)	ST		X	X			X	Class I multi-use trail	Partially funded, TE reserve	2015/16	\$100
Waterfront Trail Adorni to Tydd (Phase C)	STY		X	X			X	Class I multi-use trail	Partially funded, TE reserve		



Section 6.0 Alternatives

**Table 6-1
Funded Complete Streets Proposed Regional Projects**

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Hawthorn St from Broadway to Felt, Felt St from Hawthorn to Del Norte, and 14th St from M St to West Ave	ST	X	X			X	X	Road rehabilitation, ADA, bicycle facility	STIP	2014/15	\$400
Highland Ave from Broadway to Utah St and Koster St from Del Norte to Washington St	ST		X			X	X	Road rehabilitation, ADA	STIP	2014/15	\$400
Agency: Hoopa Valley Tribal Roads Department											
SR 96	ST	X	X		X		X	Downtown traffic calming & safety enhancements	Partially funded	2013-16	\$4,400
Agency: City of Ferndale											
Berding St-Rose Ave to Lewis St	ST	X	X				X	New sidewalk (Ped 2)	STIP/TE	2013	\$50.0
Rose Ave - Berding to Herbert St	ST	X	X				X	New sidewalk (Ped 2)	STIP/TE	2013	\$147.0
Agency: City of Fortuna											
Rohnerville Road, Redwood Way to Jordan Street	ST	X	X	X	X	X	X	Reconstruct w/sidewalk and bike lanes	STIP	2014/15	\$1,041
Agency: City of Rio Dell											
Wildwood Avenue from Eagle Prairie Bridge to Davis Street	ST	X	X	X		X	X	Transportation enhancement project adding raised center median and striped bike lanes to increase safety.	State Transp. Enhancement	2013	\$589
Wildwood Avenue at Center Street and Davis Street Safe Routes to School	ST	X	X	X				Traffic calming on Davis Street, including curb extensions, crosswalks and sidewalks. Lighted Pedestrian Crossing across Wildwood Avenue.	State Safe Routes to Schools	2013/14	\$152
Agency: Karuk Tribe											
NONE											



Section 6.0 Alternatives

**Table 6-1
Funded Complete Streets Proposed Regional Projects**

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Agency: City of Trinidad											
NONE											
Agency: County of Humboldt											
Myrtle, Lucas, Harris, Eureka	ST	X		X	X		X	Sidewalk Infilling	STIP	2014	\$580
Myrtle Avenue, Freshwater	ST	X		X	X		X	Bicycle Lane Improvements – Pigeon Point to Mitchell	BTA	2013	\$200
Central Avenue, McKinleyville	ST	X			X		X	Central Avenue Median Installation – School to Hiller	HSIP	2014	\$700
Walnut & Fern Street, Cutten	ST	X		X	X		X	Traffic Signal Installation	STIP	2015	\$400
Honeydew Bridge	ST	X	X	X	X	X	X	Replace existing bridge	HBP	2014	\$6,200
Redway	ST	X		X	X		X	Pedestrian Safety Improvements	TE	2013	\$450
School Road, McKinleyville	ST	X		X	X		X	Sidewalks – Salmon to Fischer	TE	2013	\$650
School Road, McKinleyville	ST	X	X	X	X	X	X	Sidewalks & bike lanes w/ roundabout Washington to Salmon	Prop 1B & Developer	2013	\$1,400
Briceland Thorne Road	ST				X		X	Curve Correction	HRRR	2013	\$800
Oak & F Street, Eureka	ST	X		X	X		X	Sidewalks, speed table crosswalk, center median haven	SR2S	2013	\$350
Murray Road, McKinleyville	ST	X		X			X	Sidewalks, bulbouts, center median haven	SR2S	2013	\$100
Union Street	ST	X	X	X	X	X	X	Shoulder widening & geometric improvements	STIP	2013/14	\$2,881
Agency: California Department of Transportation											
101 Corridor Improvement Project	ST	X	X	X	X	X	X	Safety improvements at uncontrolled intersections	RTIP ITIP	2017/18 2017/18	\$24,658 \$15,000



Section 6.0 Alternatives

**Table 6-1
Funded Complete Streets Proposed Regional Projects**

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
U.S. Highway 101 / Broadway, Kmart to O Street	ST	X				X	X	ADA curb returns and ramp upgrades	2016 SHOPP	2018	\$3,000
101-In Arcata from 11th Street Overcross to the Arcata Overhead	ST						X	Install cable median barrier	2013 SHOPP	2013	\$ 1,000
101-From Arcata Slough Bridge to Arcata Overhead	ST	X	X	X	X	X	X	Eureka/Arcata CAPM and restripe	2012 SHOPP	2013	\$14,000
101-Various locations from Westhaven Dr. to Trinidad Rd.	ST					X	X	Humboldt 101 seismic retrofit	2013 SHOPP	2014	\$4,000
101- Near Rio Dell from Eel River Bridge to S. of Van Duzen Bridge	ST						X	Median barrier installation	2013 SHOPP	2014	\$ 1,000
101 – Near Garberville near Richardson Grove	ST		X		X		X	STAA Operational Improvement Project	2011 SHOPP	NA	\$5,500
City of Fortuna Maintenance Station	ST		X		X		X	Excavate contaminated material	2014 SHOPP	2015	\$2,000
299-Near Willow Creek on Cedar Creek Road	ST				X	X	X	Cedar Gap curve improvement	2014 SHOPP	2012	\$1,000
299-Near Blue Lake near Bair Rd	ST				X	X	X	Acorn curve improvement	2014 SHOPP	2015	\$3,000
299-Near Willow Creek near Redwood Creek Bridge	ST				X	X	X	Sabertooth shoulder widening	2016 SHOPP	2017	\$2,000
299 - Near Willow Creek near Chezem Road	ST				X	X	X	Circle Point curve improvement	2014 SHOPP	2016	\$4,000
299-near Blue Lake, Chezem Road	ST				X	X	X	Lupton curve improvement	2015 SHOPP	2016	\$2,000
299-Near Blue Lake at Mill Creek Bridge	ST			X				Mad River fish passage mitigation	2012 SHOPP	2013	\$1,000



Section 6.0 Alternatives

**Table 6-1
Funded Complete Streets Proposed Regional Projects**

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
299-Near Blue Lake at Chezem Road	ST				X	X	X	Green Point sink restoration	2012 SHOPP	2014	\$9,000
299-Near Blue Lake to 0.2m W of the Route 96 Junction	ST				X		X	Grind-in rumble strips installation	2012 SHOPP	2017	\$21,000
96 - Near Willow Creek near the Tish-Tang Campground	ST				X	X	X	Sugar Bowl Ranch curve Improvement	2012 SHOPP	2017	\$3,000
96 - Near Willow Creek near Shoemaker Road	ST				X	X	X	Hoopa Vista Point curve correction	2012 SHOPP	2017	\$2,000
96 - In Hoopa from Loop Road near Hostler Creek Bridge	ST	X	X		X		X	Shoulder widen and lighted crosswalk	2012 SHOPP	2016	\$1,000
255 -Near Arcata at McDaniel Slu Bridge	ST			X			X	Mad River Wetland Mitigation	2012 SHOPP	2015	\$1,000
169 - East of Pecwan near Junction of Highways 96 / 169	ST				X	X	X	Weitchepec Curve Improvement	2016 SHOPP	2017	\$1,000
169 - Various Locations	ST				X		X	Widening and Metal Beam Guardrail	2012 SHOPP	2015	\$6,000
36 - At Carlotta from Wilson Lane to 0.5 W of Cummings Creek Rd.	ST				X	X	X	Carlotta Left Turn Channelization	2012 SHOPP	2014	\$9,000
254 - Various Locations	ST				X	X	X	Avenue of the Giants - Four Bridges Project	2012 SHOPP	2016	\$6,000
101 - South Fork Eel River Bridge	ST				X	X	X	Eel River Bridges Seismic Retrofit Project	SHOPP	2015	
101 - In Trinidad between 6th Street and Trinidad Road Exit	ST		X		X		X	New Interchange	STIP (PID)	NA	\$18,000

Section 6.0 Alternatives

**Table 6-1
Funded Complete Streets Proposed Regional Projects**

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
96 - Trinity River Bridge in Downtown Hoopa	ST	X	X	X	X	X	X	Pedestrian and non-motorized vehicle crossing of Trinity River	SHOPP (PID)	NA	\$1,000
101 - Intersection of Broadway, Wabash and Hawthorne	ST	X	X		X	X	X	Intersection Control Evaluation	SHOPP (PID)	NA	\$3,000
101 - In Eureka south of Fields Landing OH to North of Herrick Avenue OC	ST				X	X	X	Pavement Preservation	SHOPP (PID)	NA	
101 - Eureka on 4th and 5th Streets from Broadway to Eureka Slough Bridge	ST	X	X		X	X	X	Eureka CAPM	SHOPP (PID)	NA	
101 - Near Orick North of Big Lagoon	ST				X	X	X	Orick CAPM	SHOPP (PID)	NA	
101 - Near Blue Lake at Various Locations from Lupton Creek to Berry Summitt	ST				X	X	X	Slope Repair and Drainage Improvements	SHOPP (PID)	NA	
101 - Near Blue Lake from Titlow Hill Road to Willow Creek	ST				X	X	X	Humboldt 299 CAPM	SHOPP (PID)	NA	
96 - 6.2m E of Willow Creek to 2.6m W of Tish-Tang Campground	ST				X	X	X	Correct curve, shoulder widen, rumble strip, restripe, OGFC	SHOPP	2016	3,700
101 and 254 - Various locations in Humboldt County	ST				X		X	Upgrade guardrail and bridge approach	SHOPP	NA	\$4,000
101, 169, and 199 - Various locations	ST				X			MBGR Follow-up	SHOPP	2014	\$3,000
101 - Upgrade Bridges (2 Humboldt County Bridges)	ST				X	X	X	Bridge Seismic Retrofit	SHOPP	2014	
36 - Hely Creek, Little Larabee Creek and Butte Creek	ST				X		X	Bridge Rail Replacement and Upgrade	SHOPP (PID)	NA	\$1,000

Section 6.0 Alternatives

**Table 6-1
Funded Complete Streets Proposed Regional Projects**

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
36 - Little Golden Gate, approx 15m E of Carlotta	ST			X	X		X	Install erosion control measures	SHOPP (PID)	NA	\$2,000
36 -Near Hydesville at River Bar Road	ST				X	X	X	Alton Shoulder Widening	SHOPP (PID)	NA	
101 - Between Eureka and Arcata	ST				X		X	MBGR follow-up to previous locations	SHOPP	2014	\$2,000
299, 96 - Near willow Creek; 36 - From Carlotta to Hydesville	ST				X		X	MBGR follow up to previous locations	SHOPP	NA	\$2,000
101 - Williford Rd. Undercrossing	ST				X	X	X	Replace Superstructure	SHOPP	2015	\$2,000

¹ Short-term (ST) is the next 1 to 10 years; long-term (LT) is the next 11 to 20 years.

² Assume 3% annual inflation.

**Table 6-2
Funded Regional Trails Proposed Projects**

(From RTP Table *Trails-1*)

Trail Project	Jurisdiction	Description	In HCAOG Adopted Plan(s)*:
California Coastal Trail	HCAOG	<ul style="list-style-type: none"> Encourage Caltrans to design improvements for pedestrians and bicycles on the bridges crossing the Eel River and Mattole River. Work towards implementing the <i>Humboldt County Coastal Trail Implementation Strategy</i>, in coordination and cooperation with local jurisdictions, agencies, and other public and private stakeholders to design, locate, fund, acquire, and maintain segments of the California Coastal Trail. Work with private landowners to acquire public access rights at locations from Centerville Beach to Cape Mendocino. 	HCCTIS, RPP



Section 6.0 Alternatives

**Table 6-2
Funded Regional Trails Proposed Projects**
(From RTP Table *Trails-1*)

Trail Project	Jurisdiction	Description	In HCAOG Adopted Plan(s)*:
Annie and Mary Rail Trail	Arcata, Blue Lake, Blue Lake Rancheria, Humboldt County	6.8-mile trail corridor that would run east from the Aldergrove Industrial Park in Arcata to the City of Blue Lake, following the inactive NCRA railroad corridor and a segment along SR 299.	HCCTIS, OWP, RPP, RTMP
Arcata Rails with Trail	Arcata, Humboldt County	Trail from West End Road to Samoa Boulevard, with segments along railroad tracks. This trail would link the Annie & Mary Trail and the Humboldt Bay Trail.	HCCTIS, RBP, RPP
Eureka Waterfront Trail	Eureka	From Tydd Street to Herrick Avenue, including along the existing Eureka Boardwalk. The segments still to be built and/or upgraded are: Waterfront Drive from C Street Boardwalk to Del Norte Street; PALCO Marsh Trail improvements.	HCCTIS (Priority Project), RTMP
Hammond Trail	Arcata, Eureka, Humboldt County	Extend the Hammond Trail from the Mad River bridge south, connecting to the City of Arcata (downtown) and Eureka. Extend the trail north to Westhaven and Trinidad. Restore the Hammond Trail pedestrian/bicycle bridge across the Mad River.	HCCTIS, RBP, RPP, RTMP
Humboldt Bay Trail	Arcata, Eureka, Humboldt County	Arcata to Eureka Segment: A 6.5-mile Class I/multi-use path around the east side of Humboldt Bay, between Arcata and Eureka. The trail would follow the North Coast Railroad rail corridor and parallel U.S. 101.	HCCTIS, Humboldt Bay Trails Feasibility Study, RBP, RPP, RTMP
Hoopa Valley Trail	Humboldt County	A 6-mile segment along SR 96 from the south end of Shoemaker Road northward (in Caltrans right-of-way). The long-term vision is to expand the trail throughout the Hoopa Valley.	RPP
Orick Levee Coastal Trail	Humboldt County	Multi-purpose trail on north Redwood Creek levee to the U.S. 101 bridge (0.69 miles), south levee to Redwood National Park Visitor Center (2.45 miles).	HCCTIS (Priority Project)
Riverwalk Trail	Humboldt County	Fortuna City Limits to Sandy Prairie	RTMP
Baylands Trail	Arcata	Within Baylands Park – Class I	RTMP
Truesdale Vista Point Trail	Eureka	Multipurpose Trail from Truesdale Vista Point to Hilfiker Lane Trailhead	RPP, RTMP
Foster Avenue Extension	Arcata	Sunset Avenue to Alliance Avenue – Class I & II	RBP,RPP, RTMP
John Campbell Memorial Greenway	Fortuna	Multi-purpose from the Riverwalk Trail to the south entrance of the Headwaters Reserve	RBP, RTMP



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Table 6-3
Funded Public Transportation Proposed Regional Projects
 (From RTP Update 2013/14, Table *Transit-4*)

Operator / Agency	Short or Long Term ¹	Description	Funding Source ²	Implementation Year(s)	Cost in Year of Expenditure ³ (\$000)
Eureka	ST	Bus Replacement (2)	5311/PTMSIEA	2013-14	1,000
Arcata	ST	Bus replacement (2)	5311/PTMSIEA	2014-2023	1,200
Arcata	ST	Bus replacement (2)	5311/PTMSIEA	2025	1,400
HTA	ST	Bus replacements (one 40' & two 30')	5311/5311 (f)	2013	825
HTA	ST	40' bus replacements (2 to 3 based on fuel type)	5311/PTMSIEA	2014	1,300
HTA	ST	40' bus replacements (2)	5311	2014	937
HTA	ST	30' bus replacements (2)	5311	2015	392
HTA	ST	40' bus replacements (2)	5311	2016	965
HTA	ST	40' bus replacements (2)	5311	2022	1,152
KT Net	ST	Bus	5311(f)	2013-2014	63.5
KT Net	ST	Expand service hours	5311(f)	2013-2014	18.5*
KT Net	ST	Intelligent Transportation System application/equipment	5311(f)	2013-2014	38
HCAOG	ST	Park-and-Ride Feasibility Study	RPA	2014-15	10
				Short-Term Total	\$10,576
				Long-Term Total	\$15,628+tbid
Regional Projects–Unfunded (unconstrained) Subtotal					\$16,903 +tbid
Regional Projects–Funded (constrained) Subtotal					\$ 9,301
PUBLIC TRANSPORTATION PROJECTS TOTAL					\$ 26,204+tbid

¹ Short-term (ST) is in the next 1 to 10 years; long-term (LT) is in the next 11 to 20 years.

² PTMSIEA = Public Transportation Modernization, Improvement, and Service Enhancement Account (Prop 1B); RPA = Rural Planning Assistance funding

³ Assumes 3% annual inflation.

*Annual cost



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**Table 6-4
Funded Goods Movement Proposed Regional Projects**

(From RTP Update 2013/14, Table Goods-3)

Lead Agency	Project Name	Short or Long Term ¹	Description	Funding Source	Implementation Year(s)	Estimated Cost ²
NONE						

**Table 6-5
Funded Aviation Proposed Regional Projects**

(From RTP Update 2013/14, Table Aviation-5)

Lead Agency	Project Name/Description	Short or Long Term ¹	Funding Source	Implementation Year(s)	Estimated Cost ²
Arcata-Eureka Airport					
County of Humboldt	Phase 2 ARFF site civil work, remove nose hangar	ST	FAA, County of Humboldt	2013	\$2,478,914
County of Humboldt	Phase 3 ARFF design completion	ST	FAA, County of Humboldt	2013	\$399,277
County of Humboldt	Study hazard removal	ST	FAA, County of Humboldt	2014	\$150,00
County of Humboldt	Design runway lighting improvements	ST	FAA, County of Humboldt	2015	\$600,00
County of Humboldt	*Phase 3 construct fire station	ST	FAA, County of Humboldt	2016	\$3,700,000
County of Humboldt	*RNR TWY B&G/drainage (design complete 2006)	ST	FAA/County of Humboldt	2018	\$508,802
					<i>Subtotal \$4,208,802</i>
Dinsmore Airport					
County of Humboldt	Study removing or lowering hazards to aircraft	ST	FAA, County of Humboldt	2014	\$50,000
County of Humboldt	Remove/lower hazard to aircraft	ST	FAA, County of Humboldt	2014	\$150,000
County of Humboldt	*Design windsock and segmented circle	ST	FAA, County of Humboldt	2015	\$130,000
County of Humboldt	Construct windsock and segmented circle	ST	FAA, County of Humboldt	2016	\$88,000
County of Humboldt	*Construct west end storm drain improvements	ST	FAA, County of Humboldt	2017	\$300,000
County of Humboldt	*Construct fence and gates	ST	FAA, County of Humboldt	2018	\$166,400
County of Humboldt	Design ramp improvements	ST	FAA, County of Humboldt	2018	\$50,000
					<i>Subtotal \$934,400</i>



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**Table 6-5
Funded Aviation Proposed Regional Projects**

(From RTP Update 2013/14, Table *Aviation-5*)

Lead Agency	Project Name/Description	Short or Long Term ¹	Funding Source	Implementation Year(s)	Estimated Cost ²
<i>Garberville Airport</i>					
County of Humboldt	Study removing or lowering hazards to aircraft	ST	FAA, County of Humboldt	2014	\$150,000
County of Humboldt	*Design runway	ST	FAA, County of Humboldt	2014	\$52,5000
County of Humboldt	*Remove or lower hazards to aircraft	ST	FAA, County of Humboldt	2014	\$100,000
County of Humboldt	*Construct runway RNR	ST	FAA, County of Humboldt	2015	\$368,000
County of Humboldt	*Construct ramp RNR and expansion	ST	FAA, County of Humboldt	2017	\$562,500
County of Humboldt	*Design runway safety area drainage	ST	FAA, County of Humboldt	2017	\$68,000
County of Humboldt	*Construct runway safety area drainage	ST	FAA/County of Humboldt	2018	\$564,000
					<i>Subtotal \$2,276,300</i>
<i>Kneeland Airport</i>					
County of Humboldt	*Study removing or lowering hazards to aircraft	ST	FAA, County of Humboldt	2014	\$50,000
County of Humboldt	RSA study	ST	FAA, County of Humboldt	2012	\$156,825
County of Humboldt	*Design fencing and gates	ST	FAA, County of Humboldt	2013	\$45,000
County of Humboldt	*Construct fencing and gates	ST	FAA, County of Humboldt	2014	\$350,000
County of Humboldt	*Design stabilization	ST	FAA, County of Humboldt	2014	\$107,800
County of Humboldt	*Construct stabilization	ST	FAA, County of Humboldt	2016	\$1,077,600
					<i>Subtotal \$1,787,225</i>
<i>Murray Field Airport</i>					
County of Humboldt	Construct wildlife perimeter fencing/gates	ST	FAA, County of Humboldt	2012-13	\$608,708
County of Humboldt	Design AWOS, upgrade of RWY/TWY lighting system and connecting security lights to emergency generator	ST	FAA, County of Humboldt	2014	\$63,000
County of Humboldt	*Construct upgrade of RWY/TWY lighting system	ST	FAA, County of Humboldt	2015	\$350,000
County of Humboldt	*Install and implement AWOS type system	ST	FAA, County of Humboldt	2015	\$270,000
County of Humboldt	*Design RWY/TWY RNR	ST	FAA, County of Humboldt	2016	\$63,000
County of Humboldt	*Construct RWY/TWY RNR	ST	FAA, County of Humboldt	2017	\$753,000
County of Humboldt	*Design entry road rehabilitation	ST	FAA, County of Humboldt	2017	\$40,000



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**Table 6-5
Funded Aviation Proposed Regional Projects**

(From RTP Update 2013/14, Table *Aviation-5*)

Lead Agency	Project Name/Description	Short or Long Term ¹	Funding Source	Implementation Year(s)	Estimated Cost ²
County of Humboldt	*Construct entry road rehabilitation	ST	FAA, County of Humboldt	2018	\$480,000
<i>Subtotal \$1,874,708</i>					
Rohnerville Airport					
County of Humboldt	*Construct RWY/TWY RNR (design in 2006)	ST	FAA, County of Humboldt	2014	\$933,000
County of Humboldt	Design completion of wildlife exclusion fence/gates	ST	FAA, County of Humboldt	2015	\$180,000
County of Humboldt	Construct completion of wildlife exclusion fence/gates	ST	FAA, County of Humboldt	2016	\$609,000
County of Humboldt	*Construct ramp RNR (design in 2009-10)	ST	FAA, County of Humboldt	2017	\$660,450
County of Humboldt	Design and construct Phase II ramp improvements	ST	FAA, County of Humboldt	2017	\$1,081,300
County of Humboldt	Design beacon replacement	ST	FAA, County of Humboldt	2019	\$67,500
<i>Subtotal \$3,531,250</i>					
Samoa Field (Formerly Eureka Municipal)					
City of Eureka	Remove/lower hazard to aircraft	ST	Caltrans/City of Eureka	2014	\$30,000
City of Eureka	Design T-hangars	ST	City of Eureka	2014	\$20,000
City of Eureka	Construct T-hangars	ST	City of Eureka	2015	\$240,000
City of Eureka	Resurface runway/taxiways/repaint markings	ST	Caltrans/City of Eureka	2019	\$160,000
City of Eureka	Construct wildlife exclusion fence/gates	ST	Caltrans/City of Eureka	2021	\$240,000
<i>Subtotal \$690,000</i>					
Hoopa Airport, Samoa Field Airport, Shelter Cove Airport —No information available/TBD.					

¹ Short-term is 0-10 years; long-term is 11-20 years. ² To estimate the cost in year of implementation, assume a 3% annual rate of inflation.

*Project is listed in the "California Aviation System Plan: Capital Improvement Plan Year 2012-2021" (Caltrans, September 2011).

Acronyms: Reconstruct and Rehabilitate (RNR), Automated Weather Observation System (AWOS), taxiway (TWY), runway(RWY), Aircraft Rescue and Fire Fighting Building (ARFF)

**Table 6-6
Funded Emergency Transportation Proposed Regional Projects**

(From RTP Update 2013/14, Table *Emergency-1*)

NONE



6.2.2 Impact Analysis

a. Air Quality. Implementing the financially constrained project alternative instead of the proposed RTP 2013/14 Update would result in reduced short-term air quality impacts because less construction activity would occur. However, some congestion problems would not be alleviated with this alternative because it would not construct the financially unconstrained projects that are designed to reduce congestion. Therefore, long-term air quality impacts would be greater than under the proposed RTP. Long-term operational impacts from implementing this alternative would result in a regional increase in toxic air emissions, criteria pollutants, and re-entrained dust levels, compared to the proposed project, due to fewer improvements being constructed; however, impacts would continue to be less than significant. Overall, impacts would be greater than under the proposed RTP 2013/14 Update.

b. Biological Resources. Because there would be less future construction activity under this alternative, potential impacts to biological resources would be lower than under the proposed RTP. In addition, fewer roadway extensions, ditch crossings, and road-width increases adjacent to creeks would occur under this alternative, which would result in fewer impacts to wetlands or riparian habitat. Therefore, implementing this alternative would result in fewer impacts than expected under the proposed RTP. Nevertheless, construction activity related to RTP projects would still occur under this alternative. Thus, this alternative would require similar mitigation measures as those identified for the proposed project in order to reduce impacts to sensitive plant and animal species to a less than significant level.

c. Environmental Justice. Temporary, short-term construction impacts associated with the alternative project would be reduced; however, impacts would continue to be distributed to all communities and would not disproportionately affect minority and/or low-income communities. Long-term impacts to minority or low-income populations, however, will be greater under this alternative because unfunded top priority regional complete street projects will not be constructed. Such impacts would not be proportionately higher under this alternative. Environmental justice impacts would be similar to the proposed project.

d. Geology and Soils. Implementing this alternative could result in both greater and lesser geology hazard impacts as compared to the proposed RTP. Because this alternative does not include as many roadway improvements, there would be less exposure of new facilities to hazardous conditions, including liquefaction of soils, expansive soils, and landslides. Conversely, if inadequate facilities are not replaced, there could be greater potential than under the proposed RTP that future seismic events could result in geologic hazards that harm these existing facilities and people using them. Therefore, impacts of this alternative would be both greater and lesser than those expected under the proposed project but nevertheless, this alternative would require the same mitigation measures as those identified for the proposed project in order to reduce impacts to liquefaction, expansive soils and landslides to a less than significant level.

e. Greenhouse Gas Emissions. Implementing this alternative would result in reduced temporary short-term GHG emissions because less construction would occur. However, some congestion problems would not be alleviated with this alternative, because financially unconstrained projects designed to reduce congestion would not be constructed. Implementing only the financially constrained projects would contribute to an overall increase in vehicle



related emissions and achieve less GHG emission reductions than the proposed RTP. While this alternative would not reduce GHG emissions as much, emissions would continue to be consistent with AB32 targets. Long-term GHG emissions, and their associated impacts, would be greater than under the proposed RTP, but the impact would be less than significant.

f. Hydrology and Water Quality. Because the amount of future construction activity would be reduced with this alternative, the increase in impermeable, paved surfaces would be less under this alternative than anticipated under the proposed RTP update. Consequently, incremental increases in erosion and contamination of surface water supplies, as well as incremental reductions in groundwater recharge, would not be as great as under the proposed RTP. Therefore, this alternative would result in less overall impact to hydrology and water quality, and the impact would be significant but mitigable.

g. Noise. Implementing this alternative would have less temporary noise impacts because less construction activity would occur throughout the County. The number of improvements that would potentially result in traffic noise near sensitive receptors would be reduced with this alternative. These improvement projects would include roadway widenings, intersection modifications, streetscape improvements that enhance pedestrian accessibility, and pavement maintenance and overlays. Although the number of transportation projects would be reduced as compared to the proposed RTP, an increase in traffic volumes resulting from regional growth would likely occur. Whether noise impacts would be greater or less depends on project-specific details, which would be analyzed in project-specific studies. Regionally, the difference in VMT between this alternative and the proposed RTP is not enough to noticeably change noise levels. Because a number of transit improvements planned under the RTP 2013/14 Update would not be implemented in this alternative, the potential for increased transit noise, while site specific, overall would be less than the proposed RTP 2013/14 Update. Overall, noise impacts would be similar to or less than the proposed RTP, and are significant but mitigable.

h. Transportation. This alternative would exclude many of the capital improvements envisioned under the proposed RTP update, including roadway widenings, intersection modifications, streetscape improvements that enhance pedestrian accessibility, and pavement maintenance and overlays. These projects are intended to address traffic safety, access, and congestion identified by local agencies. Proposed projects are also intended to mitigate potential impacts associated with planned long-term development. By excluding capital improvement projects and only constructing the fiscally constrained projects, vehicle miles traveled (VMT) and roadway congestion would be greater compared to the proposed RTP. Therefore, implementing this alternative would result in increased traffic impacts as compared to the proposed project. However, in comparison to the “no project” scenario, this alternative would include projects that may reduce regional VMT and roadway congestion and thus, like the proposed project, would result in a less than significant impact.

6.3 TOP PRIORITY REGIONAL COMPLETE STREETS PROJECTS PLUS TRANSIT-RELATED PROJECTS ALTERNATIVE

6.3.1 Description

This alternative assumes that the proposed RTP is implemented, but only the Top Priority Regional Complete Streets Projects (as provided on the Table *Streets-5* in the Draft RTP 2013/14 Update) plus any transit-related projects (listed in the tables ~~CS-1~~*Streets-6* or *Transit-4* in the Draft RTP 2013/14 Update) would be included as part of the RTP. All other projects listed in Tables 2-1 through 2-6 in Section 2.0, *Project Description*, would not be implemented under this alternative.

6.3.2 Impact Analysis

a. Air Quality. Implementing this alternative would result in reduced short-term air quality impacts because less construction activity would occur. Implementation of the Top Priority Regional Complete Street Plus Transit-Related Projects alternative would increase multi-modal travel options, increase system efficiency of the transportation network, and reduce single driver automobile trips, thereby reducing traffic congestion and long-term air quality impacts. However, because this alternative proposes a smaller number of projects compared to the proposed project (RTP 2013/14 Update), long-term air quality impacts would be greater than the proposed project. Long-term operational impacts resulting from implementing this alternative would result in a regional increase in toxic air emissions, criteria pollutants, and re-entrained dust levels compared to the proposed project due to less improvements being implemented, however, impacts would continue to be less than significant. Overall, impacts would be greater than under the proposed project.

b. Biological Resources. Because the amount of future construction activity would be reduced under this alternative, potential impacts to biological resources would be lower than under the proposed project. In addition, fewer roadway extensions, ditch crossings, and road width increases adjacent to creeks would occur under this alternative, which would result in fewer impacts to wetlands or riparian habitat. Therefore, implementing this alternative would result in fewer impacts than expected under the proposed project. Nevertheless, construction activity related to RTP projects would still occur under this alternative and thus similar mitigation measures as those identified for the proposed project to reduce impacts to sensitive plant and animal species would be necessary to reduce impacts to a less than significant level.

c. Environmental Justice. Temporary, short-term construction impacts for the alternative project would be reduced; however, impacts would continue to be distributed to all communities and would not disproportionately affect minority and/or low-income communities. However, long-term impacts to minority or low-income populations will be the same as the proposed project. Since the proposed project includes all top priority regional complete street improvements and transit-related projects as the proposed project, minority and/or low-income communities will benefit from the same mobility improvements. Environmental justice impacts would be similar in comparison to the proposed project.



d. Geology and Soils. Implementing this alternative could result in both greater and lesser geology hazard impacts as compared to the proposed RTP. Because this alternative does not include as many roadway improvements, there would be less exposure of new facilities to hazardous conditions, including liquefaction of soils, expansive soils, and landslides. Conversely, if inadequate facilities are not replaced, the potential for these existing facilities and those using these structures to be harmed by geologic hazards as a result of future seismic events could be greater than under the proposed RTP. Therefore, impacts of this alternative would be both greater and lesser than those expected under the proposed project.

e. Greenhouse Gas Emissions. Implementing this alternative would result in reduced temporary short-term GHG emissions because less construction would occur. However, some congestion problems would not be alleviated with this alternative, because all projects other than the top priority complete streets projects and transit-related projects would not be constructed. Implementation of only the top priority complete street projects and transit-related projects would contribute to an overall increase in vehicle related emissions and achieve less GHG emission reductions than the proposed project. While GHG emission reductions from the alternative are less, they would continue to be consistent with AB32 targets. Long-term GHG emissions, and their associated impacts, would be greater than under the proposed project.

f. Hydrology and Water Quality. Because the amount of future construction activity would be reduced with this alternative, the increase in impermeable, paved surfaces would be less under this alternative than anticipated under the RTP 2013/14 Update. Consequently, incremental increases in erosion and contamination of surface water supplies, as well as incremental reductions in groundwater recharge, would not be as great as under the proposed RTP. Therefore, this alternative would result in less overall impact to hydrology and water quality.

g. Noise. Implementing this alternative would result in a reduction in temporary noise impacts because less construction activity would occur throughout the County. Implementing only the top priority regional complete street projects and transit-related projects would overall likely slightly reduce the increase in vehicle miles travelled and increase the use of multi-modal travel options. Although the number of road widenings would be reduced as compared to the proposed project, an increase in traffic volumes resulting from regional growth would still be expected to occur. The resulting reduction in vehicle speeds associated with increased traffic congestion that would occur under this alternative and increased multi-modal travel options under this alternative, would incrementally reduce traffic-related noise impacts. Implementing this alternative would likely result in lower noise impacts than would be expected with the proposed project; however impacts would remain significant but mitigable.

h. Transportation. This alternative would exclude many of the capital improvements envisioned under the proposed RTP update, including roadway widenings, intersection modifications, streetscape improvements that enhance pedestrian accessibility, and pavement maintenance and overlays. Projects that are included in this alternative will include top priority regional complete streets improvements and transit-related projects that are intended to increase multi-modal opportunities and efficiency of the transportation system, thereby reducing traffic congestion and associated environmental impacts of motorized transportation. However, implementation of all capital improvements in the RTP 2013/14, which are part of the proposed project, are needed in order to fully mitigate projected increases in traffic impacts.



Therefore, implementing this alternative would result in increased traffic impacts as compared to the proposed project.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

This section compares the impacts of the three alternatives under consideration to those of the proposed RTP 2013/14 Update. Table 6-7 shows whether each alternative is environmentally superior to, or similar to, or inferior to the proposed RTP 2013/14 Update for each of the issue areas studied in this EIR.

**Table 6-7
 Alternatives Comparison**

Issue	Proposed RTP	No Project Alternative	Financially Constrained Project Alternative	Top Priority Regional Complete Streets Alternative
Air Quality	=	=/-	-	-
Biological Resources	=	+	=/+	=/+
Environmental Justice	=	+/-	=	=
Geology and Soils	=	=/-	+/-	+/-
Greenhouse Gas Emissions	=	=/-	-	-
Hydrology and Water Quality	=	+	+	+
Noise	=	+	=/+	=/+
Transportation	=	-	-	-
Overall	=	=/-	+/-	+/-

+ Superior to the proposed project (reduced level of impact)
 - Inferior to the proposed project (increased level of impact)
 = / + slightly superior to the proposed project in one or more aspects, but not significantly superior
 = / - slightly inferior to the proposed project in one or more aspects, but not significantly inferior
 +/- Some areas inferior to the proposed project, and some areas superior, but not significantly inferior or superior
 = Similar level of impact to the proposed project

The No Project Alternative could be considered environmentally superior overall, as it would entail the fewest new roadway projects. Consequently, it would have the fewest impacts with regard to issues most dependent on the overall magnitude of development. No other alternative scenario would be considered superior for more issues. However, the beneficial impacts of the proposed RTP’s projects, including reducing idling and congestion and improving traffic flow and safety, would not occur under the No Project Alternative, and the RTP’s objectives, described in Section 2.3.2, *Project Objectives*, would not be achieved.

CEQA also requires an EIR to discuss the environmentally superior alternative scenario other than “No Project.” Among the other scenarios, both the Financially Constrained Project alternative and the Top Priority Regional Complete Streets Plus Transit-Related Projects alternative would reduce impacts in several issue areas compared to the proposed RTP , primarily related to a reduction in construction activity and site disturbance as these alternatives would result in fewer overall projects than the proposed RTP. Overall, the Top



Priority Regional Complete Streets Plus Transit-Related Projects alternative would result in fewer impacts than the Financially Constrained Project alternative considering all of the environmental issue areas, although it may have incrementally greater impacts to air quality, greenhouse gas emissions, and transportation and circulation as fewer projects that relieve congestion and improve alternative transportation opportunities (pedestrian access, bikeways, etc.) would occur under this alternative. The Top Priority Regional Complete Streets Plus Transit-Related Projects alternative would involve the fewest number of projects, such that it would have the lowest benefit of reducing traffic congestion, air contaminant emissions, and GHG emissions. In addition, neither of these alternatives would satisfy key project objectives. Thus neither of these alternatives would be considered environmentally superior to the proposed RTP primarily because both of these alternatives would result in greater air quality, GHG emissions, and transportation impacts.



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7.1 REFERENCES

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7.2 LIST OF ACRONYMS

5310	Federal grant program funding for mass transportation needs of elderly persons and persons with disabilities.
5311, 5311 (f)	Federal grant program funding for public transit in non-urbanized areas (population under 50,000).
A&MRTS	Arcata and Mad River Transit System
AB 32	Assembly Bill 32: California Global Warming Solutions Act of 2006
AIP	Airport Improvement Program
ATP	Active Transportation Program (A proposed state program.)
BLRTS	Blue Lake Rancheria Transit System
BT&H	Business, Transportation, and Housing Agency (Umbrella agency over Caltrans before 2013/14 fiscal year (MAP-21); current umbrella agency is CalSTA.)
BTA	Bicycle Transportation Account (State)
CALCOG	California Association of Councils of Governments
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CARB	California Air Resource Board
CFR	Code of Federal Regulations
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
DAR/DAL	Dial-a-ride; Dial-a-lift
DOT	Department of Transportation
EEM	Environmental Enhancement & Mitigation program
ETS	Eureka Transit Service
F.T.Z.	Foreign Trade Zone
FAA	Federal Aviation Administration
FFY	Federal fiscal year
FHWA	Federal Highway Administration (under the U.S. Department of Transportation)
FSTIP	Federal Statewide Transportation Improvement Program
FTA	Federal Transit Administration (under the U.S. Department of Transportation)
FTS	Fortuna Transit System
FY	Fiscal year
HCCTC	Humboldt County Tribal Transportation Commission
HCAOG	Humboldt County Association of Governments



HSU	Humboldt State University
HTA	Humboldt Transit Authority
HTF	Highway Trust Fund
HVTC	Hoopa Valley Tribal Council
ITS	Intelligent Transportation System
K/T NeT	Klamath Trinity Non-emergency Transportation
LTF	Local Transportation Fund (Enacted by the Transportation Development Act (TDA).)
MAP-21	Moving Ahead for Progress in the 21 st Century (Went into effect FY 2013/14.)
MOU	Memorandum of Understanding
NCRA	North Coast Railroad Authority
NOx	Nitrous Oxide (an air pollutant)
OES	State Office of Emergency Services
OWP	Overall Work Program
PAC	Policy Advisory Committee (HCAOG committee)
PCI	Pavement Condition Index
PM	Particulate matter (an air pollutant)
PMS	Pavement Management System
PPM	Project, Planning and Monitoring
PSA	Public Service Announcement
PSR	Project Study Report
PTMSIEA	Public Transportation Modernization, Improvement, and Service Enhancement Account (also called Prop 1B)
RPA	Regional Planning Agency
RSTP	Regional Surface Transportation Program
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RTS	Redwood Transit Authority
SAFE	Service Authority for Freeway Emergencies
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, previous federal transportation act renewed by congress multiple times. (signed into law in 2005; extensions enacted 2009-2012)
SB	Senate Bill
SB 375	Senate Bill 375: Sustainable Communities and Climate Protection Act of 2008
SCC	Service Coordination Committee (HCAOG committee)
SHA	State Highway Account
SPR	State Planning and Research
SR	State Route
SR2S	Safe Routes to School (State of California's program)
SRTS	The former federal Safe Routes to School program.
SSTAC	Social Service Transportation Advisory Council (HCAOG committee)
STAF or STA Fund	State Transit Assistance Fund (Enabled by the Transportation Development Act (TDA).)
STIP	State Transportation Improvement Program
TAC	Technical Advisory Committee (HCAOG committee)
TAP	Transportation Alternatives Program



TDA	Transportation Development Act
TE	Transportation Enhancement (Federal, enacted by SAFETEA-LU)
TTIP	Tribal Transportation Improvement Program
TSM	Transportation Systems Management
TTPA	Tribal Transportation Programmatic Agreement
VOC	Volatile organic compound (an air pollutant)

7.3 LIST OF PREPARERS

This EIR was prepared by Rincon Consultants, Inc. under contract to the Humboldt County Association of Governments. Persons involved in data gathering analysis, project management, and quality control include:

Richard Daulton, Principal-in-Charge
Matt Maddox, Project Manager
Christina McAdams, Associate Planner
Karly Kaufman, Associate Planner
Gary Kaiser, Senior Environmental Project Manager
Sarah Richman, Associate Planner
Ryan Birdseye, Senior Planner
Christy Sabdo, Senior Environmental Project Manager
Mike Tom, Senior Biologist
Craig Huff, GIS Analyst
Kevin Howen, GIS Analyst
Wade Sherman, GIS Analyst
Stephanie Goff, Production



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8.0 COMMENTS and RESPONSES

The Draft EIR and this Comments and Responses document collectively comprise the Final EIR for the RTP 2013/14 Update. Any changes made to the text of the Draft EIR correcting information, data or intent, other than minor typographical corrections or minor working changes, are noted in the Final EIR as changes from the Draft EIR. Corrections or additional text discussed below are also shown in the text of the Final PEIR in ~~striketrough~~ (for deleted text) and underline (for added text) format.

8.1 SUMMARY OF REVISIONS TO THE DRAFT EIR

The changes incorporated into this EIR correct minor errors or clarify information. These edits, in addition to other minor or technical edits found in the text of the Final EIR (including in the Appendices), do not result in presentation of new substantial adverse environmental effects and do not affect the conclusions of the EIR. As such, this Final EIR has been prepared pursuant to CEQA Guidelines Section 15164(a). Deletions in the Final EIR are indicated by strikethrough text and insertions are indicated by underlined text. The Final EIR sections (through Section 8.0 and in the Appendices (Appendix A and Appendix B) reflect the final, corrected EIR text.

Edits in the Final EIR (including in the Initial Study contained in Appendix A) compared to the Draft EIR primarily relate to clarifying that project sponsors implementing subsequent transportation projects would undertake future environmental review for projects in the proposed RTP 2013/14 Update. These agencies would include the cities within Humboldt County as well as Humboldt County, Caltrans, and public transit agencies. Individual specific environmental analysis of each project will be undertaken as necessary by the appropriate implementing agency prior to each project being considered for approval. In sponsoring individual projects, local agencies may choose to take advantage of the streamlining benefits of the Program EIR, including the use of any suggested mitigation measures, or to engage in their own environmental review without use or reference to the Program EIR. Where subsequent environmental review is required, such review would focus on project-specific significant effects (and if necessary project-specific mitigation measures) peculiar to the project, or its site, that have not been considered in this program EIR.

8.2 COMMENTS AND RESPONSES

In accordance with Section 15088 of the California Environmental Quality Act Guidelines, the Humboldt County Association of Governments, as the lead agency, has reviewed the comments received on the Draft Environmental Impact Report (EIR) for the Regional Transportation Plan (RTP) 2013/14 Update and has prepared written responses to the written and verbal comments received. The Draft EIR was circulated for a 45-day public review period that began May 23, 2014 and concluded on July 7, 2014. The comment letters included herein were submitted by public agencies.

Each comment that HCAOG received is included in this section. Responses to these comments have been prepared to address the environmental concerns raised by the commenters and to indicate where and how the EIR addresses pertinent environmental issues.



The comment letters have been numbered, and each issue within a comment letter, if more than one, has a number assigned to it (For example, letter 1, comment 2 is referenced as 1.2). Each comment letter is reproduced in its entirety with the issues of concern lettered in the right margin. References to the responses to comments identify first the letter number, and second, the lettered comment. The commenters are listed in Table 8-1.

The focus of the responses to comment is the disposition of environmental issues that are raised in the comments, as specified by Section 15088 (b) of the State CEQA Guidelines. Detailed responses are not provided to comments on the merits of the proposed project.

**Table 8-1
Commenters on the Draft EIR**

Letter No.	Commenter	Agency/Organization	Date Received
1	Tatiana Ahlstrand, Associate Transportation Planner	California Department of Transportation. District 1	June 26, 2014
2	James R. Baskin, AICP, Coastal Planner	California Coastal Commission	July 3, 2014
3	Hank Seemann, Deputy-Director	Department of Public Works, Humboldt County	July 3, 2014



DEPARTMENT OF TRANSPORTATION

DISTRICT 1, P.O. BOX 3700
EUREKA, CA 95502-3700
PHONE (707) 441-4540
FAX (707) 441-5869
www.dot.ca.gov

Letter 1



*Serious drought.
Help Save Water!*

June 26, 2014

Mrs. Marcella Clem
Executive Director
HCAOG
611 I Street, Suite B
Eureka, CA 95501

Regional Transportation Plan (RTP)
HACOG 2014 Update
Draft Comments

Dear Mrs. Clem:

Thank you for the opportunity to comment on the draft 2014 Regional Transportation Plan (RTP) and associated Environmental Impact Report (EIR) for the Humboldt County Association of Governments (HCAOG). The document is titled "VROOM: Variety in Rural Options of Mobility". The purpose of the RTP is to encourage and promote the safe and efficient management, operation and development of a regional intermodal transportation system that, when linked with appropriate land use planning, will serve the mobility needs of goods and people.

We commend HCAOG for composing a document that focuses heavily on multimodal transportation and includes complete streets principles. The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognize bicycle, pedestrian, transit and aviation modes as integral elements of the transportation system. Some innovative policies are outlined in this document, many of which are in line with the goals of Caltrans.

HCAOG is aware of Caltrans' concerns about the RTP deadlines. California state law mirrors the federal update requirement and states that "non-MPO RTPA's are required by State statute to update their RTP's at least every five years...failure of an MPO or RTPA to adhere to the required update period could result in a lack of state and federal funding as projects that are programmed for state or federal funding in the STIP and FTIP must be included in the approved RTP" (2010 California Regional Transportation Plan Guidelines, 30). HCAOG was allowed an extension for the expired 2008 document. However, in order to comply with the federal requirements, we require HCAOG make sure that work is set aside in future Overall Work Programs (OWP) for the development of future RTP updates. Furthermore, please ensure that upon approval of the 2014 document, HCAOG begin planning for the 2019 RTP update soon after.

We provide the following comments for consideration in preparing the final document:

- 1) The submitted RTP Checklist has not been completed and signed by the HCAOG Executive Director or a designated representative as required. According to the RTP Guidelines, "the purpose of the RTP Checklist is to establish a minimum standard for developing the RTP...this requirement of identifying page numbers will assist the general public, federal, state and local agencies to locate the information contained in the RTP" (2010 California Regional Transportation Plan Guidelines, 32). 1.1
- 2) The document would be enhanced with a discussion of HCAOG's role in regional efforts with sea level rise (SLR). In addition to the partnership with Caltrans on the *District 1 Climate Change Pilot Study*, the Regional Transportation Planning Agency (RTPA) will continue to serve as a lead agency for this issue (Greenhouse Gases and Climate Change section, 12-13). 1.2
- 3) The Little River Trail project should be included in Section 3: Commuter Trails Element (page 50). 1.3
- 4) State Route 96 should be included in the Hoopa Valley Reservation Regional Significance Roadway table on page 23. 1.4
- 5) The Pacific Coast Bike Route (PCBR) is not listed in the Existing Trail System section on page 45 of the Commuter Trails Element. 1.5
- 6) Table Finance-5 on page 159 lists the Bicycle Transportation Account (BTA) as an eligible funding source, which no longer exists under MAP-21 legislation. 1.6
- 7) Eligible funding sources not included in the Transportation Funding Program section include the following:
 - State Planning and Research (SPR)
 - Blueprint Funds
 - Active Transportation Program (ATP)
 - Partnership Planning for Sustainable Transportation (ORIP TP Grants)
 - Transit Planning for Rural Communities (ORIP TP Grants)
 - Federal Transit Programs1.7
- 8) The County of Humboldt: *Hammond Trail Bridge - Little River* should be changed to the Little River Trail project and Cost in Year of Expenditure updated to \$4.5M (page 36, Table Streets-5: Top Priority Regional Complete Streets Projects). 1.8
- 9) The document references an outdated version of the California Aviation System Plan, Capital Improvement Plan (CIP, 2011). The current version of the CIP was adopted by the California Transportation Commission (CTC) in 2013. Please ensure the project listed 1.9

- in the RTP are in conformance with the 2013 CIP and therefore eligible for California Aid to Airports Program (CAAP) funds. | 1.9, cont.
- 10) Please add the California Transportation Plan (CTP) to the list of acronyms. We also request that HCAOG consider updating the language regarding the CTP in the Related Plans section (page 14) to comply with the CTP 2040's vision. This would include, "California's transportation system is safe, sustainable, and globally competitive. It provides reliable and efficient mobility and accessibility for people, goods and services while meeting our greenhouse gas emission reduction goals and preserving community character. This integrated, connected and resilient multimodal system supports a prosperous economy, human and environmental health, and social equity" (CTP 2040). | 1.10
- 11) The 2013 California State Rail Plan (CSRP) was finalized in May 2013 (Goods Movement Element, pages 117 and 125). | 1.11
- 12) The Financial Element would be enhanced with a Financial Chart which summarizes the Grand Total Revenues and Expenditures. The Top Priority Regional Complete Streets projects and Appendix CS-1 can be summarized here to help determine whether the document is financially constrained. | 1.12
- 13) Caltrans Headquarters has identified the need for a more robust discussion of demographics, residential densities, housing goals and General Plans in Humboldt County. Additionally, a more dynamic discussion of documented outreach efforts, including HCAOG's coordination with federal land management agencies, has been requested. One way to help clarify these concerns can be to identify the various efforts taking place within the organization, including the draft Public Participation Plan (PPP) and the Regional Housing Needs Allocation (RHNA, December 2013). Copies of both of these documents have been sent to Headquarters. | 1.13
- 14) The following is a list of editorial comments: | 1.14
- Page 35 - Caltrans: U.S. Highway 101 from Arcata Slough Bridge to Arcata Overhead implementation year should be updated to 2013/14
 - Page 40 - "Has the number of trips to school by bicycling and walking increased?"
 - Page 88 - The California Department of Forestry is now Cal Fire
 - Page 154 - Last sentence in the STIP Funding Levels section is missing a \$ sign
 - Page 128 - The web link is missing the 'c' in HCAOG

Thank you again for giving us the opportunity to comment on the draft 2014 HCAOG RTP "VROOM". If you have any questions regarding the comments outlined in this letter or would

Mrs. Marcella Clem
June 26, 2014
Page 4

like to discuss any of it in more detail, please feel free to contact me at (707) 441-4540 or tatiana.ahlstrand@dot.ca.gov.

Thank you,



Tatiana Ahlstrand
Associate Transportation Planner
District 1 Regional Planning

cc: Oona Smith, HCAOG Senior Planner
Debbie Egger, HCAOG Administrative Services Officer
La Nae Van Valen, Caltrans Senior Transportation Planner

Letter 1

COMMENTER: Tatiana Ahlstrand, Associate Transportation Planner, District 1 Regional Planning

DATE: June 26, 2014

RESPONSE:

Response 1.1

The commenter states that the submitted RTP Checklist has not been completed and signed by the HCAOG Executive Director or a designated representative as required.

The comment is related to the RTP and not the draft EIR. The RTP is being updated where appropriate in response to comments, however no substantial changes are being made that would change the EIR.

Response 1.2

The commenter states that the RTP would be enhanced with a discussion of HCAOG's role in regional efforts with sea level rise. See Response 1.1.

Response 1.3

The commenter states that the Little River Trail project should be included in the RTP Section 3: Commuter Trails Element. See Response 1.1

Response 1.4

The commenter states that State Route 96 should be included in the RTP's Hoopa Valley Reservation Regional Significance Roadway table. See Response 1.1

Response 1.5

The commenter states that the Pacific Coast Bike Route (PCBR) is not listed in the Existing Trail System section of the Commuter Trails Element in the RTP. See Response 1.1

Response 1.6

The commenter states that the Bicycle Transportation Account is listed as an eligible funding source, although it no longer exists under MAP-21 legislation. See Response 1.1

Response 1.7

The commenter states that six eligible funding sources are not included in the Transportation Funding Program section. See Response 1.1



Response 1.8

The commenter states that the County of Humboldt: *Hammond Trail Bridge – Little River* should be changed to the Little River Trail project. They also indicate that the Cost in Year of Expenditure should be updated to \$4.5M. See Response 1.1

Response 1.9

The commenter states that the reference to the 2011 California Aviation System Plan, Capital Improvement Plan (CIP) is outdated, as the current version was adopted in 2013. They indicate that the eligibility of projects listed in the RTP for California Aid to Airports Program (CAAP) funds should be confirmed against the 2013 CIP. See Response 1.1

Response 1.10

The commenter asks that the California Transportation Plan (CTP) be added to the list of acronyms and that the HCAOG consider updating the language that describes CTP in the Related Plans section to reflect the CTP 2040's vision. See Response 1.1

Response 1.11

The commenter states that the 2013 California State Rail Plan (CSRP), referred to in the Goods Movement Element, was finalized in May 2013. See Response 1.1

Response 1.12

The commenter indicates that the Financial Element would be enhanced with a Financial Chart that summarizes the Grand Total Revenues and Expenditures, which could summarize the Top Priority Regional Complete Streets projects and Appendix CS-1. See Response 1.1

Response 1.13

The commenter requests a more robust discussion of demographics, residential densities, housing goals, General Plans, and outreach efforts, particularly HCAOG's coordination with federal land management agencies, in Humboldt County. See Response 1.1

Response 1.14

The commenter outlines a number of editorial comments for the RTP. See Response 1.1



CALIFORNIA COASTAL COMMISSION

NORTH COAST DISTRICT OFFICE
1385 EIGHTH STREET • SUITE 130
ARCATA, CA 95521
VOICE (707) 826-8950
FACSIMILE (707) 826-8960

Letter 2



June 30, 2014

RECEIVED
JUL 03 2014HUMBOLDT COUNTY
ASSOCIATION OF GOVERNMENTS

Oona Smith, Senior Planner
Humboldt County Association of Governments
611 "I" Street, Suite B
Eureka, CA 95501

SUBJECT: Request for Comments on Draft Environmental Impact Report for *Humboldt Regional Transportation Plan – Update 2013/14: Variety in Rural Options of Mobility*, Humboldt County-wide; SCH No. 2013102063

Dear Ms. Smith:

Thank you for the opportunity to submit comments on the Draft Environmental Impact Report for the above-referenced programmatic planning project. The project entails the periodic update to the County of Humboldt's Regional Transportation Plan for the five-period covering 2013 through 2018, identifying numerous programmed and/or envisioned surface and air transportation infrastructure improvements to be implemented or further considered for funding and implementation over the next ten to twenty years. This comment letter incorporates, reiterates, and elaborates upon many the scoping comments previously provided in the correspondence dated December 16, 2013 in response to the circulated Notice of Preparation.

Scope of Agency Comments

Pursuant to Section 15082(b) of the CEQA Guidelines (14 CCR §15000 *et seq.*), the Coastal Commission as a consulted agency is to provide the lead agency with "...specific detail about the scope and content of the environmental information related to the ... agency's area of statutory responsibility." In addition to providing this information, the consulted agency must identify if it will be a "responsible" or "trustee" agency (or both) for the project. This designation will depend upon the physical location(s) of the project(s) being studied.

As stated above, many of the RTP projects are located within the California Coastal Zone as defined in Chapter 2.5 of the California Coastal Act (Public Resources Code (PRC) §30150 *et seq.*) and within the coastal development permit jurisdictional areas of the Coastal Commission. Accordingly, the Commission will function as both a trustee and responsible agency. The role of trustee agency is based upon the Commission's explicit jurisdiction by law over natural resources held in trust for the people of the State of California that could be affected by the project. The function of responsible agency derives from the role of the Commission in: (a) certifying LCPs for areas within the coastal zone under local governments' jurisdiction; (b) issuing CDPs within areas of Commission jurisdiction; or (c) hearing appeals on CDPs issued by local governments for certain classes of developments in specified areas.

In addition, the Coastal Commission is designated as the state coastal zone planning and management agency for any and all purposes set forth in the Federal Coastal Zone Management

Act of 1972 (16 USC 1451, *et seq.*) This authority primarily takes the form of grants or issuance of certificates or statements as to whether a “federal action” —including development projects undertaken by other entities but receiving federal funding— is in conformity with the provisions of the state’s coastal management program (i.e., Coastal Act). However, with respect to any project with such a federal nexus located outside the coastal zone that may have a substantial effect on the resources within the coastal zone, the commission may review and submit comments for any such project which affects resources within the coastal zone.

These comments are primarily provided to clarify the applicable regulatory procedures and identify the substantive issues that would be considered in the Commission’s review and actions on the plan projects, as a coastal development permitting matter. Under Sections 15251(c) and (f) of the CEQA Guidelines, the Secretary of Natural Resources has certified the California Coastal Commission’s regulatory program as a “functionally equivalent process” to CEQA. Accordingly, in reviewing any application to the Commission for an individual, consolidated, or on-appeal coastal development permits, the adopted final EIR, in conjunction with any tiered or discrete project-specific environmental document, would be used as technical background document in assessing environmental effects in terms of the development project’s consistency with the Coastal Act or the LCP, as applicable.

In addition, while detailed evaluation of transportation projects are generally deferred until the time when detailed development plans have been formulated, there are numerous transportation project permits which have been appealed to the Coastal Commission over issues that were fully avoidable had consideration of the land use policies and regulations been given at the project planning stage before extensive engineering and design momentum had amassed. Accordingly, while the RTP is primarily a programmatic undertaking, the early identification of environmental issues that may affect the inherent viability of a given transportation improvement project in the RTP serves efficient facilities planning as well as is in keeping with the purpose and spirit of CEQA.

Most of the projects identified in the draft RTP will require a variety of permits and other grants of approval from numerous regulatory agencies. However, this letter will focus on the information needed by the California Coastal Commission. These comments address procedurally how the Commission would be involved in the review of the project, the Coastal Act issues raised by the project, and information that would be particularly important to obtain from the applicant during the application process to enable the Commission to adequately evaluate the project. In keeping with this approach, the comments provided below have been structured as to how the EIR should address issues of consistency with relevant Coastal Act coastal resource and environmental policies for the RTP projects. Pertinent Coastal Act provisions are cited, quoted or paraphrased accordingly.

Proposed Projects Considered

For purposes of providing scoping input on the preparation of the subject environmental documentation, this comment letter addresses the following enumerated proposed projects identified in the draft RTP:

Jurisdiction / Agency	Location	Description
California Department of Transportation	U.S. 101 Corridor Improvement Project - Programmed	Safety improvements at uncontrolled intersections
	U.S. 101 / Broadway, Kmart to O Street - Programmed	ADA curb returns and ramp upgrades
	U.S. 101-Various locations from Westhaven Drive to Trinidad Road - Programmed	Humboldt 101 seismic retrofit
	S.R. 255-Near Arcata at McDaniel Slough Bridge - Programmed	Mad River Bridge Wetland Mitigation
City of Arcata		
	Old Arcata Road Buttermilk to Jacoby Creek Rd - Programmed	Rehab, ped-bike and calming improvements, gateway at Jacoby Creek Road
	Annual residential streets improvement program as described in City's Pavement Management Plan	Residential streets citywide [within Coastal Zone]
	Annual Roadway Improvements Project as described in City's Pavement Management Plan	Principally on city bus routes; arterial and collectors [within Coastal Zone]
	Baylands Trail - Planned	Class I Multi-Use Trail within Baylands Park
City of Eureka		
	Waterfront Dr from G Street to J Street - Programmed	Connection Phase II
	Eureka Waterfront Trail - Planned	Tydd Street to Herrick Avenue, including along the existing Eureka Boardwalk
	Eureka Waterfront Trail – Programmed	Class I Multi-use Trail from Del Norte to Truesdale St
	Truesdale Vista Point Trail – Planned	Multipurpose Trail from Truesdale Vista Point to Hilfiker Lane Trailhead
	Hawthorn Street from Broadway to Felt Street, Felt Street from Hawthorn to Del Norte Streets - Programmed	Road rehabilitation, ADA, bicycle Facility
	Road rehabilitation - Programmed	Koster St from Del Norte to Washington St
	Samoa Field Airport - Programmed	Remove/lower Aircraft Hazards; Design/construct T-hangers; Resurface/repaint Runway, Taxiways; Construct Wildlife Exclusion Fencing
County of Humboldt		
	Myrtle Avenue, Lucas Street, Harris Avenue - Programmed	Sidewalk Infilling
	Myrtle Avenue - Programmed	Bicycle Lane Improvements Pigeon Point to Mitchell
	Orick Levee Coastal Trail - Planned	Multi-purpose trail on north Redwood Creek levee to the U.S. 101 bridge (0.69 miles), south levee to Redwood National Park Visitor Center (2.45 miles).
	Murray Field Airport - Programmed	Design/construct Runway, Taxiway; Design /construct Entry Road Rehabilitation
County of Humboldt/City of Arcata		

Jurisdiction / Agency	Location	Description
	Arcata Rails with Trail - Planned	Eighth Street to Samoa Boulevard, with segments along railroad tracks.
	Hammond Trail - Planned	Extend the Hammond Trail from the Mad River bridge south, connecting to the City of Arcata (downtown) and Eureka. Extend the trail north to Westhaven and Trinidad. Restore the Hammond Trail pedestrian / bicycle bridge across the Mad River.
County of Humboldt/Cities of Arcata & Eureka		
	Humboldt Bay Trail – Arcata to Eureka Segment - Planned	A 6.5-mile Class I/multi-use path around the east side of Humboldt Bay, between Arcata and Eureka.

Linkage between Planned Projects and Physical Development Projects

As presented in the draft RTP, if funded and programmed for implementation by the transportation agency entity, the envisioned projects should be considered viable infrastructure development proposals which will subsequently require some combination of discretionary authorizations for local, state and regional, and federal authorities. Many of these projects entail “development” as defined in section 30007 of the California Coastal Act (Public Resources Code §§30000 et seq.), namely:

...on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511).

As used in this section, ‘structure’ includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line

Further, as directed in Coastal Act section 30600, any “person” wishing to perform or undertake any development in the coastal zone shall obtain a coastal development permit (CDP). Consequently, depending upon their locations, either separate CDPs must be obtained from the Cities, County, and/or the Commission, or alternately, with the concurrence of the applicant(s), the involved City and/or County, and the Commission, a consolidated CDP could be processed by the Coastal Commission pursuant to Public Resources Code section 30601.3. The Cities’ and County’s standards of review for hearing permit requests for the portions of the project within

their jurisdiction would be whether the development conforms to the standards set forth in their respective certified LCPs. The standard of review for the issuance of a CDP for the portions of the project within the Commission’s retained/original jurisdiction, or for a consolidated CDP, would be whether the development, in part or in whole, respectively, is consistent with the policies of Chapter 3 of the Coastal Act, using the involved Cities’ and County’s LCPs as non-binding guidance in the interpretation of such consistency.

Environmental Review

The following comments are provided for lead and responsible agency consideration in the subsequent development of final environmental review documentation and review protocols for the subsequent assessing the environmental effects associated with the development projects identified in the RTP.

Aesthetics

Applicable Coastal Act Policies and Standards

Coastal Act Section 30251 requires that “... the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance.” Permitted development is to be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize alteration of natural landforms, to be compatible with surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas. New development occurring in highly scenic areas, such as the project site, must be subordinate to the character of its setting.

Comments

The FEIR coverage of visual resources impacts should provide for evaluation of whether the siting and construction of the transportation improvements, particularly the above-grade structures, utilities, fencing, lighting, and signage elements, would comply with the above-cited criteria. Many of these evaluations are qualitative in nature and may require supplemental information. To aid in these assessments, provisions for the submittal of plan and elevation views of the location and physical extent of the proposed structures, utilities, fencing, lighting, and signage, visual simulations, the erection of story poles, and/or photographic depiction of pre- and post- construction views to and along the shoreline should be discussed in the EIR and ideally incorporated within the *Environmental Stewardship* goal, objective, and policies sections of the Complete Streets Element. Requirements for identifying mitigation measures to reduce any significant adverse effects to less-than-significant levels, including height and size restrictions, exterior treatments to the structures, and landscaping and screening should similarly be detailed.

2.1

Agricultural and Forest Resources

Applicable Coastal Act Policies and Standards

Section 30241 of the Coastal Act states:

The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

- (a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.
- (b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.
- (c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.
- (d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.
- (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.

Coastal Act Section 30242 states:

All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

The assessment of impacts to the economic productivity of the agricultural land is further addressed in Coastal Act Section 30241.5 as follows:

2.2

(a) If the viability of existing agricultural uses is an issue pursuant to subdivision (b) of Section 30241 as to any local coastal program or amendment to any certified local coastal program submitted for review and approval under this division, the determination of "viability" shall include, but not be limited to, consideration of an economic feasibility evaluation containing at least both of the following elements:

(1) An analysis of the gross revenue from the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.

(2) An analysis of the operational expenses, excluding the cost of land, associated with the production of the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.

For purposes of this subdivision, "area" means a geographic area of sufficient size to provide an accurate evaluation of the economic feasibility of agricultural uses for those lands included in the local coastal program or in the proposed amendment to a certified local coastal program.

(b) The economic feasibility evaluation required by subdivision (a) shall be submitted to the commission, by the local government, as part of its submittal of a local coastal program or an amendment to any local coastal program. If the local government determines that it does not have the staff with the necessary expertise to conduct the economic feasibility evaluation, the evaluation may be conducted under agreement with the local government by a consultant selected jointly by local government and the executive director of the commission.

The Initial Study checklist states that, "RTP's policies do not promote actions involving converting agriculture or forest resources to non-agricultural or non-forest uses. No projects are proposed on agricultural land, farmland, forest land, or timberland." The DEIR subsequently relegated coverage of this impact category to the appendix containing the report's Initial Study. However, it is noted that among the proposed projects enumerated in the RTP are several trails projects which may entail the widening of the travelway of rural roads or the new construction of, or enhancements to, roads rights-of-way for the exclusive use of bicycles and pedestrians, such as along Myrtle Avenue – Old Arcata Road, the southerly extension to the Hammond Trail, or the new Baylands Trail. These routes are bordered by adjoining lands with agricultural land use and zoning designations for which any such road widening or new trail construction may entail agricultural conversion. The FEIR should address potential impacts to agricultural resources from road widening and trail construction projects in rural areas, and the *Environmental Stewardship* goal, objective, and policies sections of the Trails Element should ideally be expanded upon to identify the limitations of the Coastal Act with respect to conversions of agricultural lands, and the need for conflict minimization / continued viability studies as may be warranted for permissible conversions for transportation infrastructure. (See also comments under the Transportation sub-heading regarding the route of the City of Arcata's Baylands Trail through agricultural lands.)

2.2,
cont'd

Biological Resources

Applicable Coastal Act and LCP Policies and Standards

Coastal Act Section 30230 states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 continues on to direct:

2.3

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Coastal Act Section 30240 directs:

- (a) Environmentally sensitive habitat areas¹ shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
- (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas. [Emphases added.]

With respect to the dredging, diking, and/or filling of open coastal waters, wetlands, estuaries, and lakes, Coastal Act Section 30233 such development may only be permitted in instances where: (a) there is no feasible less environmentally damaging alternative; (b) feasible mitigation measures have been provided to minimize adverse environmental effects; and (c) is for serving a limited set of land uses. Typically for planned transportation infrastructure improvements, these uses are generally limited to projects having “incidental public service purposes,” or, in the case of trail developments and mitigation programs, “nature study... or similar resource dependent activities” and “restoration purposes,” respectively.

Comments

Permissible Development Within and Adjacent to ESHAs, Wetlands, and Other Coastal Waters: There are several projects identified within the Complete Streets and Aviation System elements and as mitigation projects which would entail the dredging, diking, and/or filling of wetlands or development adjacent to environmentally sensitive areas. With respect to trail projects, it is noted that within both the Trails element of the draft RTP and in the Recreation section of the Initial Study checklist responses that trails are considered to be transportation facilities

The FEIR should address, and the *Environmental Stewardship* goal, objective, and policies sections of these elements should ideally be revised to highlight, the Coastal Act’s requirements with respect to the prohibitions and qualifications on development within and adjacent to ESHA, and improvements within wetlands being limited to those for a permissible use, comprising the least environmentally damaging feasible alternative, and providing all feasible mitigation measures. The regulatory authority granted to the Coastal Commission and delegated local

¹ Coastal Act Section 30107.5 defines the phrase “environmentally sensitive area” as “...any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.”

governments by the Coastal Act over development in wetlands such be acknowledged in Mitigation Measure B-2(a) alongside that of the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and the North Coast Regional Water Quality Control Board. Further, for the RTP projects located within the coastal zone, the “one-parameter” definition of wetlands as set forth in Title 14, California Code of Regulations, section 13577(b) should be respectively cited together with that of the “three-parameter” definition utilized by relevant regulatory agencies operating under the purview of the Clean Water Act.

2.4

2.5

In addition, the RTP FEIR’s analytical framework should provide for the identification of instances when the intended transportation facility purpose of the roadway or trail improvement would be for improved safety at existing facility capacity, and not entail an expansion of such capacity. Alternately, for trails unavoidably routed through or near environmentally sensitive area, any such facility would need to be subordinated to another purpose dependent upon such resource area, such as “nature study,” in order for permitting of the trail to be legally tenable. In such cases, the design and siting of the trail may also need to be revised to prioritize the avoidance and minimization of impacts to wetlands and ESHA first and foremost over commuter efficiency. Additionally, an appropriate level of natural resources interpretive features would need to be included alongside other trail amenities for the purported educational purpose of the trail to be viewed as genuine.

2.6

Finally, with respect to proposed Mitigation Measure B-2(b), although the provision for compensatory wetlands replacement is stated in terms of “a minimum ration of 2:1,” it has been the Commission’s experience that, during the course of permitting development projects, many agencies will interpret the stated ratio as a maximum offset rather than a threshold amount. Moreover, in certain cases where the impacted wetlands can clearly be successfully replaced and established onsite with little likely difficulty or delay, a 2:1 replacement ration may not be roughly proportional to the impact being mitigated. Conversely, in other cases, due to the relative sensitivity of the resources affected, the potential temporal losses in habitat availability associated with the time lag between their disruption and replacement, the potential difficulties in establishing the mitigation, and the type and location of the replacement wetlands, a higher than 2:1 ratio would be indicated. Accordingly, it is suggested that Mitigation Measures B-1(d) and B-2(b) be structured on a range of compensatory replacement wetland and habitat restoration ratios, for example, from 1:1 to 4:1 or higher, to be applied on a case-by-case basis depending upon the above-stated factors.

2.7

Impacts to Aquatic Biological Resources: Finally, in keeping with the directives of Coastal Act Section 30231, the FEIR, possibly as part of Mitigation Measure B-1(d), should provide for an evaluation of opportunities where maintenance and enhancement of functional capacity of nearby coastal waters might feasibly be incorporated into the development of the identified transportation improvement projects. Additionally, the water quality best management practices (BMPs) enumerated in Mitigation Measure B-3(b) should be expanded to include both construction phase and permanent features in project design to avoid and minimize the entrainment of sediment and other pollutants in stormwater, and the inclusion of permanent BMPs for erosion control and runoff management of drainage into the biologically significant offsite creeks, rivers, and estuarine wetlands. It is suggested that citation to the municipal and new development and redevelopment BMP handbooks available through the California

2.8

2.9

Stormwater Quality Association (<http://www.casqa.org>) be referenced, This articulation of management practices is of particular importance for projects in close proximity to wetlands and open coastal waters, or to be located in or near known contaminated sites, such as the extension of Waterfront Drive between G and J Streets in Eureka. These measures should also be addressed in the Environmental Stewardship goal, objective, and policies sections of the RTP.

2.9, cont.

Cultural Resources

Applicable Coastal Act and LCP Policies and Standards

Coastal Act Section 30244 states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Comments

The Initial Study identifies several preventive and mitigative measures that are intended to avoid impacts to cultural resources. Among these are Mitigation Measure V(a,b,c)-2 which calls for consultations with the Northwest Information Center of the California Historical Resources Information Center and “other pertinent historical organizations.” Insofar as the DEIR does not contain any further discussion of potential cultural resource impacts, it remains unclear as to whether the scope of the intended consultations would extend to applicable Tribal Historical Protection Officers or other groups having local expertise in the presence and significance of *prehistoric* cultural resources. These parties include, but are not limited to the Bear River Band of Rohnerville Rancheria, the Wiyot Tribe, the Blue Lake Rancheria, the Trinidad Rancheria, the Tsurai Ancestral Society, Big Lagoon Rancheria, and the Yurok Tribe. The FEIR should incorporate and, furthermore, consider instances where the scope of Initial Study Mitigation Measures V(a,b,c)-1, 2, and -3 should be expanded accordingly to specifically identify such groups in the routing of consultation solicitations and site assessments.

2.10

Geology and Soils (Sea Level Rise) / Hydrology and Water Quality (Coastal Flooding)

Applicable Coastal Act and LCP Policies and Standards

Section 30253 of the Coastal Act states, in applicable part:

New development shall do all of the following:

- (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs...
- (d) Minimize energy consumption and vehicle miles traveled...

2.11

Comments

The projects identified in the draft RTP are located in a highly geologically active area subject to exposure to a variety of natural hazards including seismic shaking, liquefaction-related subsidence and ground failure, tsunami inundation, and supra-tidal and storm-surge related flooding. The Coastal Act requirements are particularly relevant given many of the project sites' low elevation and near shoreline environmental setting adjoining open harbor and stream course waters where exposure to tsunami inundation and storm surge exacerbated by sea level rise is anticipated during the economic design life of the improvements.

The Initial Study indicated that coverage will be provided in the EIR of many of these geologic hazards issues. However, the DEIR contain no discussion as to what if any consideration will be given to future anticipated sea level rise in assessing exposures of persons and property to these risks. Furthermore, no specific details are provided as to the breadth of intended evaluation of tsunami hazards in terms of the inclusion of adaptation and resiliency features in project siting and design, and the need for constructive noticing of evacuation routes from inundation/runup prone areas. Moreover, Mitigation Measures W-3(a) and W-3(b) do not explicitly explain whether analyses of flooding and tsunami hazards and responses thereto would include a consideration of sea level rise. The FEIR's coverage of potential geologic and hydrologic impacts should specifically identify this factor as germane to the evaluation of potential geologic and hydrological impacts and mitigation measures.

2.11

Hazards and Hazardous Materials

Applicable Coastal Act and LCP Policies and Standards

Coastal Act Section 30232 directs:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Comments

Development of the various transportation improvements, especially those involving the use of mechanized equipment or the sawing and/or grinding of existing pavement in close proximity to open coastal waters and wetlands could result in significant impacts to water quality from accidental releases of hazardous materials (e.g., hydraulic fluid, petroleum-based fuels and lubricants, concrete debris, and asphaltic compounds). The FEIR should provide an analytical framework for addressing potential environmental impacts and identify appropriate construction phase and long-term water quality best management practices (BMPs) to prevent impacts to receiving coastal waters off-site. As previously suggested, a reference to the municipal and new development and redevelopment BMP handbooks available through the California Stormwater Quality Association (<http://www.casqa.org>) should be included in Mitigation Measure B-3(b). The incorporation of the measures should be included at a policy level within the Environmental Stewardship sections of the RTP. (See also comments under the Biological Resources sub-heading regarding the City of Eureka's intended extension of Waterfront Drive between G and J Streets alongside the former Union Pacific Railroad property.)

2.12

Land Use and Planning

The response to Initial Study checklist item X.b) states that, “RTP policies are consistent with existing and projected land uses in adopted land use plans, including city and county general plans.” The entry continues on to note that the various plan initiatives “promote improving the regional transportation system by investing in existing infrastructure, rather than creating new services or new infrastructure in undeveloped areas,” and “are in existing transportation corridors within residential, commercial, industrial, or other developed land use areas.” In addition, the response asserts that “infrastructure projects are generally not subject to land use standards and as such would not conflict with adopted land use plans.”

From the information contained in the draft RTP and the Initial Study, and given the lack of further coverage in the DEIR, it remains unclear this whether first statement is correct from two perspectives. First, it is not evident whether such purported general and land use plan consistency could be concluded for all of the provisions within the Cities’ or County’s Local Coastal Programs (LCPs). These local government programs, either in the form of a general plan “coastal” element, or a discrete separate land use regulatory document, typically include inventories of existing transportation facilities or the identity of future, planned-for transportation projects, such as new road or trail “plan lines,” or interchange improvements for which such categorical conformance could be asserted. With the exceptions of the extension of Waterfront Drive between G and J Streets and the portions of the Eureka Waterfront Trail between the CA 255 bridge and Del Norte Street addressed under City of Eureka General Plan Policies 3.A.8 and 3.D.2, the majority of the new roadway sectional improvements and separate bike path projects identified in the RTP are not mentioned in the County and City LCPs. Secondly, several of the projects identified in the draft RTP are situated in the Coastal Commission’s original/retained jurisdiction for with the policies and standards of the Coastal Act would comprise a “policy or regulation of an agency with jurisdiction over the Project.” Some of these projects may arguably fall under more over-arching policies for maintaining and enhancing area transportations networks, while others may be at cross-purposes with specific provisions in the Coastal Act or LCPs. For example, consider the wording of Coastal Act section 20212(a) and 30214(a), in effective part, with respect to bounds placed on the siting and development of public coastal access facilities:

2.13

Section 30212 New development projects

- (a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected...

Section 30214 Implementation of public access policies; legislative intent

- (a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

- (1) Topographic and geologic site characteristics.

- (2) The capacity of the site to sustain use and at what level of intensity.
- (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.
- (4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter... [Emphases added.]

In addition, with respect to the proposed routing of the Baylands Trail through lands designated as Agricultural Exclusive, Arcata Coastal Land Use Element Policy IV-11 states:

Private and public non-vehicular recreational activities such as hiking, riding, fishing, hunting, and other recreational activities which do not require permanent structures, facilities, or foundations may be permitted in the Agricultural Exclusive zone if they do not interfere with adjacent agricultural uses, or limit the potential of the site to return to agricultural use or significantly displace the wildlife utilizing the area, especially in wetlands. This recommendation shall be implemented in the Land Use and Development Guide. [Emphases added.]

2.13

However, an examination of the City's development guidelines reveals no such implementation measures, such as development and performance standards, within either within the AE zoning district regulations, the provisions for accessory uses, or in the general uses section of the document. Accordingly, in the absence of provisions for evaluating the applicability of, and potential conflicts with City and County LCP provisions, an entire class of impacts from such transportation projects is potentially being dismissed out of hand by such a conclusory determination.

With respect to the latter assertions, it is noted that affording and fostering transportation in a manner that does not result in growth inducement appears as an objective in the Cities' and County's local planning programs and the Coastal Act. Further, it is acknowledged that preemptions apply to local government ministerial and discretionary permit requirements where that state agencies such as Caltrans are not bound by locally adopted County and municipal land use regulations. In addition, even if so not preempted, as most roadways and rights-of-way are not formally assigned land use and zoning designations, compliance with plan and zoning prescriptive standards becomes somewhat of a moot issue. Nonetheless, even with the inclusion of measures to avoid growth inducement, or the absence of enumerated prescriptive zoning standards, improvements to existing transportation infrastructure can potentially be in conflict with adopted land use plan policies and standards. Moreover, within the context of the requirements of the Coastal Act, particularly with respect to the scope and range of activities and development subject to its authority, the contention that transportation projects are not subject to land use standards, per se, is not accurate.

To the contrary, as discussed previously, all of the projects identified for comment in this letter comprise "development," most of which will require the issuance of a coastal development permit or permit waiver to authorize their construction. Any such permit or waiver must be found to be consistent with the policies and standards of the relevant LCP or Chapter 3 of the Coastal Act, depending upon the location of the project. In addition, while the cities' and the

County's LCPs may have been issued categorical exclusion orders by the Coastal Commission which include provisions for the granting or permit exemptions for certain classes of repair and maintenance activities, including in some cases minor roadway improvements, in order for the permit exclusion to be granted the development must be found to be otherwise in conformance with the LCP.

Consequently, a concentrated effort is needed to demonstrate that the transportation improvement projects identified in the draft RTP would be consistent with all applicable LCP and Coastal Act provisions. To this end, we again stress the importance of the role of the EIR in including appropriate mechanisms in the RTP, in the form of discrete mitigation measures or as may be appended as additional policies within the *Environmental Stewardship* sections of the RTP proper, to address head-on at the planning program stage the consistency issues raised in the comments under Aesthetics, Agricultural and Forest Resources, Biological Resources, Cultural Resources, Geology and Soils (Sea Level Rise) / Hydrology and Water Quality (Coastal Flooding), and Hazards and Hazardous Materials above, and Transportation, below.

2.13

Transportation

Applicable Coastal Act and LCP Policies and Standards

Coastal Act Section 30210 states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211 of the Coastal Act states:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

2.14

Coastal Act Section 30252 directs, in applicable part:

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service,... (3) providing nonautomobile circulation within the development, [and] (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation...

Comments

The Initial Study checklist response to item XVI.1 states that projects identified in the draft RTP have the potential to "conflict with adopted policies, plans, or programs supporting alternative transportation." Presumably, this would include both the development of motor vehicle oriented roadway improvements as well as non-motorized travel and bicycle, or pedestrian facilities.

With respect to the former category, one major vehicular transportation project identified in the draft RTP, the enhancements to the U.S. 101 Eureka-Arcata Corridor, has the potential to be in conflict with the ideal routing of the California Coastal Trail (CCT) as preliminarily envisioned in adopted CCT planning and design documents.²

As was observed in the Initial Study Aesthetics section response, at its September 12, 2013 meeting, the Coastal Commission did find the Eureka-Arcata Corridor conditionally consistent with the state’s coastal management program provided certain conditions were attached to that determination. In addition to requiring that efforts be undertaken to remove outdoor advertising structures along the corridor route to offset visual resource impacts, another condition addressed potential inconsistency with Coastal Act policies requiring maximized public access and recreational opportunities associated with the project:

1. **Coastal Trail Planning.** Construction of the Route 101 Corridor Improvements will not commence until adequate commitments are in place to assure that a separate Class 1 bike and pedestrian trail, parallel to Route 101 from Arcata to the northern end of downtown Eureka, will be constructed and operational by the time the major project components are completed. Such commitments will include, but may not be limited to, assurances that adequate funding for construction of the trail exists, as well as a demonstration that the necessary assurances are in place to secure ownership interests or permissions to enable the trail construction to proceed in a timely manner, prior to or concurrent with construction of the corridor improvements.

2.14

As the largest funded transportation project identified in the draft RTP, the existence of this substantive consistency condition bears repeating in terms of future planning, design, and permitting of the Corridor Improvement Project, especially with respect to adjustments to, or supplementation of, the project STIP funding allocations in the Financial Element of the final RTP.

With respect to the latter non-vehicular facilities category, the draft RTP Trails Element characterizes one trail segment in Arcata, the Baylands Trail, as a facility that is “...or would be part of the California Coastal Trail.” Although the namesake wetlands restoration and enhancement project site is extensive and comprising large tracts of former intertidal area around Arcata Bay, as depicted in the City of Arcata’s Parks and Recreation Master Plan, the portion of “Baylands Park” in which the trail facility would be routed passes through both City of Arcata and Coastal Commission permit jurisdictional areas where land use policies addressing the protection of agricultural lands and wetlands would be applicable to any such trail development. In addition, the Baylands Trail is indicated as inter-tying Old Arcata Road with the Arcata Rail with Trail Corridor although no mechanism is identified as to how this connection would traverse Highway 101. Accordingly, as discussed in the “Principles for Designing the Coastal Trail” chapter of the document titled Completing the California Coastal Trail, the so-called “SB 908 report,” the trail would potentially conflict with several design principles regarding the identified alignment’s proximity to the ocean, its “integrity” in terms of separation from

2.15

² See findings discussion on pages 50-51 of the August 29, 2013 staff recommendation report for Consistency Certification No. CC-016-13 (<http://documents.coastal.ca.gov/reports/2013/9/Th12a-9-2013.pdf>)

vehicular facilities, and “respect” for the protection of priority and environmentally sensitive coastal resources.³ In addition, the related need for the provision of access support facilities, such as trailhead parking areas, trash cans, benches, etc., in the development of and funding for, new trail infrastructure should also be assessed.

2.15, cont.

With regard to how best to address mitigation measures at the transportation plan programmatic level that could serve for incorporation in project design, consideration should be given in the FEIR as to the merits of incorporating the design principles and environmental protections identified in the SB 908 report within the *Environmental Stewardship* sections of the final RTP.

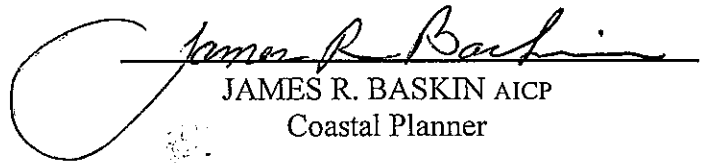
2.16

Finally, with respect to public transit, it is noted that identified projects are limited to motor coach fleet replacement with no route or service hour expansions being funded for bus lines in the coastal zone. While it is recognized that service extensions are largely dependent upon adequate ridership volumes to justify the initial investment and defray ongoing costs, independent of these factors, the FEIR should investigate the feasibility of whether adjustments to existing service schedules and routes would be warranted to provide for greater linkage to non-vehicular transportation infrastructure, notably the coastal access facilities identified in Trails Element of the draft RTP.

2.17

Thank you for the opportunity to provide comments as part of the preparation of the environmental analysis. Please call if you have any questions regarding this letter.

Sincerely,



JAMES R. BASKIN AICP
Coastal Planner

RSM/JRB:jb/lt

³ See <http://www.coastal.ca.gov/access/coastal-trail-report.pdf>

Letter 2

COMMENTER: James R. Baskin, Coastal Planner, California Coastal Commission, North Coast District Office

DATE: June 26, 2014

RESPONSE:

Response 2.1

The commenter states that the FEIR coverage of visual resources impacts should provide for evaluation of whether the siting and construction of the transportation improvements would comply with Coastal Act Section 30251. The commenter states that provisions for the submittal of plan and elevation views of the location and physical extent of the proposed transportation improvements should be discussed in the EIR and incorporated within the Environmental Stewardship sections of the Complete Streets Element. The commenter states that the EIR should also detail the requirements for identifying mitigation measures to reduce any significant adverse effects to less-than significant levels.

In acknowledgement of Coastal Act Section 30251, the Initial Study (Appendix A of the Final EIR) has been revised accordingly under Aesthetic Resources Mitigation Measures I(c)-1 to state that RTP projects shall be designed to avoid significantly degrading the existing visual character or quality of aesthetic resources, including views to and along the ocean and scenic coastal areas. In addition, Mitigation Measure I(c)-1 has also been revised to state that project siting and construction shall minimize altering natural landforms and to the fullest extent feasible be aesthetically compatible with the surrounding areas. Furthermore, Mitigation Measure I(c)-2 has been added to the Initial Study to state that , “During project design and environmental review processes, project proponents should provide plans that show elevation views of the project location with the proposed project, including proposed structures, utilities, fencing, lighting, landscaping, and signage elements.” These updated mitigation measures are included in the Mitigation Monitoring and Reporting Program contained in the Final EIR (see Appendix B).

Response 2.2

The commenter states that the FEIR should address potential impacts to agricultural resources from road widening and trail construction projects in rural areas, and that the Environmental Stewardship sections of the Trails Element should be expanded upon to identify the limitations of the Coastal Act with respect to conversions of agricultural lands and the potential needs for conflict minimization / continued viability studies.

As discussed in the Initial Study (Appendix A of the Draft EIR), the RTP’s policies do not promote actions involving converting agriculture or forest resources to non-agricultural or non-forest uses. No projects are proposed on agricultural land, farmland, forest land, or timberland. In addition, further discussion has also been added to the Initial Study (see Appendix A of the Final EIR) to state that some RTP projects are proposed along roadways, trails, or other areas that border lands with an agricultural land use designation or zoning and



mitigation measures have been added to the Initial Study to demonstrate that any impacts related to encroachment or conversion of agriculture or forest resources can be reduced to a less than significant level. As stated in the Initial Study in the Final EIR, In addition to the Farmland Protection Policy Act and the California Coastal Act, among others, and tiered environmental assessment at the project level, the potential impact can be reduced to less than significant with Mitigation Measure II(b,e)-1 and II(b,e)-2. Mitigation Measure II(b,e)-1 includes siting and designating RTP projects to avoid encroaching on lands with agricultural land use and zoning designations. Mitigation Measure II(b,e)-2 includes compensation for unavoidable conversion impacts in accordance with the Farmland Protection Policy Act and local and regional standards. Mitigation Measure II(b,e)-2 also states that the implementing agency should employ conflict minimization and / or continue viability studies, as warranted.

Response 2.3

The commenter states that the FEIR should address and the RTP should include reference to the Coastal Act's requirements for development within and adjacent to ESHA.

Section 4.2.1(e) Regulatory Framework of 4.2, *Biological Resources* in the Final EIR has been updated on page 4.2-25, per the commenter's suggestions regarding the Coastal Act's requirements for development within and adjacent to ESHA. In regard to updates to the RTP, see Response 1.1.

Response 2.4

The commenter states that the authority of the Coastal Commission and delegated local governments over development in wetlands should be acknowledged in Mitigation Measure B-2(a).

As suggested by the commenter, the "California Coastal Commission and/or local governments with regulatory authority granted by the Coastal Act" has been added to list of agencies with jurisdiction over development in wetlands in Mitigation Measure B-2(a) on pg. 4.2-40 of the FEIR.

Response 2.5

The commenter states that for the RTP projects located within the coastal zone, the "one-parameter" definition of wetlands (Title 14, California Code of Regulations, section 13577(b)) should be cited together with that of the "three parameter" definition.

As noted in Response 2.3 relating to ESHAs, Section 4.2.1(e) Regulatory Framework of 4.2 Biological Resources in the Final EIR has been updated on page 4.2-25. The new language adds that RTP projects located within the coastal zone are subject to the "one-parameter" definition of wetlands per the Coastal Act. Further, Mitigation Measure B-2(a) has been updated as discussed above in Response 2.4.

Response 2.6



The commenter states that the RTP FEIR's analytical framework should provide for the identification of instances when the intended transportation facility purpose of improvement would be for improved safety at existing facility capacity, and not entail an expansion of such capacity. The commenter also suggests that trails routed through areas of natural resources should be designed to avoid such resources foremost over commuter efficiency.

In regard to transportation improvement projects for safety and in relation to expansion of capacity, whether an individual transportation project is intended to improve safety, whether it would increase capacity, or whether by improving safety the capacity would be increased, environmental impacts may result and thus mitigation measures may be required to reduce impacts to a less than significant level. As stated on page 4.2-44 of the Final EIR, because of the programmatic nature of the RTP, the specific impacts to resources related to individual transportation projects (including projects for safety or those that expand capacity) are not known at this time. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined in the Final EIR could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency including whether additional capacity (and the impacts associated with that increase) is necessary for safety reasons.

In regard to impacts from trails, as stated above the individual transportation projects' (including trails) specific impacts to biological resources are not known at this time. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined in the Final EIR could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency. This may include avoiding or minimizing impacts related to a trail's proximity to ESHA or other biological resources. However, those specific impacts and any necessary mitigation measures would be determined at the time of project design and review by the sponsor agency.

Response 2.7

The commenter states that Mitigation Measures B-1(d) and B-2(b) be structured on a range of compensatory replacement wetland and habitat restoration ratios to be applied on a case-by-case basis depending upon such factors as: Potential temporal losses in habitat availability, difficulties in establishing mitigation, type and location of replacement wetlands, and a 2:1 replacement ration not being roughly proportional to the impact being mitigation.

Per the commenter's suggestion, Mitigation Measures B-1(D) on pg. 4.2-33 and B-2(b) on pg. 4.2-41 have been revised to require wetland and habitat restoration ratios of 1:1 to 4:1 or higher, to be applied by local jurisdictions on a case-by-case project basis.



Response 2.8

The commenter states that the FEIR should provide for an evaluation of opportunities where maintenance and enhancement of functional capacity of nearby coastal water might feasibly be incorporated into the development of the identified transportation improvement projects and suggests incorporation into Mitigation Measure B-1(d).

Impacts related to water quality are addressed in Section 4.6, Hydrology and Water Quality, and impact W-1 on page 4.6-10 of the Final EIR has been revised to include impacts related to nearby coastal waters during both construction and operation of transportation projects included in the RTP.

Response 2.9

The commenter states that the water quality best management practices (BMPs) described in Mitigation Measure B-3(b) should be expanded to include both construction phase and permanent features in project design to avoid and minimize the transport of sediment and other pollutants in stormwater, and the inclusion of permanent BMPs for erosion control and runoff management. The commenter suggests that citation to the BMP handbooks from the California Stormwater Quality Association be referenced. The commenter also states that these measures should be addressed in the Environmental Stewardship sections of the RTP.

In regard to water quality best management practices, as stated on page 4.6-10, best management practices (BMPs) would be required to be implemented during construction of transportation projects as part of the Stormwater Pollution Prevention Plan (SWPPP), thereby ensuring that construction associated with the RTP 2013/14 Update would not violate applicable water quality standards or otherwise have a significant adverse impact on water quality. In regard to operation of transportation projects, Mitigation Measure B-3(b) and W-1(b) have been revised in the Final EIR to include that projects shall implement best management practices (BMPs) for erosion control and runoff management of drainage into nearby bodies of water including but not limited to creeks, rivers, wetland and/or coastal waters. And that BMPs developed for individual projects could consult the handbooks from the California Stormwater Quality Association. Also see Response 1.1 for comments related to edits in the RTP.

Response 2.10

The commenter states that it is unclear in the DEIR whether the scope of cultural resource consultations would extend to applicable Tribal Historical Protection Officers or other groups having local expertise in the presence and significance of *prehistoric* cultural resources. The commenter states that the FEIR should incorporate and consider instances where the scope of the Initial Study Mitigation Measures V(a,b,c)-1, 2, and -3 should be expanded to identify such groups in the routing of consultation solicitations and site assessments.

In the Final EIR (See Initial Study in Appendix A), Cultural Resources Mitigation measure V(a,b,c)-2 now identifies the Northwest Information Center of the California Historical Resources Information Center, Tribal Historical Protection Officers, and other pertinent experts



with knowledge of local historic or prehistoric cultural resources for the routing of consultation solicitations and site assessments.

Response 2.11

The commenter states that the FEIR's coverage of potential geologic and hydrologic impacts should specifically identify sea level rise as relevant to the evaluation of potential mitigation measures.

A discussion of sea level rise is included in Section 4.5.1(c) Potential Effects of Climate Change in Section 4.5 Greenhouse Gas Emissions on pg. 4.5-4, and changes have been made to Section 4.5.1(d) Regulatory Setting on pg. 4.5-9. As stated in the EIR, in order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for each individual transportation project, including those that may be located in areas subject to geologic hazards and/or sea level rise, the sponsor agency will need to further analyze the individual transportation projects when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts related to geologic hazards or sea level rise apply, based on final design and conditions on site. Specific project mitigation (if determined to be required) will be defined by the sponsor agency. Nevertheless, Mitigation Measures W-3(a) and W-3(b) have been revised in the Final EIR to state that the potential for flooding and potential for tsunami inundation shall be analyzed considering potential impacts from sea level rise.

Response 2.12

The commenter states that the FEIR should provide an analytical framework for addressing potential environmental impacts and identify appropriate construction phase and long-term water quality BMPs to prevent impacts to off-site water bodies from development of transportation improvements. The commenter suggests a reference to the BMP handbooks from the California Stormwater Quality Association in Mitigation Measure B-3(b) and the incorporation of the measures within the Environmental Stewardship policy sections of the RTP.

See Responses 2.8 and 2.9 related to comment on BMPs. Mitigation Measure B-3(b) and W-1(b) have been revised in the Final EIR consistent with this comment.

Response 2.13

The commenter states that the EIR should include appropriate mechanisms in the RTP, in the form of mitigation measures or as appended additional policies within the Environmental Stewardship sections of the RTP, to demonstrate that the transportation improvement projects identified in the draft RTP would be consistent with all applicable LCP and Coastal Act provisions.

The Initial Study in Appendix A of the Final EIR has been revised in response to the comment. The following summarizes the revisions in the Initial Study (Section X, Land Use). RTP objectives and policies are consistent with existing and projected land uses in adopted land use



plans, including city and county general plans and Local Coastal Programs. The RTP's objectives and policies support transportation projects to be designed, constructed, and maintained to avoid or mitigate adverse environmental impacts. At the programmatic level, the RTP does not conflict with applicable land use plans, policies or regulations adopted for the purpose of avoiding or mitigating adverse environmental impacts.

Infrastructure projects are generally not subject to land use standards and as such would not conflict with adopted land use plans. Proposed projects within the Coastal Zone, however, are still subject to all applicable Coastal Zone policies and regulations of the California Coastal Act. Such projects would be within the permitting jurisdiction of the California Coastal Commission and/or the local jurisdiction.

Response 2.14

The commenter states that the existence of the Coastal Trail Planning substantive consistency condition should be repeated in the Financial Element of the final RTP. See Response 1.1. No changes to the EIR are warranted. However, the final draft of the RTP Finance Element has been revised to add the assumption that HCAOG and member agencies will apply for various grant funds for transportation projects and programs. The RTP gives the Humboldt Bay Trail as one example, and a footnote describes the Coastal Commission's consistency condition for the construction of Caltrans' Route 101 Corridor Improvements project.

Response 2.15

The commenter states that a portion of the proposed Baylands Trail in Arcata, listed in the draft RTP Commuter Trails Element, would be routed through both City of Arcata and Coastal Commission permit jurisdictional areas where land use policies addressing the protection of agricultural lands and wetland would be applicable. The commenter states that the it is not clear how the Baylands Trail would traverse Highway 101, that the trail would potentially conflict with design principles of Completing the California Coastal Trail (SB 908 Report), and states the need for the provision of access support facilities in the development and funding for new trail infrastructure should be assessed.

As stated on page 4.2-44 of the Final EIR, because of the programmatic nature of the RTP, the specific impacts to resources related to individual transportation projects are not known at this time. In order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the sponsor agency will need to further analyze individual transportation projects when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures outlined in the Final EIR could apply to transportation projects, though specific project mitigation (if determined to be required) will be defined by the sponsor agency and responsible regulatory agency(ies), such as the Coastal Commission, as applicable.

Response 2.16



The commenter states that consideration should be given in the FEIR as to the merits of incorporating the design principles and environmental protections identified in the “Principles for Designing the Coastal Trail” chapter of Completing the California Coastal Trail, the SB 908 report, with the Environmental Stewardship sections of the final RTP.

The design parameters of specific project trails are outside the scope of HCAOG. As discussed in the Final EIR, Section 1.0, analysis of site-specific impacts of individual projects is not the intended use of a program EIR. Many specific projects in the RTP 2013/14 Update are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each project will be undertaken as necessary by the appropriate implementing agency prior to each project being considered for approval.

Regarding the comment relating to the RTP (which is outside the scope of the FEIR), the RTP was revised in the Commuter Trails Element. Policy Trails-5 now states that HCAOG supports and encourages the design principles that the Coastal Conservancy outlined in “Completing the California Coastal Trail” (2003).

Response 2.17

The commenter notes that the identified projects are limited to motor coach fleet replacement with no route or service hour expansions being funded for bus lines in the coastal zone. The commenter states that the FEIR should investigate the feasibility of whether adjustments to existing service schedules and routes would be warranted to provide for greater linkages to non-vehicular transportation infrastructure.

Adjustments to public transit service schedules and routes is outside the purview of the EIR and outside the scope of HCAOG.



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AVIATION 839-5401

ADMINISTRATION 445-7491
 BUSINESS 445-7652
 ENGINEERING 445-7377
 FACILITY MAINTENANCE 445-7493

NATURAL RESOURCES 445-7741
 NATURAL RESOURCES PLANNING 267-9540
 PARKS 445-7651
 ROADS & EQUIPMENT MAINTENANCE 445-7421

LAND USE 445-7205

MEMO

Date:	July 3, 2014
To:	Oona Smith, Senior Planner Humboldt County Association of Governments
From:	Hank Seemann, Deputy-Director (Environmental Services) Humboldt County Public Works Department
Subject:	Comments/Questions on Draft EIR Humboldt Regional Transportation Plan – 2013/14 Update

Section 1.5

It should be clarified whether the EIR is intended to apply to Caltrans projects identified in the RTP, and to projects identified in the RTP for which funding is not programmed through HCAOG (e.g., FAA-funded airport projects or BIA-funded road projects). 3.1

Section 2.3

This section (or another section in the DEIR, if more appropriate) should describe the environmental review process for transportation projects that receive funding through the Federal Highways Administration, as administered by Caltrans local assistance division, for compliance with the National Environmental Policy Act (NEPA). The NEPA review process for transportation projects is well-established, rigorous, and extensively documented. This process should be accounted for as part of the “project” that is analyzed in the DEIR. 3.2

It should be noted that projects often have beneficial environmental effects, for example by replacing under-sized or failing culverts, stabilizing fill slopes, reducing sediment delivery to waterways, and improving treatment of surface runoff. 3.3

Table 2-2

- Clarify (or omit) the first bullet point under California Coastal Trail. 3.4
- For the Hammond bridge, replace the word “restore” with “replace”.

Table 2-4

- For NCRA, use more precise terms by listing Eel River Division and Humboldt Bay Division. 3.5

Section 4.2

Table 4.2-2 (and other references in the document): Verify if American badger is present in Humboldt County, and remove references if warranted.

3.6

The thresholds of significance for Biological Resources are not adequately defined. The evaluation criteria listed in Section 4.2.2 make reference to having “substantial adverse effects” on species or habitats. The EIR should be more specific on what constitutes a “substantially adverse” effect. In addition, the document should provide a more clearly defined connection between the significance thresholds and the mitigation measures.

3.7

Issues and concerns with Mitigation Measure B-1:

- B-1 duplicates many of the measures included in the NEPA review process for transportation projects. The EIR should specify that the NEPA review process is equivalent to B-1 (i.e., if a project is subject to NEPA review, then B-1 is not required).

3.8

- For B-1(d), a minimum mitigation ratio of 2:1 for special status plant species needs to be further substantiated. HCAOG should consider omitting a minimum mitigation ratio.

3.9

- The need for B-1(g) should be justified. HCAOG should consider omitting B-1(g).

3.10

- B-1(h) should be edited to more closely match local practice. Reports should be retained on file by the agency and available upon request, rather than being submitted to HCAOG.

3.11

- B-1(i) should only apply to projects with potentially significant impacts. Reports should be retained on file by the agency and available upon request, rather than being submitted to HCAOG.

3.12

Issues and concerns with Mitigation Measure B-2:

- For B-2(b), a minimum mitigation ratio of 2:1 for wetland and riparian habitat needs to be further substantiated. HCAOG should consider omitting a minimum mitigation ratio.

3.13

- HCAOG should re-consider specifying a minimum implementation period for a mitigation and monitoring plan (most funding programs do not fund post-construction monitoring).

3.14

- The need for B-2(d) should be justified. HCAOG should consider omitting B-2(d).

3.15

Issues and concerns with Impact B-3 and Mitigation Measure B-3:

- The DEIR does not substantiate why Impact B-3 is a Class I, “significant and unavoidable” impact. HCAOG should consider designating this a Class II, “significant but mitigable” impact.

3.16

- Mitigation measure B-3(a) should clarify what is considered a “long” segment of fencing or lighting.

3.17

Section 4.5

The basis for considering Impact GHG-1 potentially significant is not clear. The need for Mitigation Measure GHG-1 should be further substantiated.

3.18

Section 4.6

Issues and concerns with Impact W-1 and Mitigation Measure W-1:

- The EIR should identify that urban areas in the county (Eureka, Arcata, Fortuna, McKinleyville) are subject to the state municipal separate storm sewer system (MS4) general permit, which contains provisions for low-impact development standards that apply to road projects creating 5,000 square feet or more of newly constructed contiguous impervious surface.

3.19

- The need for W-1(a) related to fertilizers and pesticides is not clear and should be further substantiated. | 3.20
 - Measure W-1(b) related to stormwater runoff needs to be revised to be more flexible and proportionate to the specific project impacts. | 3.21
- Issues and concerns with Impact W-2 and Mitigation Measure W-2:
- The EIR should specify what “documented problems” exist related to quantity and quality of groundwater in Humboldt County. | 3.22
 - The need for W-2 is not clear and should be further substantiated. | 3.23

Letter 3

COMMENTER: Hank Seemann, Deputy-Director, Environmental Services, Humboldt County Public Works Department

DATE: July 3, 2014

RESPONSE:

Response 3.1

The commenter states that it should be clarified whether the EIR is intended to apply to Caltrans projects identified in the RTP and to projects identified in the RTP for which funding is not programmed through HCAOG.

The EIR does not apply to Caltrans projects or to projects identified in the RTP for which funding is not programmed through HCAOG. Mitigation would only apply for HCAOG projects on the list. Changes have been made in Section 1.0 Introduction and Section 2.0 Project Description to clarify.

Response 3.2

The commenter states that the NEPA review process for transportation projects that receive funding through the Federal Highways Administration should be described in Section 2.3 of the DEIR, or another appropriate section in the DEIR, and should be accounted for as part of the “project” that is analyzed in the DEIR.

NEPA review for individual transportation projects is outside of the purview of HCAOG and this EIR. However, a statement in Section 1.0, Introduction, of the Final EIR has been added to clarify that NEPA review may be required for some individual transportation projects if the funding source for the project includes any funds for the federal government. If funding from the federal government is included as a source for the project, sponsor agencies may be required to perform environmental review to satisfy NEPA requirements in addition to CEQA requirements.

Response 3.3

The commenter states that projects often have beneficial environmental effects and that this should be noted in Section 2.3. Changes have been made to acknowledge the beneficial impacts of the proposed RTP’s projects on page 2-5 of Section 2.3.2 Project Objectives.

Response 3.4

The commenter states that the first bullet point under California Coastal Trail in Table 2-2 should be clarified or omitted and suggests a word change for Hammond Bridge from “restore” to “replace.”

Table 2-2 has been updated/revised in the Final EIR to reflect the commenter’s suggestion.



Response 3.5

The commenter requests that instead of NCRA, the more precise Eel River Division and Humboldt Bay Division be used in Table 2-4.

Table 2-4 in the Final EIR has been updated to distinguish between the Eel River Division and the Humboldt Bay Division.

Response 3.6

The commenter states that the presence of American badger should be verified and that references to it should be removed if warranted in Table 4.2-2 and throughout the EIR.

The American badger listed in Table 4.2-2 should remain in the list of special status species known to occur within Humboldt County. The CNDDDB database includes one (1) record of American badger (CNDDDB occurrence number 409) observed in 2007 (recorded on the Shubrick Peak U.S.G.S 7.5 Minute Topographic Quadrangle). Furthermore, Humboldt County is within the known range of this species, and there is abundant suitable habitat (grasslands and open stages of shrub, herbaceous and forest habitats) throughout Humboldt county, and the species likely occurs throughout the County. No changes to the EIR warranted.

Response 3.7

The commenter states that the thresholds of significance for Biological Resources in Section 4.2 are not adequately defined and that the EIR should be more specific on what constitutes a “substantially adverse” effect on species or habitats. In addition, the commenter states that the connection between the significance thresholds and the mitigation measures should be more clearly defined.

The thresholds of significance references in Section 4.2, *Biological Resources*, are based on Appendix G of the *State CEQA Guidelines*. In general, a substantial adverse effect on sensitive species, habitats, or wetlands would occur if a project would directly or indirectly result in the loss or removal of a species, habitat or wetlands. As stated on page 4.2-31, direct impacts to special status species include injury or mortality occurring during implementation and/or operation of projects under the RTP. Direct impacts also include habitat modification and loss such that it results in the mortality or otherwise alters the foraging and breeding behavior substantially enough to cause injury. Indirect impacts could be caused by the spread of invasive non-native species that out-compete native species and/or alter habitat towards a state that is unsuitable for special status species.

Response 3.8

The commenter states that Mitigation Measure B-1 in Section 4.2 duplicates measures included in the NEPA review process for transportation projects and requests that the EIR specify that B-1 is equivalent to the NEPA review process.



See Response 3.2. While NEPA review may be required for some individual transportation projects that require federal funds, not all transportation projects may require NEPA review.

Response 3.9

The commenter states that the minimum mitigation ratio for special status plant species in Mitigation Measure B-1(d) in Section 4.2 needs to be further substantiated or omitted. See Response 2.7.

Response 3.10

The commenter states that the need for Mitigation Measure B-1(g) in Section 4.2 should be justified or omitted.

The measures listed in Mitigation Measure B-1(g) are intended to options for sponsoring agencies to include if necessary to reduce potential for impacts to non-listed special status animal species that would result from individual transportation projects. This Mitigation Measure in the Final EIR has been revised to state that these measures are recommended but that ultimately it is up to the sponsor agency of a transportation project to determine what (if any) mitigation is necessary to reduce impacts to a less than significant level.

Response 3.11

The commenter states that Mitigation Measure B-1(h) in Section 4.2 should be edited, such that reports are retained on file by the agency and available upon request, rather than submitted to HCAOG. Comment acknowledged and changes were made to Mitigation Measure B-1(h) in Section 4.2.

Response 3.12

The commenter states that Mitigation Measure B-1(i) in Section 4.2 should only apply to projects with potentially significant impacts and that reports should be retained on file by the agency and available upon request, rather than submitted to HCAOG.

Changes were made to Mitigation Measure B-1(i) in Section 4.2 as suggested by the commenter.

Response 3.13

The commenter states that the minimum mitigation ratio for wetland and riparian habitat in Mitigation Measure B-2(b) in Section 4.2 needs to be further substantiated or omitted. See Response 2.7. The Mitigation Measure B-2(b) has been revised in the Final EIR to provide a range of mitigation ratios and the specific ration would be determined on each individual transportation project by the sponsoring agency.

Response 3.14



The commenter states that specifying a minimum implementation period for a mitigation and monitoring plan should be re-considered.

Mitigation Measure B-1(d) has been updated/ revised to state that a monitoring plan for the compensatory mitigation site shall include monitoring schedule that is to be determined by the sponsoring agency implementing the transportation project.

Response 3.15

The commenter states Mitigation Measure B-2(d) in Section 4.2 should be justified or omitted.

Mitigation Measure B-2(d) would include an Invasive Weed Prevention and Management Program. This measure is necessary to reduce impacts related to invasive weeds because indirect impacts to sensitive habitats may result from individual transportation projects. Indirect impacts from invasive weeds (as stated on page 4.2-40) include habitat degradation caused by incidentally introducing invasive plant species from construction equipment, through selecting invasive landscape plants, and eroding disturbed areas. Impacts would be potentially significant and Mitigation Measure B-2(d) may be necessary for an individual transportation project to reduce impacts to a less than significant level. Nevertheless, the Final EIR also clarifies that in order to determine the actual magnitude of impact, if any, and the appropriate mitigation measure for that project, the individual transportation projects will need to be analyzed further by the sponsor agency when they are implemented and final designs completed. At that time, the sponsor agency would confirm whether or not the potential impacts listed apply, based on final design and conditions on site. Mitigation measures such as Mitigation Measure B-2(d) could apply to transportation projects though specific project mitigation (if determined to be required) will be defined by the sponsor agency.

Response 3.16

The commenter states that the DEIR does not substantiate why Impact B-3 in Section 4.2 is a Class I impact and that HCAOG should consider changing the designation to a Class II impact.

The commenter suggestion as been noted and HCAOG has determined that Impact B-3 in Section 4.2 be edited in the Final EIR to a Class II impact as mitigation measures provided have been determined to reduce this impact to a less than significant level.

Response 3.17

The commenter states that Mitigation Measure B-3(a) in Section 4.2 should clarify what is meant by “long” segment of fencing or lighting.

Mitigation Measure B-3(a) has been updated in the Final EIR to clarify that “long” means approximately a quarter (1/4) mile or more in length.

Response 3.18



The commenter states the basis for considering Impact GHG-1 in Section 4.5 potentially significant is not clear and that the need for Mitigation Measure GHG-1 should be further substantiated.

As stated on page 4.5-12 of the EIR, construction activities associated with transportation improvement projects included in the RTP would generate temporary short-term GHG emissions, primarily due to truck trips and operating construction equipment. Although individual projects' construction-related emissions are speculative at the RTP level because such emissions depend on the characteristics of individual development projects, Mitigation Measure GHG-1 is intended to provide a measure for sponsor agencies to implement (if warranted) that would reduce GHG emissions related to construction activity on a transportation project. While not all transportation projects would result in significant GHG emissions due to construction, some projects may result in a significant impact (to be determined by the sponsor agency) and Mitigation Measure GHG-1 which would ensure that applicable GHG-reducing diesel particulate and NOx emissions measures for off-road construction vehicles are implemented during construction could be applied to reduce GHG impacts to a less than significant level.

Response 3.19

The commenter states that the EIR should identify that urban areas in the county are subject to the state municipal separate storm sewer system (MS4) general permit in Section 4.6.

Comment acknowledged and Section 4.6.2 has been updated with the suggested edit.

Response 3.20

The commenter states that the need for Mitigation Measure W-1(a) in Section 4.6 should be further substantiated related to pesticides/fertilizer

Comment acknowledged and Mitigation Measure W-1(a) has been edited in the Final EIR to clarify that this measure only applies to those transportation projects that that contain or would implement landscaping and that would need the use of fertilizers or pesticides.

Response 3.21

The commenter states that Measure W-1(b) in Section 4.6 needs to be revised to be more flexible and proportionate to the specific project impacts.

Comment acknowledged and Mitigation Measure W-1(b) has been updated in the Final EIR to clarify the sponsor of an RTP widening or roadway extension project shall ensure that the improvement directs runoff in a manner that would allow for the removal of urban pollutants, fertilizers, pesticides, and other chemicals by using best management practices (BMPs) that are specific for the individual transportation project. These BMPs would ensure erosion control and runoff management of drainage on the project site into nearby bodies of water including but not limited to creeks, rivers, wetland and/or coastal waters is limited and would not result in a significant impact.



Response 3.22

The commenter states that Impact W-2 in Section 4.6 of the EIR should specify what “documented problems” exist related to quantity and quality of groundwater in Humboldt County.

As stated on page 4.6-3, in general, seawater intrusion and high nitrate levels are a problem in shallow aquifers within coastal groundwater basins, and high levels of total dissolved solids (TDS) -- iron, boron, and manganese in particular -- can be a problem in the inland basins of Humboldt County. Elevated TDS levels are due to natural environmental features such as carbonate deposits and sea water intrusion, but other sources include urban runoff, agricultural runoff, and other point/non-point pollution discharges (Winzler & Kelly Consulting Engineers, November 2007 as shown on page 4.6-3 of the EIR).

Response 3.23

The commenter states that the need for W-2 should be further substantiated in Section 4.6.

Mitigation Measures W-2(a-e) are provided to reduce impacts from transportation projects that may impact water supplies including related to the use of water for construction (dust suppression) or operations (watering for landscaping) or through the increase of impervious surfaces which could impact groundwater supplies by incrementally reducing groundwater recharge potential.



Appendix A

*Notice of Preparation (NOP), NOP Comment Letters,
Final Initial Study*



Notice of Preparation and Comment Letters



HUMBOLDT COUNTY ASSOCIATION OF GOVERNMENTS

611 "I" Street, Suite B
Eureka, CA 95501
(707) 444-8208
www.hcaog.net

Date: October 29, 2013

To: Responsible Agencies, Trustee Agencies, and Interested Parties

Re: **Notice of Preparation of an Environmental Impact Report (EIR) and Notice of Public Scoping Meeting**

Humboldt Regional Transportation Plan—2013/14 Update ("VROOM")

NOTICE IS HEREBY GIVEN that the Humboldt County Association of Governments (HCAOG) is the lead agency for the preparation and review of the Program Environmental Impact Report (EIR) for the Humboldt Regional Transportation Plan (RTP) 2013/14 Update, also known as "VROOM" (Variety in Rural Options Of Mobility).

Pursuant to section 15082 of the California Environmental Quality Act (CEQA), HCAOG is soliciting views from your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. HCAOG will accept written comments concerning the scope and content of the EIR from interested persons and organizations concerned with the project.

The Draft EIR will be a Program EIR. Per the CEQA Guidelines, a Program EIR is an EIR that may be prepared on a series of actions that can be characterized as one large project. The purpose of a Program EIR is to allow the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts.

A summary of the project description and probable environmental effects associated with the RTP 2013/14 Update is provided in the attached CEQA Initial Study. The Initial Study will be available for review at the HCAOG office, located at 611 "I" Street, Suite B, Eureka, CA, and on the HCAOG website at <http://www.hcaog.net/documents/regional-transportation-plan-rtp-2013-update-vroom>. Time limits required by State law mandate your response be sent at the earliest possible date but not later than 30 days after receipt of this notice.

HCAOG will hold a **public information/EIR scoping meeting on Thursday, November 21, 2013**, at 6:00 p.m in the Eureka Council Chambers, Eureka City Hall, 531 K Street. The purpose of the meeting is to solicit input on the scope and content of the environmental analysis that will be included in the Draft EIR.

The 30-day public review and comment period will commence on October 29, 2013 and conclude **November 29, 2013** at 5:00 p.m. **Public comments must be received, in writing, by 5:00 p.m. on Friday, November 29, 2013.** Written comments may be mailed to:

Oona Smith, Senior Planner
Humboldt County Association of Governments
611 "I" Street, Suite B
Eureka, CA 95501

They may also be submitted by fax to (707)444-8319, or sent by e-mail to: oonasmith@hcaog.net

Contact Person: Oona Smith (707)444-8208.

COMMISSIONERS
1st Division
Aaron Newman
2nd Division
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**HUMBOLDT BAY
HARBOR, RECREATION, AND CONSERVATION
DISTRICT**

(707) 443-0801
P.O. Box 1030
Eureka, California 95502-1030



November 22, 2013

Oona Smith, Senior Planner
Humboldt County Association of Governments
611 "I" Street, Suite B
Eureka, CA 95501

Subject: Notice of Preparation of an Environmental Impact Report for the Humboldt Regional Transportation Plan – 2013/14 Update ("VROOM")

Dear Ms. Smith,

The Humboldt Bay, Harbor, Recreation & Conservation District appreciates this opportunity to comment on the Humboldt Regional Transportation Plan (RTP) 2013/14 Update Program Environmental Impact Report (EIR) Notice of Preparation. The District is working on several projects that will enhance goods movement within our jurisdiction.

In particular, the District's Samoa Industrial Waterfront Preliminary Transportation Access Plan (SIWPTAP) defines a transportation network for the Samoa Peninsula. The preferred alternative route roadway segments identified in the SIWPTAP are included in the Goods Movement Element of the RTP Update (Table Goods-3) and in the NOP Goods Movement Proposed Regional Projects table. As noted in the table, this roadway network is proposed to be upgraded in functional classification to Major Collector, at a minimum, and improved to meet National Highway System (NHS) designation standards. It is proposed to connect to the existing NHS network in Humboldt County and beyond. The SIWPTAP will be finalized by December 31, 2013 and the functional reclassification of Bay Street to Major Collector has been initiated with the County.

Please analyze to the extent possible in the PEIR these important improvements for goods movement so that funding applications can reference, and build upon if necessary, this environmental analysis. Additional information about the proposed goods movement projects are provided in the attached table to assist you with this analysis. If you have any questions please contact our District Planner, Planwest Partners, at (707) 825-8260.

Sincerely,

Jack Crider, CEO

Humboldt Bay Harbor, Recreation, and Conservation District

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NOV 27 2013

HUMBOLDT COUNTY
ASSOCIATION OF GOVERNMENTS

Samoa Industrial Waterfront Preliminary Transportation Access Plan - Roadway Segments

DESCRIPTION	RAILROAD CROSSING/ ENCROACHMENT	OWNERSHIP/ EASEMENTS	TOPOGRAPHIC/ PHYSICAL LIMITS
Segment 1: New Navy Base Road – Bay Street to SR 255			
<p>This segment of New Navy Base Road is approximately 13,176 feet long, with an average width of 36.2 feet including 2 to 4-foot-wide shoulders on both sides and no sidewalks. This segment has one travel lane in each direction, except turning pockets at the intersections and is designated as a Major Collector. The posted speed limit on this segment of New Navy Base Road is 55 mph. The average daily traffic volume (DTV) on this segment is 1,560, out of which 45% is truck traffic.</p>	<p>There are no railroad crossings on this segment.</p>	<p>New Navy Base Road is owned and maintained by the County of Humboldt and will not require right-of-way acquisition.</p>	<p>There are no topographic or physical constraints.</p>
Segment 2: Bay Street – New Navy Base Road to Vance Ave.			
<p>This segment of Bay Street is approximately 2,103 feet long with an average paved width of 30.3 feet, including 2- to 3- foot-wide paved shoulders, and no sidewalks. This segment is designated as a local street. The posted speed limit on this segment is 35 mph. The average DTV is 456, out of which 41% is truck traffic.</p>	<p>Segment 2 has two un-signalized railroad crossings. These crossings are within the 50-foot railroad rights-of-way. This section of rail connects the Fairhaven Business Park with former LP Mill site, now HBHRCD Owned.</p>	<p>Bay Street is a County-owned and maintained road and will not require right-of-way acquisition.</p> <p>Segment 2 contains an existing water line crossing within a 30-foot easement granted to the Humboldt Bay Municipal Water District. A row of existing joint utility poles are located within the road right-of-way. Based on advanced road segment design, these utility poles may need to be realigned to accommodate construction of Segment 2 to AASHTO standards.</p>	<p>The southern edge of the road segment has a significant willow hollow and a small hill that encroaches into the right-of-way.</p>
Segment 3: Vance Ave. – Bay Street to Samoa Pulp Lane			
<p>This segment of Vance Avenue is approximately 4,612 feet long with an average paved width of 20.6 feet, with no shoulder or sidewalk.</p>	<p>There are no railroad crossings on this segment. The 50-foot railroad right-of-way overlaps with the western edge of the proposed right-of-way of Segment 3. This</p>	<p>This portion of Vance Avenue is currently privately owned. Right-of-way acquisition will be necessary. A 20-foot-wide PG&E gas line easement is located on the western</p>	<p>A gate is located at the southern end of Segment 3. A willow hollow is located on the western side of the road segment. A minor rise in elevation exists</p>

DESCRIPTION	RAILROAD CROSSING/ ENCROACHMENT	OWNERSHIP/ EASEMENTS	TOPOGRAPHIC/ PHYSICAL LIMITS
	minor encroachment (a matter of five feet or less) continues to the intersection of Segment 3 and Segment 5.	side of Segment 3, with evidence of a gas line crossing. An 80-foot PG&E power line easement crosses Segment 3. A line of joint utility poles is located directly adjacent to the existing paved roadway on both the western and eastern sides of Segment 3. Construction of this road segment to AASHTO standards will require relocation of some or all of the existing utility poles.	along the eastern side of the road segment up to the proposed intersection with Segment 7, which may require additional excavation to accommodate widening of the paved roadway. A more pronounced downslope begins on the western side of the roadway at this same location, which will likely require importation of engineered fill to support the widened roadway.
Segment 4: Vance Ave. – Samoa Pulp Lane to North Spur			
This segment of Vance Avenue extends from its intersection with Samoa Pulp Lane to the property line between Samoa Pacific Group (APN 401-031-065) and California Redwood Company (CRC) (APN 401-031-061), where this property line intersects with Vance Avenue. It is approximately 1,788 feet long with an average paved width of 23 feet, with no shoulder or sidewalk.	The 50-foot railroad right-of-way overlaps with the western edge of the proposed right-of-way of Segment 4 at the intersection of Segment 4 and Segment 5. This minor encroachment continues northward along the western edge of Segment 4, and grows more pronounced as the railroad splits and forms two parallel tracks. The two parallel railroad tracks cross the road segment at a skew near station 61+50.	This portion of Vance Avenue is privately owned. A 2004 access easement agreement granted to HBHRCD had a continuous-use contingency that may have expired. Right-of-way acquisition will be necessary on any portions of this road segment not under a valid access easement. A number of joint utility poles are located along this road segment. Widening the paved roadway to AASHTO standards will likely require relocation or removal of some of these utility poles.	The shoulders along Segment 4 are relatively flat and do not pose any topographic constraints to road widening. A small outbuilding is located next to the joint utility pole near station 60+50; this structure may not currently be in use.
Segment 5: Samoa Pulp Lane – New Navy Base Road to Vance Ave.			
This segment of Samoa Pulp Lane (formerly known as LP Drive) connects New Navy Base Road and Vance Avenue and is designated a Local Street. It is approximately 224 feet long with an average paved width of 28 feet, with no shoulder or sidewalk.	The 50-foot railroad right-of-way crosses Segment 5 at an un-signalized intersection. The pavement covering the rails would need to be removed and a crossing control installed prior to railroad operation.	Samoa Pulp Lane, between New Navy Base Road and the west line of the railroad right-of-way is owned and maintained by the County. Acquisition of right of- way across the NCRA right-of-way will be needed.	The road shoulders on both sides of Segment 5 drop off into depressions immediately outside the existing curbs. Widening the paved roadway will likely require importation of engineered fill. A fence meets the edge of the

DESCRIPTION	RAILROAD CROSSING/ ENCROACHMENT	OWNERSHIP/ EASEMENTS	TOPOGRAPHIC/ PHYSICAL LIMITS
		A 50-foot HBMWD water line easement crosses Segment 5. This crossing is not expected to significantly restrict or impact development of Segment 5 to AASHTO standards.	paved road on both sides of Segment 5 and a former guard house and associated automated gate infrastructure is located on the north side of the road.
Segment 6: North Spur off Vance Ave.			
This road segment extends northeast from the northern terminus of Segment 4, leaving Vance Avenue and the adjacent railroad track, and follows the northern boundary of APN 401-031-061 and then 401-031-054 (both owned by CRC) until the Segment ends at the western boundary of APN 401-031-040, owned by HBHRCD. It is approximately 872 feet long and 70 to 80% of the segment length is paved. However, the paving is from previous industrial land use and not associated with a designated street.	Parallel railroad tracks within a 50-foot railroad right-of-way cross the proposed Segment 6 right-of-way.	The proposed new road segment is located on property owned by California Redwood Company. Right-of-way acquisition will be required. There are a number of joint utility poles in the vicinity of Segment 6. As this is a conceptual-level design, the alignment of Segment 6 can likely be modified to circumvent some or all of the existing poles and utility lines.	The road segment crosses old foundations from abandoned and torn down buildings from previous uses of the property. The remainder of the road segment footprint crosses a paved landscape from previous use of the property as a log yard.
Segment 7: South Spur off Vance Ave.			
This road segment begins at Vance Avenue, north of it the intersection with Bay Street. The Segment extends east following the southern boundary of APN 401-112-021 (HBHRCD owned), approximately midway between the existing fence line to the north and the utility line to the south. Toward the eastern end of the peninsula, the Segment takes a turn northward to tie into the existing paved roadway along the waterfront on APN 401-112-021. The Segment ends where the existing paved road intersects with the eastern boundary of APN 401-112-011 (State of California owned). This road segment is approximately 1,645 feet long, and is undeveloped.	Private railroad tracks overlap the proposed Segment 7 right-of-way near station 15+00. This is a private spur track that connects with the NCRA mainline on Segment 4.	The proposed new road segment is located on property owned by HBHRCD. Right-of way acquisition will not be required. A utility line easement, granted to PG&E, is located on the south side of the proposed Segment 7 right-of way. There appears to be ample room to accommodate the proposed road segment without impacting the existing overhead utility line. A pair of outfall or intake pipes cross Segment 7, these pipes do not appear to be working at this time and may be able to be removed.	Following a slight incline from Segment 3, the majority of Segment 7 is relatively flat. The road segment crosses a sandy substrate made up of dredge spoils and native dune mat. A manmade berm, on which a fence has been installed, is located on the north side of the road segment. Segment 7 crosses this berm to meet up with the existing paved waterfront road.

Samoa Industrial Waterfront Preliminary Transportation Access Plan
 2nd Administrative Review Draft
 Humboldt Bay Harbor, Recreation & Conservation District

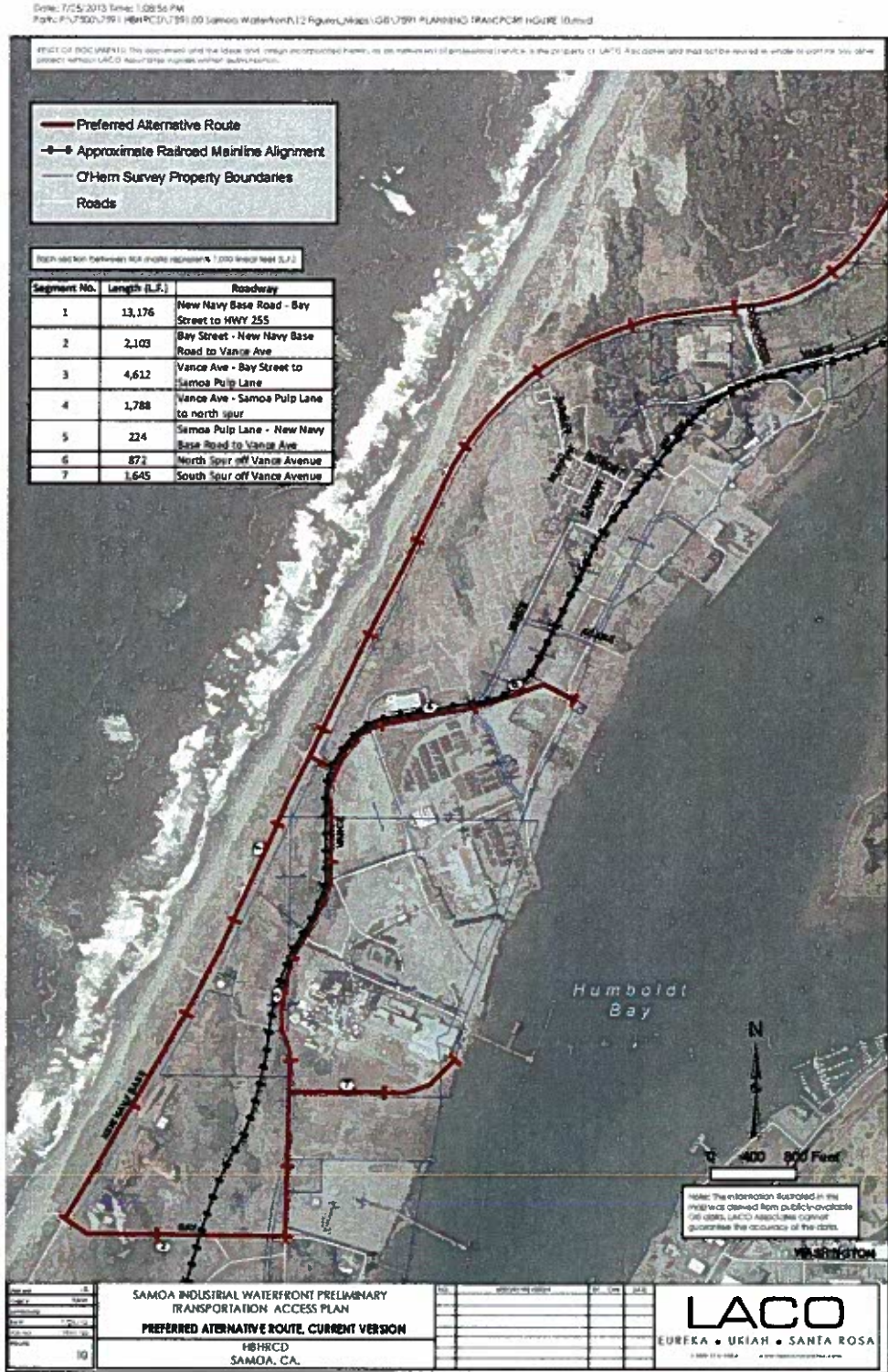


Figure 10. Preferred Alternative Route, current version

CALIFORNIA COASTAL COMMISSION

NORTH COAST DISTRICT OFFICE
1385 EIGHTH STREET • SUITE 130
ARCATA, CA 95521
VOICE (707) 826-8950
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December 16, 2013

Oona Smith, Senior Planner
Humboldt County Association of Governments
611 "I" Street, Suite B
Eureka, CA 95501

SUBJECT: Request for Comments on Notice of Preparation of Draft Environmental Impact Report for *Humboldt Regional Transportation Plan – Update 2013/14: Variety in Rural Options of Mobility*, Humboldt County-wide; SCH No. 2013102063

Dear Ms. Smith:

Thank you for the opportunity to submit comments on the *Notice of Preparation* for the Draft Environmental Impact Report for the above-referenced programmatic planning project. The project entails the periodic update to the County of Humboldt's Regional Transportation Plan for the five-period covering 2013 through 2018, identifying numerous programmed and/or envisioned surface and air transportation infrastructure improvements to be implemented or further considered for funding and implementation over the next ten to twenty years.

The transportation improvement projects identified in the plan span areas *outside* of the California Coastal Zone — generally those areas beyond 1,000 yards inland from the mean high tide line, and areas *within* the coastal zone more proximate to the ocean shoreline situated in the delegated permitting authorities of the Cities of Trinidad, Arcata, and Eureka and the County of Humboldt. Coastal development permitting authority over the City and County jurisdictional segments was delegated to these local governments upon certification of their Local Coastal Programs (LCPs) in 1983, 1988, 1984, and 1986, respectively. In addition, several of the proposed projects would be located within the original/retained jurisdiction of the Coastal Commission, namely the historical tidally-inundated margins of the Pacific Ocean and Humboldt Bay, and lands subject to the Public Trust between the submerged margins of tidally-influenced rivers, lakes, and streams.

Scope of Agency Comments

Pursuant to Section 15082(b) of the CEQA Guidelines (14 CCR §15000 *et seq.*), the Coastal Commission as a consulted agency is to provide the lead agency with "...specific detail about the scope and content of the environmental information related to the ... agency's area of statutory responsibility." In addition to providing this information, the consulted agency must identify if it will be a "responsible" or "trustee" agency (or both) for the project. This designation will depend upon the physical location(s) of the project(s) being studied.

As stated above, many of the RTP projects are located within the California Coastal Zone as defined in Chapter 2.5 of the California Coastal Act (Public Resources Code (PRC) §30150 *et seq.*) and within the coastal development permit jurisdictional areas of the Coastal Commission.

Accordingly, the Commission will function as both a trustee and responsible agency. The role of trustee agency is based upon the Commission’s explicit jurisdiction by law over natural resources held in trust for the people of the State of California that could be affected by the project. The function of responsible agency derives from the role of the Commission in: (a) certifying LCPs for areas within the coastal zone under local governments’ jurisdiction; (b) issuing CDPs within areas of Commission jurisdiction; or (c) hearing appeals on CDPs issued by local governments for certain classes of developments in specified areas.

In addition, the Coastal Commission is designated as the state coastal zone planning and management agency for any and all purposes set forth in the Federal Coastal Zone Management Act of 1972 (16 USC 1451, *et seq.*) This authority primarily takes the form of grants or issuance of certificates or statements as to whether a “federal action” —including development projects undertaken by other entities but receiving federal funding— is in conformity with the provisions of the state’s coastal management program (i.e., Coastal Act). However, with respect to any project located outside the coastal zone that may have a substantial effect on the resources within the coastal zone, the commission may review and submit comments for any such project which affects resources within the coastal zone.

These comments are being provided to clarify the applicable regulatory procedures and identify the substantive issues that would be considered in the Commission’s review and actions on the plan projects, as a coastal development permitting matter. Under Sections 15251(c) and (f) of the CEQA Guidelines, the Secretary of Natural Resources has certified the California Coastal Commission’s regulatory program as a “functionally equivalent process” to CEQA. Accordingly, in reviewing any application to the Commission for an individual, consolidated, or on-appeal coastal development permits, the adopted final EIR, in conjunction with any tiered or discrete project-specific environmental document, would be used as technical background document in assessing environmental effects in terms of the development project’s consistency with the Coastal Act or the LCP, as applicable.

Proposed Projects Considered

For purposes of providing scoping input on the preparation of the subject environmental documentation, this comment letter addresses the following enumerated proposed projects identified in the draft RTP:

Jurisdiction / Agency	Location	Description
California Department of Transportation	U.S. 101 Corridor Improvement Project - Programmed	Safety improvements at uncontrolled intersections
	U.S. 101 / Broadway, Kmart to O Street - Programmed	ADA curb returns and ramp upgrades
	U.S. 101-Various locations from Westhaven Drive to Trinidad Road - Programmed	Humboldt 101 seismic retrofit
	S.R. 255-Near Arcata at McDaniel Slough Bridge - Programmed	Mad River Bridge Wetland Mitigation
City of Arcata	Old Arcata Road Buttermilk to	Rehab, ped-bike and calming

Jurisdiction / Agency	Location	Description
	Jacoby Creek Rd - Programmed	improvements, gateway at Jacoby Creek Road
	Annual residential streets improvement program as described in City's Pavement Management Plan	Residential streets citywide [within Coastal Zone]
	Annual Roadway Improvements Project as described in City's Pavement Management Plan	Principally on city bus routes; arterial and collectors [within Coastal Zone]
	Baylands Trail - Planned	Class I Multi-Use Trail within Baylands Park
City of Eureka		
	Waterfront Dr from G Street to J Street - Programmed	Connection Phase II
	Eureka Waterfront Trail - Planned	Tydd Street to Herrick Avenue, including along the existing Eureka Boardwalk
	Eureka Waterfront Trail – Programmed	Class I Multi-use Trail from Del Norte to Truesdale St
	Truesdale Vista Point Trail – Planned	Multipurpose Trail from Truesdale Vista Point to Hilfiker Lane Trailhead
	Hawthorn Street from Broadway to Felt Street, Felt Street from Hawthorn to Del Norte Streets - Programmed	Road rehabilitation, ADA, bicycle Facility
	Road rehabilitation - Programmed	Koster St from Del Norte to Washington St
	Samoa Field Airport - Programmed	Remove/lower Aircraft Hazards; Design/construct T-hangers; Resurface/repaint Runway, Taxiways; Construct Wildlife Exclusion Fencing
County of Humboldt		
	Myrtle Avenue, Lucas Street, Harris Avenue - Programmed	Sidewalk Infilling
	Myrtle Avenue - Programmed	Bicycle Lane Improvements Pigeon Point to Mitchell
	Orick Levee Coastal Trail - Planned	Multi-purpose trail on north Redwood Creek levee to the U.S. 101 bridge (0.69 miles), south levee to Redwood National Park Visitor Center (2.45 miles).
	Murray Field Airport - Programmed	Design/construct Runway, Taxiway; Design /construct Entry Road Rehabilitation
County of Humboldt/City of Arcata		
	Arcata Rails with Trail - Planned	West End Road to Samoa Boulevard, with segments along railroad tracks.
	Hammond Trail - Planned	Extend the Hammond Trail from the Mad River bridge south, connecting to the City of Arcata (downtown) and Eureka. Extend the trail north to Westhaven and Trinidad. Restore the Hammond Trail pedestrian / bicycle bridge across the Mad River.
County of Humboldt/Cities of Arcata & Eureka		
	Humboldt Bay Trail – Arcata to	A 6.5-mile Class I/multi-use path

Jurisdiction / Agency	Location	Description
	Eureka Segment - Planned	around the east side of Humboldt Bay, between Arcata and Eureka.

Linkage between Planned Projects and Physical Development Projects

As presented in the draft RTP, if funded and programmed for implementation by the transportation agency entity, the envisioned projects should be considered viable infrastructure development proposals which will subsequently require some combination of discretionary authorizations for local, state and regional, and federal authorities. Many of these projects entail “development” as defined in section 30007 of the California Coastal Act (Public Resources Code §§30000 et seq.), namely:

...on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511).

As used in this section, ‘structure’ includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line

Further, as directed in Coastal Act section 30600, any “person” wishing to perform or undertake any development in the coastal zone shall obtain a coastal development permit (CDP). Consequently, depending upon their locations, either separate CDPs must be obtained from the Cities, County, and/or the Commission, or alternately, with the concurrence of the applicant(s), the involved City and/or County, and the Commission, a consolidated CDP could be processed by the Coastal Commission pursuant to Public Resources Code section 30601.3. The Cities’ and County’s standards of review for hearing permit requests for the portions of the project within their jurisdiction would be whether the development conforms to the standards set forth in their respective certified LCPs. The standard of review for the issuance of a CDP for the portions of the project within the Commission’s retained/original jurisdiction, or for a consolidated CDP, would be whether the development, in part or in whole, respectively, is consistent with the policies of Chapter 3 of the Coastal Act, using the involved Cities’ and County’s LCPs as non-binding guidance in the interpretation of such consistency.

Environmental Review

The following comments are provided primarily for lead and responsible agency consideration in the subsequent development of environmental review documentation and reviewing the environmental effects associated with these development projects. While this undertaking is generally deferred until the time when detailed project proposals have been formulated, there are numerous transportation project permits which have been appealed to the Coastal Commission over issues that were fully avoidable had consideration of the land use policies and regulations been given at the project planning stage before extensive engineering and design momentum had amassed. Accordingly, while the RTP is primarily a programmatic undertaking, the early identification of environmental issues that may affect the inherent viability of a given transportation improvement project in the RTP serves efficient facilities planning as well as is in keeping with the purpose and spirit of CEQA.

Most of the projects identified in the draft RTP will require a variety of permits and other grants of approval from numerous regulatory agencies. However, this letter will focus on the information needed by the California Coastal Commission. These comments address procedurally how the Commission would be involved in the review of the project, the Coastal Act issues raised by the project, and information that would be particularly important to obtain from the applicant during the application process to enable the Commission to adequately evaluate the project. In keeping with this approach, the comments provided below have been structured as to how the EIR should address issues of consistency with relevant Coastal Act coastal resource and environmental policies for the RTP projects. Pertinent Coastal Act provisions are cited, quoted or paraphrased accordingly.

Aesthetics

Applicable Coastal Act Policies and Standards

Coastal Act Section 30251 requires that "... the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance." Permitted development is to be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize alteration of natural landforms, to be compatible with surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas. New development occurring in highly scenic areas, such as the project site, must be subordinate to the character of its setting.

Comments

The EIR coverage of visual resources impacts should provide for evaluation of whether the siting and construction of the transportation improvements, particularly the above-grade structures, utilities, fencing, lighting, and signage elements, would comply with the above-cited criteria. Many of these evaluations are qualitative in nature and may require supplemental information. To aid in these assessments, provisions for the submittal of plan and elevation views of the location and physical extent of the proposed structures, utilities, fencing, lighting, and signage, visual simulations, the erection of story poles, and/or photographic depiction of pre- and post-construction views to and along the shoreline should be discussed in the EIR and ideally incorporated within the *Environmental Stewardship* goal, objective, and policies sections of the

Complete Streets Element. Requirements for identifying mitigation measures to reduce any significant adverse effects to less-than-significant levels, including height and size restrictions, exterior treatments to the structures, and landscaping and screening should similarly be detailed.

Agricultural and Forest Resources

Applicable Coastal Act Policies and Standards

Section 30241 of the Coastal Act states:

The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

- (a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.
- (b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.
- (c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.
- (d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.
- (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.

Coastal Act Section 30242 states:

All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

The assessment of impacts to the economic productivity of the agricultural land is further addressed in Coastal Act Section 30241.5 as follows:

- (a) If the viability of existing agricultural uses is an issue pursuant to subdivision (b) of Section 30241 as to any local coastal program or amendment to any certified local coastal program submitted for review and approval under this division, the determination of "viability" shall include, but not be limited to, consideration of an economic feasibility evaluation containing at least both of the following elements:

(1) An analysis of the gross revenue from the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.

(2) An analysis of the operational expenses, excluding the cost of land, associated with the production of the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.

For purposes of this subdivision, "area" means a geographic area of sufficient size to provide an accurate evaluation of the economic feasibility of agricultural uses for those lands included in the local coastal program or in the proposed amendment to a certified local coastal program.

(b) The economic feasibility evaluation required by subdivision (a) shall be submitted to the commission, by the local government, as part of its submittal of a local coastal program or an amendment to any local coastal program. If the local government determines that it does not have the staff with the necessary expertise to conduct the economic feasibility evaluation, the evaluation may be conducted under agreement with the local government by a consultant selected jointly by local government and the executive director of the commission.

The Initial Study checklist states that, "RTP's policies do not promote actions involving converting agriculture or forest resources to non-agricultural or non-forest uses. No projects are proposed on agricultural land, farmland, forest land, or timberland." However, it is noted that among the proposed projects enumerated in the Initial Study are several trails projects which may entail the widening of the travelway of rural roads or the construction of completely separated bike path rights-of-way for the exclusive use of bicycles and pedestrians. Most of these identified routes are bordered by adjoining lands with agricultural land use and zoning designations for which any such road widening or new trail construction may entail agricultural conversion. The EIR should address, and the *Environmental Stewardship* goal, objective, and policies sections of the Trails Element should ideally be expanded upon to identify the limitations of the Coastal Act with respect to conversions of agricultural lands, and the need for conflict minimization / continued viability studies as may be warranted for permissible conversions for transportation infrastructure. (See also comments under the Transportation sub-heading regarding the route of the City of Arcata's Baylands Trail through agricultural lands.)

Biological Resources

Applicable Coastal Act and LCP Policies and Standards

Coastal Act Section 30230 states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy

populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 continues on to direct:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Coastal Act Section 30240 directs:

- (a) Environmentally sensitive habitat areas¹ shall be protected against any significant disruption of habitat values, and **only uses dependent on those resources shall be allowed within those areas.**
- (b) **Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.** [Emphases added.]

Finally with respect to the dredging, diking, and/or filling of open coastal waters, wetlands, estuaries, and lakes, Coastal Act Section 30233 such development may only be permitted in instances where: (a) there is no feasible less environmentally damaging alternative; (b) feasible mitigation measures have been provided to minimize adverse environmental effects; and (c) is for serving a limited set of land uses. Typically for planned transportation infrastructure improvements, these uses are generally limited to projects having “incidental public service purposes,” or, in the case of trail developments and mitigation programs, “nature study... or similar resource dependent activities” and “restoration purposes,” respectively.

Comments

Permissible Development Within and Adjacent to ESHAs, Wetlands, and Other Coastal Waters: There are several projects identified within the Complete Streets and Aviation System elements and as mitigation projects which would entail the dredging, diking, and/or filling of wetlands or development adjacent to environmentally sensitive areas. With respect to trail projects, it is noted that within both the Trails element of the draft RTP and in the Recreation section of the Initial Study checklist responses that trails are considered to be transportation facilities

¹ Coastal Act Section 30107.5 defines the phrase “environmentally sensitive area” as “...any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.”

The EIR should address, and the *Environmental Stewardship* goal, objective, and policies sections of these elements should ideally be revised to highlight, the Coastal Act's requirements with respect to the prohibitions and qualifications on development within and adjacent to ESHA, and improvements within wetlands being limited to those for a permissible use, comprising the least environmentally damaging feasible alternative, and providing all feasible mitigation measures. For example, this analysis should identify provisions for when the intended transportation facility purpose of the trail would need to be subordinated to another purpose, such as "nature study," in order for permitting of the trail to be legally tenable. In such cases, the design and siting of the trail may also need to be revised to prioritize the avoidance and minimization of impacts to wetlands and ESHA first and foremost over commuter efficiency. Additionally, an appropriate level of natural resources interpretive features would need to be included alongside other trail amenities for the purported educational purpose of the trail to be viewed as genuine.

Impacts to Aquatic Biological Resources: Finally, in keeping with the directives of Coastal Act Section 30231, the EIR should include an evaluation of opportunities where maintenance and enhancement of functional capacity of nearby coastal waters might feasibly be incorporated into the development of the identified transportation improvement projects. This analysis should address employing established construction phase water quality best management practices (BMPs) in project design to avoid and minimize the entrainment of sediment and other pollutants in stormwater, and the inclusion of permanent BMPs for erosion control and runoff management of drainage into the biologically significant offsite creeks, rivers, and estuarine wetlands. These measures should also be addressed in the *Environmental Stewardship* goal, objective, and policies sections of the RTP.

Cultural Resources

Applicable Coastal Act and LCP Policies and Standards

Coastal Act Section 30244 states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Comments

The Initial Study identifies several preventive and mitigative measures that are intended to avoid impacts to cultural resources. Among these are Mitigation Measure V(a,b,c)-2 which calls for consultations with the Northwest Information Center of the California Historical Resources Information Center and "other pertinent historical organizations." It is unclear whether the scope of the intended consultations would extend to applicable Tribal Historical Protection Officers or other groups having local expertise in the presence and significance of *prehistoric* cultural resources. The EIR should consider whether the scope of Mitigation Measure V(a,b,c)-2 should be expanded accordingly to specifically identify such groups in the routing of consultation solicitations.

Geology and Soils (Sea Level Rise) / Hydrology and Water Quality (Coastal Flooding)

Applicable Coastal Act and LCP Policies and Standards

Section 30253 of the Coastal Act states, in applicable part:

New development shall do all of the following:

- (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs...
- (d) Minimize energy consumption and vehicle miles traveled...

Comments

The projects identified in the draft RTP are located in a highly geologically active area subject to exposure to a variety of natural hazards including seismic shaking, liquefaction-related subsidence and ground failure, tsunami inundation, and supra-tidal and storm-surge related flooding. The Coastal Act requirements are particularly relevant given many of the project sites' low elevation and near shoreline environmental setting adjoining open harbor and stream course waters where exposure to tsunami inundation and storm surge exacerbated by global sea level rise is anticipated during the economic design life of the improvements.

The Initial Study specifically indicates that coverage will be provided in the EIR of many of these geologic hazards issues. However, the checklist responses contain no discussion as to what if any consideration will be given to future anticipated sea level rise in assessing exposures of persons and property to these risks. Furthermore, no specific details are provided as to the breadth of intended evaluation of tsunami hazards in terms of the inclusion of adaptation and resiliency features in project siting and design, and the need for constructive noticing of evacuation routes from inundation/runup prone areas. The EIR coverage of potential geologic and hydrologic impacts should include these factors in evaluating potential impacts and mitigation measures.

Hazards and Hazardous Materials

Applicable Coastal Act and LCP Policies and Standards

Coastal Act Section 30232 directs:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Comments

Development of the various transportation improvements, especially those involving the use of mechanized equipment or the sawing and/or grinding of existing pavement in close proximity to open coastal waters and wetlands could result in significant impacts to water quality from accidental releases of hazardous materials (e.g., hydraulic fluid, petroleum-based fuels and lubricants, concrete debris, and asphaltic compounds). The EIR should address these potential environmental impacts and identify appropriate construction phase and long-term water quality best management practices (BMPs) to prevent impacts to receiving coastal waters off-site. The incorporation of the measures should be included at a policy level within the Environmental Stewardship sections of the RTP.

Land Use and Planning

The response to Initial Study checklist item X.b) states that, “RTP policies are consistent with existing and projected land uses in adopted land use plans, including city and county general plans.” The entry continues on to note that the various plan initiatives “promote improving the regional transportation system by investing in existing infrastructure, rather than creating new services or new infrastructure in undeveloped areas,” and “are in existing transportation corridors within residential, commercial, industrial, or other developed land use areas.” In addition, the response asserts that “infrastructure projects are generally not subject to land use standards and as such would not conflict with adopted land use plans.”

It is not evident from the information contained in either the draft RTP or the Initial Study that this first statement is correct, from two perspectives. First it is unclear whether such purported general and land use plan consistency would be inclusive of a city’s or the County’s Local Coastal Program (LCP). Secondly, several of the projects identified in the draft RTP are situated in the Coastal Commission’s original/retained jurisdiction for with the policies and standards of the Coastal Act would comprise a “policy or regulation of an agency with jurisdiction over the Project.”

With respect to the latter assertions, it is noted that affording and fostering transportation in a manner that does not result in growth inducement appears as an objective in the Cities’ and County’s local planning programs and the Coastal Act. Further, it is acknowledged that preemptions apply to local government ministerial and discretionary permit requirements where that state agencies such as Caltrans are not bound by locally adopted County and municipal land use regulations. In addition, even if so not preempted, as most roadways and rights-of-way are not formally assigned land use and zoning designations, compliance with plan and zoning prescriptive standards becomes somewhat of a moot issue. Nonetheless, improvements to existing transportation infrastructure can potentially be in conflict with adopted land use plan policies and standards. Moreover, within the context of the requirements of the Coastal Act, the contention that transportation projects are not subject to land use standards, per se, is not accurate.

To the contrary, as discussed previously, all of the projects identified for comment in this letter comprise “development,” most of which will require the issuance of a coastal development permit or permit waiver to authorize their construction. Any such permit or waiver must be found to be consistent with the policies and standards of the relevant LCP or Chapter 3 of the

Coastal Act, depending upon the location of the project. In addition, while the cities' and the County's LCPs may have been issued categorical exclusion orders by the Coastal Commission which include provisions for the granting or permit exemptions for certain classes of repair and maintenance activities, including in some cases minor roadway improvements, in order for the permit exclusion to be granted the development must be found to be otherwise in conformance with the LCP.

Consequently, a concentrated effort is needed to demonstrate that the transportation improvement projects identified in the draft RTP would be consistent with all applicable LCP and Coastal Act provisions. To this end, we again stress the importance of the role of the draft RTP's EIR in devising appropriate mechanisms in the form of discrete mitigation measures or as may be appended as additional policies within the Environmental Stewardship sections of the RTP proper to address head-on at the planning program stage the consistency issues raised in the comments under Aesthetics, Agricultural and Forest Resources, Biological Resources, Cultural Resources, Geology and Soils (Sea Level Rise) / Hydrology and Water Quality (Coastal Flooding), and Hazards and Hazardous Materials above, and Transportation, below.

Transportation

Applicable Coastal Act and LCP Policies and Standards

Coastal Act Section 30210 states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211 of the Coastal Act states:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Coastal Act Section 30252 directs, in applicable part:

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service,... (3) providing nonautomobile circulation within the development, [and] (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation...

Comments

The Initial Study checklist response to item XVI.1 states that projects identified in the draft RTP have the potential to "conflict with adopted policies, plans, or programs supporting alternative transportation." Presumably, this would include both the development of motor vehicle oriented

roadway improvements as well as non-motorized travel and bicycle, or pedestrian facilities. With respect to the former category, one major vehicular transportation project identified in the draft RTP, the enhancements to the U.S. 101 Eureka-Arcata Corridor, has the potential to be in conflict with the ideal routing of the California Coastal Trail (CCT) as preliminarily envisioned in adopted CCT planning and design documents.²

As was observed in the Initial Study Aesthetics section response, at its September 12, 2013 meeting, the Coastal Commission did find the Eureka-Arcata Corridor conditionally consistent with the state's coastal management program provided certain conditions were attached to the to that determination. In addition to requiring that efforts be undertaken to remove outdoor advertising structures along the corridor route to offset visual resource impacts, another condition addressed potential inconsistency with Coastal Act policies requiring maximized public access and recreational opportunities associated with the project:

1. **Coastal Trail Planning.** Construction of the Route 101 Corridor Improvements will not commence until adequate commitments are in place to assure that a separate Class 1 bike and pedestrian trail, parallel to Route 101 from Arcata to the northern end of downtown Eureka, will be constructed and operational by the time the major project components are completed. Such commitments will include, but may not be limited to, assurances that adequate funding for construction of the trail exists, as well as a demonstration that the necessary assurances are in place to secure ownership interests or permissions to enable the trail construction to proceed in a timely manner, prior to or concurrent with construction of the corridor improvements.

As the largest funded transportation project identified in the draft RTP, the existence of this substantive consistency condition bears repeating in terms of future planning, design, and permitting of the Corridor Improvement Project, especially with respect to adjustments to, or supplementation of, the project STIP funding allocations in the Financial Element of the final RTP.

With respect to the latter non-vehicular facilities category, the draft RTP Trails Element characterizes one trail segment in Arcata, the Baylands Trail, as a facility that is "...or would be part of the California Coastal Trail." Although the namesake wetlands restoration and enhancement project site is extensive and comprising large tracts of former intertidal area around Arcata Bay, as depicted in the City of Arcata's Parks and Recreation Master Plan, the portion of "Baylands Park" in which the trail facility would be routed passes through both City of Arcata and Coastal Commission permit jurisdictional areas where land use policies addressing the protection of agricultural lands and wetlands would be applicable to any such trail development. In addition, the Baylands Trail is indicated as inter-tying Old Arcata Road with the Arcata Rail with Trail Corridor although no mechanism is identified as to how this connection would traverse Highway 101. Accordingly, as discussed in the "Principles for Designing the Coastal Trail" chapter of the document titled *Completing the California Coastal Trail*, the so-called "SB 908 report," the trail would potentially conflict with several design principles regarding the

² See findings discussion on pages 50-51 of the August 29, 2013 staff recommendation report for Consistency Certification No. CC-016-13 (<http://documents.coastal.ca.gov/reports/2013/9/Th12a-9-2013.pdf>)

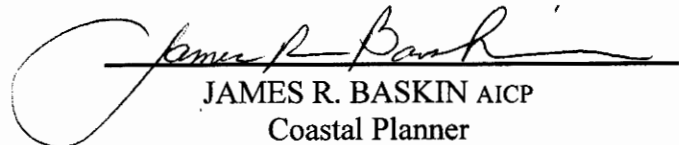
identified alignment's proximity to the ocean, its "integrity" in terms of separation from vehicular facilities, and "respect" for the protection of priority and environmentally sensitive coastal resources.³ In addition, the related need for the provision of access support facilities, such as trailhead parking areas, trash cans, benches, etc., in the development of and funding for, new trail infrastructure should also be assessed.

With regard to how best to address mitigation measures at the transportation plan programmatic level that could serve for incorporation in project design, consideration should be given in the EIR as to the merits of incorporating the design principles and environmental protections identified in the SB 908 report within the Environmental Stewardship sections of the final RTP.

Finally, with respect to public transit, it is noted that identified projects are limited to motor coach fleet replacement with no route or service hour expansions being funded for bus lines in the coastal zone. While it is recognized that service extensions are largely dependent upon adequate ridership volumes to justify the initial investment and defray ongoing costs, independent of these factors, the EIR should investigate the feasibility of whether adjustments to existing service schedules and routes would be warranted to provide for greater linkage to non-vehicular transportation infrastructure, notably the coastal access facilities identified in Trails Element of the draft RTP.

Thank you for the opportunity to provide comments as part of the preparation of the environmental analysis. Please call if you have any questions regarding this letter.

Sincerely,


JAMES R. BASKIN AICP
Coastal Planner

RSM/JRB:jb/lt

³

See <http://www.coastal.ca.gov/access/coastal-trail-report.pdf>

November 21, 2013 “VROOM” EIR Agency Scoping Meeting

Attendees:

1. Susan Harincar-Driscoll, Humboldt Community Access & Resource Center (HCAR)
2. Jerome Carman, Redwood Coast Energy Authority (RCEA)
3. Jack West, Council member, City of Trinidad (and HCAOG board member)
4. Shannon Dempsey, State Parks-North Coast Redwood District
5. Larry Pardi, Arcata & Mad River Transit System (A&MRTS)
6. Greg Pratt, Humboldt Transit Authority (HTA)
7. Jason Davis, North Coast Unified Air Quality Control District (NCUAQMD)
8. Allison Riemer, State Parks
9. Charlie Bean, Social Service Transit Advisory Council (SSTAC) member (citizen representative for potential transit riders who are disabled)

Name:	Comments:
Larry Pardi, A&MRTS	<ul style="list-style-type: none"> • Bus Rapid Transit (BRT), study if it could be viable. • Traffic signaling (buses have control). • Goal to shorten trip times; make transit “more sexy.” • Lower emissions (as part of protecting air quality).
Jason, NCUAQMD	<ul style="list-style-type: none"> • Air Quality Board would support BRT and alternative fuel vehicles as consistent with goals. • Enhance alternative-fuel vehicles, e.g. install charging stations.
Jerome, RCEA	<ul style="list-style-type: none"> • Study possibilities of doing “preferential treatment” for alternative fuel vehicles.
Charlie Bean	<ul style="list-style-type: none"> • Locations of charging stations need to be better identified. • Environmental Justice – be explicit that it includes social justice. • Eureka at Herrick; Elk River out to Walnut. Two spots that people complain about congestion; need more bus service and pedestrian access, West End Road, Arcata. • Eureka - I Street identified to Waterfront & Broadway. • West & Myrtle – traffic and pedestrian access. • Harrison, has medical facilities, should be safe & beautiful. City's side pretty good (except for poles, etc.), other side (County's) is incomplete. • Bus pullouts on Central to help buses get out of traffic flow. • Underground utilities.
Greg Pratt, HTA	<ul style="list-style-type: none"> • Broadway - when you (or bus drivers) pull over it's very difficult to get back into traffic flow (buses/bus stops)

The following is an updated/revised Final Initial Study compared to the Draft Initial Study that was provided with the Notice of Preparation and in the Draft EIR. This updated/revised Initial Study in the Final EIR contains slight revisions and edits that were made based on public comments received on the Draft EIR (See Section 8.0 Responses to Comments for a description of which comments warranted the revisions). Any revisions in the Final Initial Study that differ from the Draft Initial Study contained in the Draft EIR, including any edits to impact analysis and any mitigation measures, are shown in ~~strikeout~~/underline similar to other edits contained in the Final EIR sections. In addition, any updates/revisions to mitigation measures contained in the Final Initial Study are also reflected in the Mitigation Monitoring and Reporting Program (MMRP) contained in Appendix B.

INITIAL STUDY

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INITIAL STUDY

1. **Project title:** Humboldt Regional Transportation Plan – Update 2013/14: Variety in Rural Options of Mobility
2. **Lead agency name and address:** Humboldt County Association of Governments (HCAOG) 611 "I" Street, Suite B, Eureka, CA 95501
3. **Contact person and phone number:** Oona Smith, Senior Planner (707) 444-8208
4. **Project location:** Humboldt County, California. See *Figure 1, Regional Location*, and *Figure 2, Project Location*.
5. **Project sponsor's name and address:** HCAOG, 611 "I" Street, Suite B, Eureka, CA 95501
6. **General Plan designation:** Multiple
7. **Zoning:** Multiple
8. **Project description:**

The project is the update of the Regional Transportation Plan (RTP) for Humboldt County. The RTP is a long-range planning document. It provides a course for future transportation investment in the region, with the objective of building and maintaining a multi-modal, safe and efficient, balanced transportation system, which also balances moving goods and people with sustaining non-renewable resources.

The last RTP was adopted in 2008. The *Humboldt Regional Transportation Plan—Update 2013/14* helps chart the course to provide *Variety in Rural Options of Mobility*. The update's short name is "VROOM." VROOM plans for: Complete Streets (covering roadway, pedestrian, and bicycle systems), Trails, Tribal Transportation, Public Transportation, Aviation, Goods Movement, Emergency Transportation and Finance.

HCAOG decides how to program transportation funds based on multi-modal goals and objectives, and needs and priorities as established in the RTP. The RTP's policies and proposed projects pursue six main objectives/planning priorities (in alphabetical order), which the RTP applies to each mode:

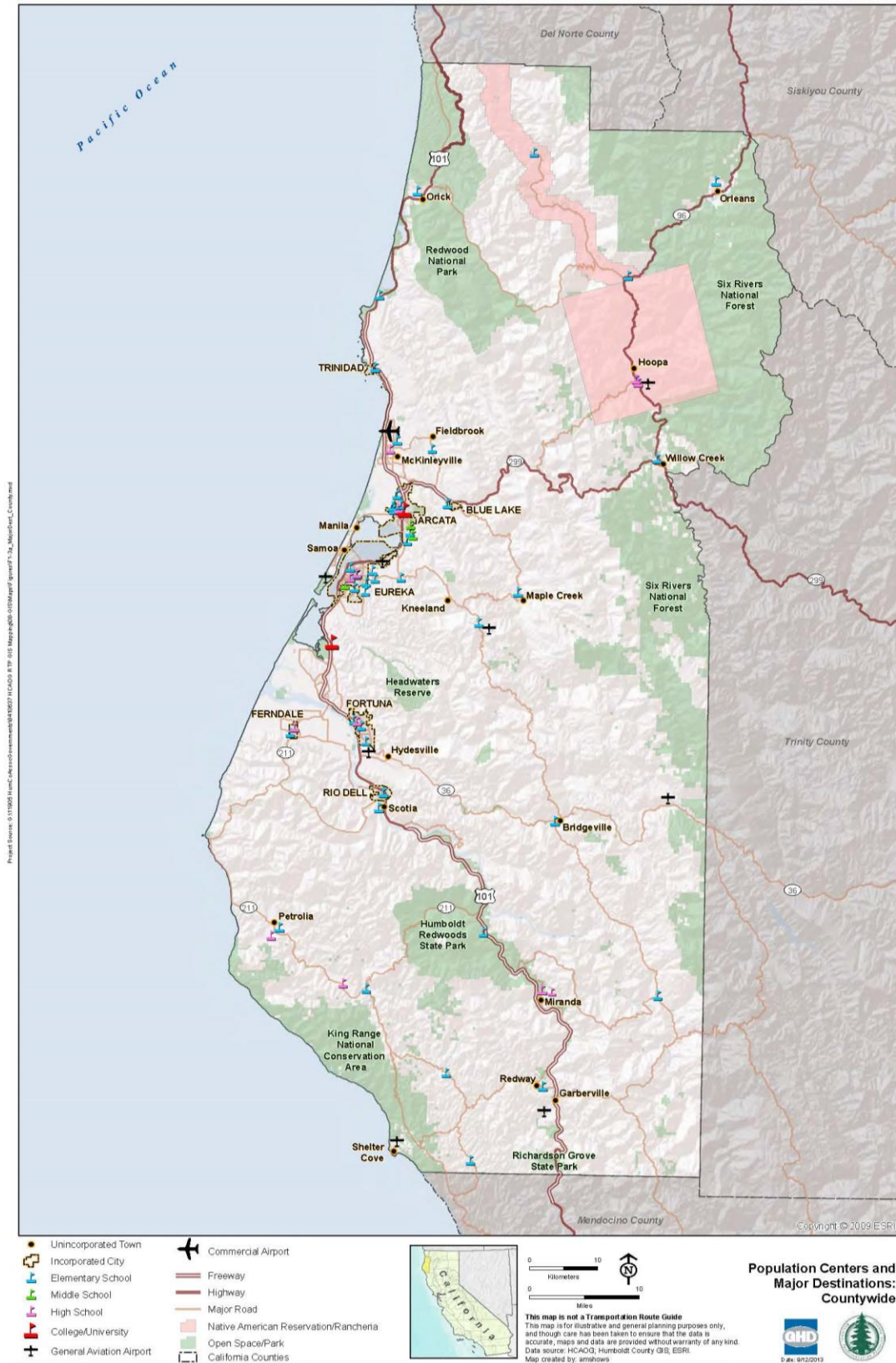
- ❖ Balanced Mode Share/Complete Streets – Increase multi-modal mobility, balanced mode shares, and/or access. Mobility means having travel choices (for people and goods) with predictable trip times. A balanced mode share means all transportation modes are available in proportion to their efficiency and short-term and long-term costs and benefits. Increased access means more options for people to reach the goods, services, and activities they need.
- ❖ Economic Vitality – Support the local or regional economy by improving goods movement and transportation access, efficiency, and cost-effectiveness; by enhancing economic attractors (e.g. via walkable streets, multiuse trails, transit service); or by indirectly cutting health care costs due to more active transportation or less transportation-related pollution.
- ❖ Efficient & Viable Transportation System – Make the transportation system operate more efficiently, such as by reducing traffic congestion and using Intelligent Transportation System (ITS) management (e.g. Greater Eureka Area Travel Demand Model, Street



Figure 1. **Regional Location**



Figure 2. **Project Location: Humboldt County**



- ❖ Saver, GPS tracking on transit buses, other management programs). Make the system more financially and operationally viable such as by prioritizing cost-effective investments, pursuing stable funding, and preserving transportation assets to maximize resources and future use.
- ❖ Environmental Stewardship – Enhance the performance of the transportation system while protecting and enhancing the natural environment. Help achieve goals of California Global Warming Solutions Act of 2006 (AB 32) and Sustainable Communities and Climate Protection Act of 2008 (SB 375), protect and improve air, water, and land quality, help reduce transportation-related fuel and energy use, help reduce single-occupancy-vehicle (SOV) trips or motorized vehicle miles traveled (VMT), etc.
- ❖ Equitable & Sustainable Use of Resources – Lobby for costs and benefits (financial, environmental, health, and social) to be shared fairly. Prioritize projects based on cost effectiveness as well as need and equity for underserved populations. Coordinate transportation systems with land use for efficient, sustainable use of resources.
- ❖ Safety – Increase safety for users (one or more modes). Reduce transportation-related fatalities and serious injuries.

The RTP includes a Needs Assessment and an Action Plan in the Complete Streets, Public Transportation, Aviation, and Goods Movement Elements (required per CTC Guidelines). These Action Plans consist of projects proposed by HCAOG's member jurisdictions (the County of Humboldt and the cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad) and standing committees, as well as tribal governments. Additionally, the Goods Movement Action Plan includes projects from the Humboldt Bay Harbor, Recreation and Conservation District, and the Public Transportation Element Action Plan includes projects from the Humboldt Transit Authority as well as from local public transportation providers. Some short-term projects (0-10 years) have already been fully funded; others are partially funded and/or await being programmed or planned. Many projects are long-term (11 to 20 years) with no secured funding. With the current state of federal transportation funding (e.g., the Federal Highway Trust Fund and the State Highway Account are at risk of chronic shortfalls or insolvency), proposed projects that are for the longer term and have no funding can be considered speculative at the moment.

The RTP Update's proposed regional projects are listed in Table 1 on the following page.



Table 1. RTP Update 2013/14 Proposed Regional Projects

Complete Streets Proposed Regional Projects

(From RTP Update 2013/14, Table Streets-6, Appendix G-1)

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Agency: City of Arcata											
Old Arcata Road Buttermilk to Jacoby Creek Rd	ST	X	X	X	X	X	X	Rehab, ped-bike and calming improvements, gateway at Jacoby Creek Road	STIP, Measure G	2014-16	\$950
Residential streets citywide	ST				X	X	X	Annual residential streets improvement program (see City's PMP)	Measure G, RSTP	2014-2024	\$2,500
Valley East and Valley West Improvement project	ST	X	X	X	X	X	X	Roadway rehab with improvements for bike, ped transit, landscaping and gateway	Not Funded. Measure G match	2016	\$1,000
Hwy 255 at 101 Roundabouts	ST	X	X	X	X		X	Convert clover leaf intersection to 2 roundabouts, ped-bike access across bridge (non-existent), add transit park-and-ride, remove 1 mile paved roadway (mitigation)	Not funded	2018-2020	\$2,000
Hwy 101 at Sunset and L.K Wood Blvd Roundabout	ST	X			X	X	X	Convert 5-way intersection to roundabout and create safer segregated bike/ped facilities	Not funded. City match	2018-2020	\$650
Guintoli Lane-Hwy 299 intersections, Valley West and Valley East to West End Rd	ST	X	X			X	X	Rehab, restripe and improve LOS (roundabouts or channelization). Potential bus park-n-ride at Wymore Rd	Measure G, apply for grant funds*	2018-2022	\$2,200
Annual Roadway Improvements Project (based on city pavement management program)	ST			X	X	X	X	Principally on city bus routes; arterial and collectors (refer to City PMP)	Measure G, apply for grant funds*	2014-2024	\$8,000
									<i>*Assumes 50% Measure G match + 50% grant funds</i>		
									<i>Arcata ST Subtotal</i>		<i>17,300</i>
									<i>Arcata LT Subtotal</i>		<i>\$ -</i>

¹ Short-term (ST) is the next 1 to 10 years; long-term (LT) is the next 11 to 20 years. ² Assume 3% annual inflation.



Project Location	Short or Long Term	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Agency: City of Blue Lake											
South Railroad Ave from Chartin Way to Broderick Ln	ST	X	X	X		X	X	Repave and add pedestrian improvements "Annie and Mary" Trail, rehab and reconstruction	Not Funded	18/19	\$2,000
Greenwood Rd/Railroad Ave/Hatchery Rd, from Blue Lake Blvd to Mad River Bridge	ST	X	X			X	X	Overlay and pedestrian improvements, rehab and reconstruction	Not Funded	16/17	\$3,000
Hartman Lane/G Street, from Blue Lake Blvd. to Railroad Ave.	ST	X	X			X	X	Rehab and reconstruct with ped improvements	Not Funded	20/21	\$1,400
I Street, from Blue Lake Blvd. to First Avenue	LT	X	X			X	X	Rehab and reconstruct with ped improvements	Not Funded	23/24	\$1,200
Annie and Mary Trail, from Chartin Road to City Limits	LT	X	X	X			X	Rail/Trail	Not Funded	23/24	\$1,500
									<i>Blue Lake ST Subtotal</i>		<i>\$6,400</i>
									<i>Blue Lake LT Subtotal</i>		<i>\$ 2,700</i>
Agency: City of Eureka											
Harrison Ave, Harris St to Myrtle Ave	ST	X	X	X	X	X	X	TWLTL, Bike lanes, bus pullouts	Not funded		\$2,000
Harris St from H St to J St	LT		X		X	X	X	Signalization and signalization modifications	Not funded		\$700
Henderson St from I St to S St	LT	X	X	X	X	X	X	Convert to one-way street, install bike facility, bus pullout	Not funded		\$500
Myrtle Ave from 5 th St to Harrison Ave	LT	X	X	X	X	X	X	Congestion relief, ADA, bike facility	Not funded		\$500
South Gateway of Eureka	ST		X	X			X	Beautification and traffic calming	Not funded		\$1,688
Waterfront Dr from G St to J St	ST	X	X		X		X	Connection Ph II	STIP	2012/13	\$4,059
Eureka Waterfront Trail from Del Norte to Truesdale St (Phase A)	ST		X	X			X	Class I multi-use trail	STIP	2014/15	\$1,450
Hawthorn St from Broadway to Felt, Felt St from Hawthorn to Del Norte, and 14th St from M St to West Ave	ST	X	X			X	X	Road rehabilitation, ADA, bicycle facility	STIP	2013/14	\$400
Highland Ave from Broadway to Utah St	ST		X			X	X	Road rehabilitation, ADA	STIP	2013/14	\$400



Project Location	Short or Long Term	Complete Sts. Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)	
and Koster St from Del Norte to Washington St											
3rd St from L St to R St and Glen St from Harris St to Allard St	ST	X	X			X	X	Road rehabilitation, ADA, bicycle facility	Not funded	\$200	
6 th St from I St to Myrtle Ave, and 7 th St from Broadway to J St	ST	X	X	X	X	X	X	Road rehabilitation, ADA, bike lanes, bus pullouts	Not funded	\$500	
H St from 7 th St to Harris St	ST	X	X	X	X	X	X	Road rehab, ADA and bus pullouts	Not funded	\$700	
City-wide	LT				X	X	X	Improve transit stop pullouts	Not funded	\$500	
Walnut Dr at Hemlock St	LT				X	X	X	Traffic signalization	Not funded	\$300	
Eureka TBD	LT	X	X	X	X	X	X	Eureka Intermodal Transit Center	Not funded	\$14,000	
City-wide	LT			X	X	X	X	Bicycle facilities per Humboldt Regional Bicycle Plan 2012	Not funded	\$3,239	
6th, 7th, and Henderson Streets	LT		X	X		X	X	Pedestrian improvements per Humboldt Reg'l Pedestrian Plan 2008	Not funded	\$165	
								<i>Eureka ST Subtotal</i>		<i>\$11,397,497</i>	
								<i>Eureka LT Subtotal</i>		<i>\$ 195,904</i>	
Agency: Hoopa Valley Tribal Roads Department											
SR 96	ST	X	X		X		X	Downtown traffic calming & safety enhancements	Partially funded	2013-2016	\$4,400
SR 96	ST					X	X	Reservation-wide safety enhancements; SR2S & pedestrian walkways	Not Funded	2014-2020	\$12,500
SR96, Trinity River Bridge	ST	X	X				X	Safety enhancement; cantilevered walkway	Not funded	2015-2025	\$12,500
Bair Ranch Road, Humboldt County Road	ST				X	X		Reconstruction of roadway for emergency access	Not Funded	2015-2020	\$750
On SR96 at Blue Slide	LT		X		X	X		New bridge crossing the Trinity River to K'ima:w Medical Center	Not Funded	2020-2035	\$45,000
Tish Tang Road from SR 96 to Medical Center & Hoopa Airport	LT		X		X	X	X	Reconstruct Tish-tang(county road)	Not Funded	2020-2035	\$6,500
								<i>Hoopa ST Subtotal</i>		<i>\$30,150</i>	
								<i>Hoopa LT Subtotal</i>		<i>\$51,500</i>	



Project Location	Short or Long Term	Complete Sts. Economic	Environment	Operations	Preserve Sys. Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)	
Agency: City of Ferndale										
Rose Ave/Herbert St - East city limits to Main St	ST	X				X	Class II bike path	Not funded	2019	\$24.0
5th St - Van Ness Ave to Ocean Ave	ST	X				X	Class II bike path	Not funded	2019	\$14.4 15
Arlington Ave - 5th St to Main St	ST	X				X	Class II bike path	Not funded	2019	\$19.8 20
Ocean Ave-west city limits to east city limits	ST	X				X	Class II bike path	Not funded	2019	\$21.6 22
Wildcat Rd - Ocean Ave to south city limits	ST	X				X	Class III bike path	Not funded	2017	\$0.5 1
Main St - Ocean Ave to north city limits	ST	X				X	Class III bike path	Not funded	2017	\$38.0
Van Ness Ave - 5th St to Main St	ST	X				X	Class III bike path	Not funded	2017	\$0.6 1
Shaw Ave - Ocean Ave to Berding St	ST	X				X	Class III bike path	Not funded	2017	\$ 37.0
Ocean Ave - Strawberry Lane heading east towards trailhead	ST	X	X			X	Multipurpose trail (Class 1 bike path)	Not funded	2018	\$36.0
5th St - Van Ness Ave to Ocean Ave	ST	X	X			X	Multipurpose trail (Class 1 bike path)	Not funded	2018	\$174.0
Lincoln St - Grant Ave to east city limits	ST	X	X			X	Multipurpose trail (Class 1 bike path)	Not funded	2018	\$12.0
Ocean Ave - Craig St to Russ Park trailhead	ST	X	X			X	New sidewalk	Not funded	2016	\$97.5 98
5th St - Arlington Ave to Fairview North and piece on Arlington Ave	ST	X	X			X	Curb and gutter and new sidewalk	Not funded	2015	\$54.0
Berding St-Rose Ave to Lewis St	ST	X	X			X	New sidewalk (Ped 2)		2013	\$50.0
Rose Ave - Berding to Herbert St	ST	X	X			X	New sidewalk (Ped 2)		2013	\$147.0
Main St - North City limits to Arlington Ave; citywide	ST	X	X			X	Misc. ADA improvements	Not funded	2015	\$150.0
Main St - Arlington Ave to Ocean Ave (Caltrans)	ST	X	X			X	Misc. ADA improvements		2014	\$600.0
Francis St - Ocean Ave to Ferndale Public Works Bldg	ST	X	X			X	Roadway rehabilitation	Not funded	2016	\$80.0
Berding St - Herbert St to Eugene	ST	X	X			X	Roadway rehabilitation	Not funded	2015	\$1,400.0
Deferred Maintenance	LT					X	Misc. roadway maintenance	Not funded		\$3,291.0 5



Project Location	Short or Long Term	Complete Sts. Economic	Environment	Operations	Preserve Sys. Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
							<i>Ferndale ST Subtotal</i>		\$ 295 <u>96.4</u>
							<i>Ferndale LT Subtotal</i>		\$ 3,291 <u>0.5</u>
Agency: City of Fortuna									
12 th Street – Riverwalk Drive/ U.S. 101 South On-ramps, Dinsmore Drive	LT	X	X	X	X	X	Not Funded	TBD	\$1,500
Newburg Road and 12 th Street/North bound 101 ramps re-alignment	LT	X	X	X	X	X	Not Funded	TBD	\$2,000 1,500
Ross Hill Road, Kenmar to School Street	ST	X	X	X	X	X	Not Funded	15/16	\$800
Rohnerville Road, Redwood Way to Jordan Street	ST	X	X	X	X	X	STIP	14/15	\$1,041
Rohnerville Road, Newell St. to Redwood Way	ST	X	X	X	X	X	Not Funded	18/19	\$3,000
Fortuna Boulevard, Redwood Way to Kenmar Road	ST	X	X	X	X	X	Not Funded	17/18	\$2,000
Redwood Way, Fortuna Blvd to Rohnerville Road	ST	X	X	X	X	X	Not Funded	17/18	\$1,000
							<i>Fortuna ST Subtotal</i>		\$ 7,841
							<i>Fortuna LT Subtotal</i>		\$ 3,500
Agency: City of Rio Dell									
Wildwood Avenue from Eagle Prairie Bridge to Davis Street	ST	X	X	X		X	State Transp. Enhancement	2013	\$589
Wildwood Avenue at Center Street and Davis Street Safe Routes to School	ST	X	X	X			State Safe Routes to Schools	2013/2014	\$152

Project Location	Short or Long Term ¹	Complete Sts.	Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Wildwood Avenue, Elko St. to Belleview Ave.	ST	X	X		X	X	X	Class III bike lanes including striping and signage.	Not Funded	2013/2014	\$35
Rigby Ave., Davis St. to Center St.	ST	X	X	X			X	Maintenance Paving and Bike Improvements, Class II bike lane, centerline stripe.	Not Funded	2013/2014	\$104
Wildwood Avenue at Intersection with Hwy 101 off-ramp	ST		X	X		X	X	Re-alignment of southbound off-ramp and pavement replacement between Caltrans paving project and City of Rio Dell project on Wildwood Ave.	Not Funded	2014/2015	\$135
Davis Street, Between Wildwood Ave. and Rigby Ave.	ST	X	X				X	Pedestrian/Bike Improvements, narrow crossing distance at Hwy 101 on-ramp. Class II bike lanes from Rigby Ave. to Ireland St. Class III bikes lanes from Ireland St. to Wildwood Ave.	Not Funded	2014/2015	\$53
1st Avenue and 2nd Avenue, from Elko St. to Columbus St.	ST		X					Signage and striping to accommodate emergency response vehicles.	Not Funded	2014/2015	\$44
Belleview Avenue, Wildwood Ave to River Street	ST	X	X				X	Class II bike lanes, signage and centerline striping.	Not Funded	2014/2015	\$69
2nd Ave., Davis St. to Columbus St.	ST		X	X				Maintenance paving project including 2" overlay and striping	Not Funded	2014/2015	\$106
Ogle Avenue, River Street to Creek Street	ST	X	X	X	X		X	Road reconstruction and drainage improvements	Not Funded	2015/2016	\$3,303
Monument Road, Dinsmore Ranch Rd to Redwood Lane	ST				X		X	Drainage improvements including new inlets, valley gutter, ditch and storm piping	Not Funded	2016/2017	\$149
Riverside Dr., Eagle Prairie Rd. to Fern St.	ST		X	X				Maintenance paving project including 2" overlay and striping	Not Funded	2016/2017	\$156



Project Location	Short or Long Term ¹	Complete Sts. Economic	Environment	Operations	Preserve Sys. Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)	
Northwestern Ave, east entrance to Eel River Industries to cul-de-sac at Humboldt County right-of-way	ST	X	X		X	X	Centerline and edge striping from Eel River Industries to Metropolitan Heights Rd. Edge stripe from Metropolitan Heights Rd. to cul-de-sac at County right-of-way. Centerline monument	Not Funded	2017/2018	\$55
Ireland Ave., Davis St. to Painter St. and Dixie St., 4th Ave. to Davis St.	ST	X	X	X	X		Maintenance paving project, including 2” overlay and striping, including bikeway signage	Not Funded	2017/2018	\$19
Monument Road at Dinsmore Ranch Road	ST		X	X	X		Replacement of a failing timber post retaining wall	Not Funded	2019/2020	\$234
Bellevue Avenue, Spring Street to 300 ft east and 750 ft east of Creek Street to 100 ft west of Creek Street.	ST		X	X			Maintenance paving project, including 2" overlay and striping.	Not Funded	2019/2020	\$112
Elm St., Pacific To Wildwood Ave. Orchard Pl., Cherry Ln. to Orchard St. Cedar St., Pacific Ave. to Wildwood Ave. View St., Douglas St. to Kelly St.	ST			X			Maintenance paving project, including 2" overlay and striping.	Not Funded	2019/2020	\$109
W. Painter St., Pacific Ave to 50' west of Rio Dell Ave. Butcher St., Pacific Ave. to Rio Dell Ave. Rio Dell Ave., W. Center St. to Townsend St. W. Townsend St., Rio Dell Ave. to Pacific Ave.	ST			X			Maintenance paving project, including 2" overlay and striping	Not Funded	2019/2020	\$95
Davis Street, Gunnerson Lane to Edwards Drive and Edwards Drive from Water Treatment Plant to Davis Street.	ST	X	X	X		X	Sidewalk, Class III bikeway and Class I Bike and Pedestrian path along Eel River gravel bar, including two trailheads.	Not Funded	2021/2022	\$246
Scenic Way at Eeloa Avenue	ST	X	X	X	X	X	Intersection Reconfiguration to improve pedestrian and bicyclist safety	Not Funded	2023/2024	\$572



Project Location	Short or Long Term ¹	Complete Sts. Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Eel River bar, Davis Street to Eeloa Avenue	LT	X			X	X	Class I bike and pedestrian path along Eel River bar, including two trailheads	Not Funded	2025/2026	\$947
Railroad ROW, Eagle Prairie Bridge to Northwestern Avenue	LT	X		X	X	X	Class I bike and pedestrian path next to railroad tracks	Not Funded	2027/2028	\$2,394
								<i>Rio Dell ST Subtotal</i>		<i>\$6,337</i>
								<i>Rio Dell LT Subtotal</i>		<i>\$3,341</i>
Agency: Karuk Tribe										
Karuk Tribe/County: Red Cap Road, Orleans – see under County projects										
Karuk Tribe/Caltrans: SR 96, Orleans	LT	X	X		X	X	Streetscapes/Dip improvement Project: roadway rehab, ped-bike-transit improvements, landscaping	FHWA TTP Safety funds	2016-20	\$1,100
Karuk Tribe/Caltrans: Tishawnik Hill, Camp Creek Road to Asip Road	LT	X	X	X	X	X	Class I trail (detour project) and Class II bikeway	FHWA TTP Safety funds	2021/22	\$1,400
								<i>Karuk Tribe LT Subtotal</i>		<i>\$2,500</i>
Agency: City of Trinidad										
Van Wycke Street Trail	ST	X	X	X	X		Reconstruction, Lights	Not Funded	16/17	\$372
Trinity Street	ST	X	X	X		X	Sidewalks, driveways & curb ramps	Not Funded	18/19	\$377
Patrick's Point Drive/Scenic Drive	ST	X	X	X		X	Sidewalks, Driveways & Curb Ramps	Not Funded	20/21	\$191
Patrick's Point Drive	ST		X			X	Overlay/Maintenance Paving	Not Funded	21/22	\$127
Main St, Trinity St, Westhaven Drive	LT		X			X	Overlay/Maintenance Paving	Not Funded	22/23	\$561
Edwards Street	LT		X			X	Overlay/Maintenance Paving	Not Funded	24/25	\$415
Frontage Road	LT					X	Overlay/Maintenance Paving	Not Funded	26/27	\$323
Parker Creek Drive	LT					X	Reconstruction	Not Funded	27/28	\$159
Edwards Street	LT	X	X	X		X	Sidewalks, Driveways & Curb Ramps	Not Funded	28/29	\$514
								<i>Trinidad ST Subtotal</i>		<i>\$1,067</i>



Project Location	Short or Long Term	Complete Sts. Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
								<i>Trinidad LT Subtotal</i>		<i>\$1,972</i>
Agency: County of Humboldt										
Myrtle, Lucas, Harris, Eureka	ST	X		X	X	X	Sidewalk Infilling	STIP	2014	\$580
Myrtle Avenue, Freshwater	ST	X		X	X	X	Bicycle Lane Improvements – Pigeon Point to Mitchell	BTA	2013	\$200
Central Avenue, McKinleyville	ST	X			X	X	Central Avenue Median Installation – School to Hiller	HSIP	2014	\$700
Walnut & Fern Street, Cutten	ST	X		X	X	X	Traffic Signal Installation	STIP	205	\$400
Honeydew Bridge	ST	X	X	X	X	X	Replace existing bridge	HBP	2014	\$6,200
Redway	ST	X		X	X	X	Pedestrian Safety Improvements	TE	2013	\$450
School Road – Salmon to Fischer, McKinleyville	ST	X		X	X	X	Sidewalks – Salmon to Fischer	TE	2013	\$650
School Road – Washington to Salmon, McKinleyville	ST	X	X	X	X	X	Sidewalks & bike lanes w/ roundabout Washington to Salmon	Prop 1B & Developer	2013	\$1,400
Briceland Thorne Road	ST				X	X	Curve Correction	HRRR	2013	\$800
Oak & F Street, Eureka	ST	X		X	X	X	Sidewalks, speed table crosswalk, center median haven	SR2S	2013	\$350
Murray Road, McKinleyville	ST	X		X		X	Sidewalks, bulbouts, center median haven	SR2S	2013	\$100
Union Street	ST	X	X	X	X	X	Shoulder widening & geometric improvements	STIP	2013-14	\$2,881
Central Avenue	ST	X		X	X	X	Shoulder widening & overlay	Not Funded	TBD	\$900
Harris & Hall	ST	X			X	X	Safety improvements	Not Funded	TBD	\$500
Herrick & Elk River Intersection	LT	X	X	X	X	X	Signalize	Not Funded	TBD	\$900
Fairfield, Meyer, Eureka	LT	X	X	X	X	X	Route improvement	Not Funded	TBD	\$1,000
McKinleyville Avenue Extension	ST	X	X	X	X	X	Connect to School Road	Not Funded	TBD	\$500
Bald Hills Road	LT		X	X	X		Pave Surface	Not Funded	TBD	\$6,000
New Navy Base Road	LT	X	X	X	X	X	Reconstruct from SR 255 to Bay	Not Funded	TBD	\$1,500
Myrtle Avenue at Freshwater Road	ST	X		X	X	X	Traffic Circle	Not Funded	TBD	\$900
Central Avenue, McKinleyville	ST	X		X	X	X	Shoulder widening	Not Funded	TBD	\$800

Project Location	Short or Long Term	Complete Sts. Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
Central Avenue, McKinleyville	ST	X	X	X	X	X	Synchronize Traffic Signals	Not Funded	TBD	\$800
Hammond Trail Bridge - Mad River	ST	X	X	X	X	X	Replace existing bridge	Not Funded	TBD	\$3,200
Hammond Trail Bridge - Little River	ST	X	-	X	X	X	Construct bridge	Not Funded	TBD	\$2,000
Glendale Drive, Blue Lake	ST	X	X	X	X	X	Construct Class I Trail	Not Funded	TBD	\$2,000
Humboldt Hill to Thompkins Hill	LT	X	X	X	X	X	Connector Road	Not Funded	TBD	\$2,000
Harris to Fern Street, Cutten	LT	X	X	X	X	X	Connector Road	Not Funded	TBD	\$2,000
Alderpoint/Mattole/Maple Creek	LT	X	X	X	X	X	Reconstruct rural routes	Not Funded	TBD	\$100,000
Bell Springs Road	LT	X	X	X	X	X	Improve with Mendocino County	Not Funded	TBD	\$10,000
Briceland/Shelter Cove Roads	LT	X	X	X	X	X	Reconstruction/Safety Improve	Not Funded	TBD	\$10,000
Fern Street, Cutten	LT	X	X	X	X	X	Complete Connection	Not Funded	TBD	\$1,000
Red Cap Road, Orleans	ST	X	X	X	X	X	Shoulder Widening	Not Funded	TBD	\$1,200
Garberville	ST	X	X	X	X	X	Context Sensitive Modifications	Not Funded	TBD	\$1,500
Hoopa Downtown Corridor Project	ST	X	X	X	X	X	Context Sensitive Modifications (County portion only)	Not Funded	TBD	\$250
								<i>Humboldt Co. ST Subtotal</i>		\$27,980 <i>\$161</i>
								<i>Humboldt Co. LT Subtotal</i>		<i>\$ 134,400</i>
Agency: California Department of Transportation										
101 Corridor Improvement Project	ST	X	X	X	X	X	Safety improvements at uncontrolled intersections	RTIP ITIP	2017/18 2017/18	\$24,658 <u>28,380</u> \$15,000
U.S. Highway 101 / Broadway, Kmart to O Street	ST	X	X	X	X	X	ADA curb returns and ramp upgrades	2016 SHOPP	2018	\$3,000
101-In Arcata from 11th Street Overcross to the Arcata Overhead	ST	X	X	X	X	X	Install cable median barrier	2013 SHOPP	2013	\$ 1,000
101-From Arcata Slough Bridge to Arcata Overhead	ST	X	X	X	X	X	Eureka/Arcata CAPM and restripe	2012 SHOPP	2013	\$14,000
101-Various locations from Westhaven Dr. to Trinidad Rd.	ST	X	X	X	X	X	Humboldt 101 seismic retrofit	2013 SHOPP	2014	\$4,000

Project Location	Short or Long Term	Complete Sts. Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
101- Near Rio Dell from Eel River Bridge to S. of Van Duzen Bridge	ST					X	Median barrier installation	2013 SHOPP	2014	\$ 1,000
101 – Near Garberville near Richardson Grove	ST	X		X		X	STAA Operational Improvement Project	2011 SHOPP	NA	\$5,500
City of Fortuna Maintenance Station	ST	X		X		X	Excavate contaminated material	2014 SHOPP	2015	\$2,000
299-Near Willow Creek on Cedar Creek	ST			X	X	X	Cedar Gap curve improvement	2014 SHOPP	2012	\$1,000
299-Near Blue Lake near Bair Rd	ST			X	X	X	Acorn curve improvement	2014 SHOPP	2015	\$3,000
299-Near Willow Creek near Redwood Creek Bridge	ST			X	X	X	Sabertooth shoulder widening	2016 SHOPP	2017	\$2,000
299 - Near Willow Creek near Chezem Rd	ST			X	X	X	Circle Point curve improvement	2014 SHOPP	2016	\$4,000
299-near Blue Lake, Chezem Road	ST			X	X	X	Lupton curve improvement	2015 SHOPP	2016	\$2,000
299-Near Blue Lake at Mill Creek Bridge	ST		X				Mad River fish passage mitigation	2012 SHOPP	2013	\$1,000
299-Near Blue Lake at Chezem Road	ST			X	X	X	Green Point sink restoration	2012 SHOPP	2014	\$9,000
299-Near Blue Lake to 0.2m W of the Route 96 Junction	ST			X		X	Grind-in rumble strips installation	2012 SHOPP	2017	\$21,000
96 - Near Willow Creek near the Tish-Tang Campground	ST			X	X	X	Sugar Bowl Ranch curve Improvement	2012 SHOPP	2017	\$3,000
96 - Near Willow Creek near Shoemaker	ST			X	X	X	Hoopa Vista Point curve correction	2012 SHOPP	2017	\$2,000
96 - In Hoopa from Loop Road near Hostler Creek Bridge	ST	X	X	X		X	Shoulder widen and lighted crosswalk	2012 SHOPP	2016	\$1,000
96 – Downtown Hoopa	ST	X	X	X		X	<u>Pedestrian safety, traffic calming, drainage improvements</u>	<u>Partially funded</u>	<u>2013-2016</u>	<u>\$4,400</u>
255 - Near Arcata at McDaniel Slu Bridge	ST		X			X	Mad River Wetland Mitigation	2012 SHOPP	2015	\$1,000
169 - East of Pecwan near Junction of Highways 96 / 169	ST			X	X	X	Weitchpec Curve Improvement	2016 SHOPP	2017	\$1,000
169 - Various Locations	ST			X		X	Widening and Metal Beam Guardrail	2012 SHOPP	2015	\$6,000
36 - At Carlotta from Wilson Lane to 0.5 W of Cummings Creek Rd.	ST			X	X	X	Carlotta Left Turn Channelization	2012 SHOPP	2014	\$9,000
254 - Various Locations	ST			X	X	X	Avenue of the Giants - Four Bridges Project	2012 SHOPP	2016	\$6,000

Project Location	Short or Long Term	Complete Sts. Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
101 - South Fork Eel River Bridge	ST			X	X	X	Eel River Bridges Seismic Retrofit Project	Not Funded SHOPP	NA <u>2015</u>	
101 - In Trinidad between 6th Street and Trinidad Road Exit	ST	X		X		X	New Interchange	Not Funded SHOPP (PID)	NA	\$18,000
255 - City of Manila	ST	X	X	X	X	X	Pedestrian and Non-Motorized Vehicle Safety Enhancement	Not Funded	NA	\$1,000
96 - Trinity River Bridge in Downtown Hoopa	ST	X	X	X	X	X	Pedestrian and non-motorized vehicle crossing of Trinity River	Not Funded SHOPP (PID)	NA	\$1,000
101 - Intersection of Broadway, Wabash and Hawthorne	ST	X	X		X	X	Intersection <u>Improvement control evaluation</u>	Not Funded SHOPP (PID)	NA	\$3,000
101 - In Eureka south of Fields Landing OH to north of Herrick Avenue OC	ST				X	X	<u>Pavement preservation</u>	SHOPP (PID)	<u>NA</u>	
101 - Eureka on 4 th and 5 th Streets from Broadway to Eureka Slough Bridge	ST	X	X		X	X	<u>Eureka capital preventative maintenance</u>	SHOPP (PID)	<u>NA</u>	
101 - Near Orick north of Big Lagoon	ST				X	X	<u>Orick capital preventative maintenance</u>	SHOPP (PID)	<u>NA</u>	
101 - Near Blue Lake at various location from Lupton Creek to Berry Summit	ST				X	X	<u>Slope repair and drainage improvements</u>	SHOPP (PID)	<u>NA</u>	
101 - Near Blue Lake from Titlow Hill Road to Willow Creek	ST				X	X	<u>Humboldt 299 capital preventative maintenance</u>	SHOPP (PID)	<u>NA</u>	
96 - 6.2m E of Willow Creek to 2.6m W of Tish-Tang Campground	ST				X	X	Correct curve, shoulder widen, rumble strip, restripe, OGFC	Not Funded SHOPP	NA <u>2016</u>	\$5,000 <u>3,700</u>
101 and 254 - Various locations in Humboldt County	ST				X	X	Upgrade guardrail and bridge approach	Not Funded SHOPP	NA	\$4,000
101, 169, and 199 - Various locations	ST				X		<u>Metal beam guardrail</u> <u>BGR follow-up</u>	SHOPP	NA <u>2014</u>	\$3,000
101 - Upgrade Bridges (2 Humboldt County Bridges)	ST				X	X	Bridge Seismic Retrofit	Not Funded SHOPP	NA <u>2014</u>	\$6,000
36 - Hely Creek, Little Larabee Creek and Butte Creek	ST				X	X	Bridge Rail Replacement and Upgrade	Not Funded SHOPP (PID)	NA	\$1,000
36 - Little Golden Gate, approx 15m E of Carlotta	ST			X	X	X	Install erosion control measures	Not Funded SHOPP (PID)	NA	\$2,000
36 - Near Hydesville at River Bar Road	ST				X	X	<u>Alton shoulder widening</u>	SHOPP (PID)	<u>NA</u>	







Project Location	Short or Long Term ¹	Complete Sts. Economic	Environment	Operations	Preserve Sys.	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure ² (\$000)
101 - Between Eureka and Arcata	ST			X		X	Metal beam guardrail BGR follow-up to previous locations	Not Funded SHOPP	NA 2014	\$2,000
299, 96 - Near willow Creek; 36 - From Carlotta to Hydesville	ST			X		X	MBGR follow up to previous locations	Not Funded SHOPP	NA	\$2,000
101 - Williford Rd. Undercrossing	ST			X	X	X	Replace Superstructure	SHOPP	NA2015	\$2,000
101 - Through the community of Orick	LT	X	X	X		X	Streetscape improvements to enhance bike and pedestrian safety	Not funded	NA	\$1,400
96 - Aikens Creek, Bluff Creek, Slate Creek, Rube Creek, Trinity	ST	-	-	X		X	Bridge Rail Replacement and Upgrade	Not Funded	NA	-\$3,000
101 - Eureka Slough, Big Lagoon, Richardson Grove, Salt River	ST	-	-	X		X	Bridge Rail Replacement and Upgrade	Not Funded	NA	-\$2,000
96 - Eureka Slough, Camp Creek, Willow Creek, Klamath River	ST	-	-	X	X	X	Seismic Restoration	Not Funded	NA	-\$7,000
383 - Eel River BOH	ST	-	-	X	X	X	Seismic Restoration	Not Funded	NA	-\$6,000
101 - Orick Hill	ST	-	-			-	Relocate Radio Tower and Transmitter Site	Not Funded	NA	-\$0
101 - South Fork Eel River Bridge	ST	-	-	X	X	X	Strengthen Bridges	Not Funded	NA	-\$1,000
299 - Approx. 15m east of Blue Lake	ST	-	X	X		X	Install source control measures for erosion	Not Funded	NA	-\$1,000
96 - Through the community of Orleans	LT	X	X	X		X	Streetscape improvements to enhance bike and pedestrian safety	Not funded	NA	\$1,800
96 - Through the community of Manila	LT	X	X	X	X	X	Streetscape improvements to enhance bike and pedestrian safety	Not funded	NA	\$2,200
								Caltrans ST Subtotal		\$222,439
										191,980
								Caltrans LT Subtotal		-\$5,400
								Regional Projects–Funded (constrained) Subtotal		\$ 143,439
										239,274
								Regional Projects–Not funded (unconstrained) Subtotal		\$70,000
										275,426




¹ Short-term (ST) is the next 1 to 10 years; long-term (LT) is the next 11 to 20 years.

² Assume 3% annual inflation.

Regional Trails Proposed Projects

(From RTP Table *Trails-1*)

Trail Project	Jurisdiction	Description	In HCAOG Adopted Plan(s)*:
California Coastal Trail 	HCAOG	<ul style="list-style-type: none"> Encourage Caltrans to design improvements for pedestrians and bicycles on the bridges crossing the Eel River and Mattole River. Work towards implementing the <i>Humboldt County Coastal Trail Implementation Strategy</i>, in coordination and cooperation with local jurisdictions, agencies, and other public and private stakeholders to design, locate, fund, acquire, and maintain segments of the California Coastal Trail. Work with private landowners to acquire public access rights at locations from Centerville Beach to Cape Mendocino. 	HCCTIS, RPP
Annie and Mary Rail Trail	Arcata, Blue Lake, Blue Lake Rancheria, Humboldt County	6.8-mile trail corridor that would run east from the Aldergrove Industrial Park in Arcata to the City of Blue Lake, following the inactive NCRA railroad corridor and a segment along SR 299.	HCCTIS, OWP, RPP, RTMP
Arcata Rails with Trail 	Arcata, Humboldt County	Trail from West End Road to Samoa Boulevard, with segments along railroad tracks. This trail would link the Annie & Mary Trail and the Humboldt Bay Trail.	HCCTIS, RBP, RPP
Eureka Waterfront Trail 	Eureka	From Tydd Street to Herrick Avenue, including along the existing Eureka Boardwalk. The segments still to be built and/or upgraded are: Waterfront Drive from C Street Boardwalk to Del Norte Street; PALCO Marsh Trail improvements.	HCCTIS (Priority Project), RTMP
Hammond Trail 	Arcata, Eureka, Humboldt County	Extend the Hammond Trail from the Mad River bridge south, connecting to the City of Arcata (downtown) and Eureka. Extend the trail north to Westhaven and Trinidad. Restore Replace the Hammond Trail pedestrian/bicycle bridge across the Mad River.	HCCTIS, RBP, RPP, RTMP
Humboldt Bay Trail 	Arcata, Eureka, Humboldt County	Arcata to Eureka Segment: A 6.5-mile Class I/multi-use path around the east side of Humboldt Bay, between Arcata and Eureka. The trail would follow the North Coast Railroad rail corridor and parallel U.S. 101.	HCCTIS, Humboldt Bay Trails Feasibility Study, RBP, RPP, RTMP
Hoopa Valley Trail	Humboldt County	A 6-mile segment along SR 96 from the south end of Shoemaker Road northward (in Caltrans right-of-way). The long-term vision is to expand the trail throughout the Hoopa Valley.	RPP
<u>Little River Trail (Hammond Trail Extension)</u> 	<u>Humboldt County</u>	<u>Construct multi-use (Class I) trail between Clam Beach and Moonstone Beach. The trail would connect the Hammond Trail and Clam Beach Road to Scenic Drive.</u>	<u>n.a.</u>

Trail Project	Jurisdiction	Description	In HCAOG Adopted Plan(s)*:
Orick Levee Coastal Trail 	Humboldt County	Multi-purpose trail on north Redwood Creek levee to the U.S. 101 bridge (0.69 miles), south levee to Redwood National Park Visitor Center (2.45 miles).	HCCTIS (Priority Project)
Riverwalk Trail 	Humboldt County	Fortuna City Limits to Sandy Prairie	RTMP
Baylands Trail 	Arcata	Within Baylands Park – Class I	RTMP
Truesdale Vista Point Trail	Eureka	Multipurpose Trail from Truesdale Vista Point to Hilfiker Lane Trailhead	RPP, RTMP
Foster Avenue Extension	Arcata	Sunset Avenue to Alliance Avenue – Class I & II	RBP,RPP, RTMP
John Campbell Memorial Greenway	Fortuna	Multi-purpose from the Riverwalk Trail to the south entrance of the Headwaters Reserve	RBP, RTMP



Public Transportation Proposed Regional Projects

(From RTP Update 2013/14, Table *Transit-4*)

Operator / Agency	Short or Long Term ¹	Description	Funding Source ²	Implementation Year(s)	Cost in Year of Expenditure ³ (\$000)
Eureka	ST	Bus Replacement (2)	5311/PTMSIEA	2013-14	1,000
Eureka	ST	Bus Replacement (2)	Not funded	2016-17	1,090
Eureka DAR/L	ST	Van Replacement (1)	Not funded	2016-17	62
Eureka	LT	Eureka Intermodal Transit Center	Not funded	TBD	14,000
Arcata	ST	Bus replacement (2)	5311/PTMSIEA	2014-2023	1,200
Arcata	ST	Bus replacement (2)	5311/PTMSIEA	2025	1,400
Arcata	LT	Pursue unmet transit needs requests for service to the Arcata Marsh and service on Sundays (annual cost)	Not funded	2023-2033	90*
Fortuna Senior Bus	ST	Bus replacement	Not funded	2016-17	73
HTA	ST	Bus replacements (one 40' & two 30')	5311/5311 (f)	2013	825
HTA	ST	40' bus replacements (2 to 3 based on fuel type)	5311/PTMSIEA	2014	1,300
HTA	ST	40' bus replacements (2)	5311	2014	937
HTA	ST	30' bus replacements (2)	5311	2015	392
HTA	ST	40' bus replacements (2)	5311	2016	965
HTA	ST	40' bus replacements (2)	5311	2022	1,152
HTA	LT	RTS increased frequency & late night service	Not funded	2018	400*
HTA	LT	Feeder bus lines to McKinleyville and Fortuna to connect to the RTS commuter line	Not funded	2023-2033	538*
HTA	LT	Park-and-Ride lots with multi-modal facilities (e.g. bike lockers, bus shelter), located near transit stops (6)	Not funded	2023-2033	600
KT Net	ST	Bus	5311(f)	2013-2014	63.5
KT Net	ST	Expand service hours	5311(f)	2013-2014	18.5*

KT Net	ST	Intelligent Transportation System application/equipment	5311(f)	2013-2014	38
KT Net	ST	Relocate bus stop	Not funded	2014-2018	50
HCAOG	ST	Park-and-Ride Feasibility Study	RPA	2014-15	10
City Ambulance of Eureka	LT	Expand service hours and to Sundays	Not funded	2023-2033	not available, TBD
HCAR	LT	Expand service area for non-emergency medical trips	Not funded	2023-2033	not available, TBD
				Short-Term Total	\$10,576
				Long-Term Total	\$15,628+tbd
				Regional Projects–Unfunded (unconstrained) Subtotal	\$16,903 +tbd
				Regional Projects–Funded (constrained) Subtotal	\$ 9,301
				PUBLIC TRANSPORTATION PROJECTS TOTAL	\$ 26,204+tbd

¹ Short-term (ST) is in the next 1 to 10 years; long-term (LT) is in the next 11 to 20 years.

² PTMSIEA = Public Transportation Modernization, Improvement, and Service Enhancement Account (Prop 1B); RPA = Rural Planning Assistance funding

³ Assumes 3% annual inflation.

*Annual cost

Goods Movement Proposed Regional Projects

(From RTP Update 2013/14, Table Goods-3)

Lead Agency	Project Name	Short or Long Term ¹	Description	Funding Source	Implementation Year(s)	Estimated Cost ²
Harbor District	Redwood Marine Terminal Modernization (Option B)	LT	Establish a multipurpose, publicly-owned marine terminal with two berths. Develop a single multipurpose berth for the short-term, designed to be integrated into long-term terminal development.	Not funded	Unknown	\$32 to \$38 million (initial cost in 2008 dollars).
Harbor District	Vance Ave - Bay Street to Samoa Pulp Lane	ST	Acquire title to property; improve to Major Collector and National Highway System (NHS) standards to serve marine terminals.	Not funded	2015	\$2,336,000
Harbor District	Vance Ave – Samoa Pulp Lane to North Spur	ST	Acquire title to property; improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2015	\$1,094,000
Harbor District	North Spur off Vance Ave	ST	Acquire title to property; improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2019	\$746,000
Harbor District	South Spur off Vance Ave	ST	Acquire title to property; improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2019	\$1,033,000
Humboldt County	Bay Street - New Navy Base Road to Vance Ave	LT	Improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2017	\$978,000
Humboldt County	Samoa Pulp Lane - New Navy Base Road to Vance Ave	ST	Improve to Major Collector and NHS standards to serve marine terminals.	Not funded	2017	\$239,000
Humboldt County	New Navy Base Road – State Route 255 to Bay St.	LT	Improve to NHS standards to serve marine terminals.	Not funded	Unknown	\$1,929,000

(continued on next page)

Freight Rail Improvements – The following improvements have been identified in terms of goals and objectives for freight rail. Because no specific projects are proposed at this time, HCAOG identifies the following improvements to document HCAOG’s advocacy for rail improvements that will enhance the region’s goods movement system.

Harbor District and NCRA	Northern Freight Corridor Restoration Project (per 2008 RTP)		Project seeks to reduce shoaling in Humboldt Bay (thereby enhancing navigation efficiency and safety), and rehabilitate the Northern Corridor of the NWP railroad from the Port of Humboldt Bay to South Fork. The project would also open up the potential for excursion passenger train service within the NCRA’s Northern Corridor Rail. (per 2008 RTP)	Not funded	Unknown	Unknown
NCRA (NWP Co. secondary)	Northwestern Pacific Railroad Reopening Eel River Division	N/A	Repair facilities and resume service on the Eel River <u>and Humboldt Bay Divisions</u> of the NWP Railroad (far Northern Portion (South Fork to Samoa) and alternately referred to as the Canyon Portion and far Northern Portion).	Not funded	Not within next 20 years per NCRA	Unknown

Aviation Proposed Regional Projects

(From RTP Update 2013/14, Table Aviation-5)

Lead Agency	Project Name/Description	Short or Long Term ¹	Funding Source	Implementation Year(s)	Estimated Cost ²
Arcata-Eureka Airport					
County of Humboldt	Phase 2 ARFF site civil work, remove nose hangar	ST	FAA, County of Humboldt	2013	\$2,478,914
County of Humboldt	Phase 3 ARFF design completion	ST	FAA, County of Humboldt	2013	\$399,277
County of Humboldt	Study hazard removal	ST	FAA, County of Humboldt	2014	\$150,00
County of Humboldt	Design runway lighting improvements	ST	FAA, County of Humboldt	2015	\$600,00
County of Humboldt	*Phase 3 construct fire station	ST	FAA, County of Humboldt	2016	\$3,700,000
County of Humboldt	*RNR TWY B&G/drainage (design complete 2006)	ST	FAA/County of Humboldt	2018	\$508,802
<i>Subtotal</i>					<i>\$4,208,802</i>
Dinsmore Airport					
County of Humboldt	Study removing or lowering hazards to aircraft	ST	FAA, County of Humboldt	2014	\$50,000
County of Humboldt	Remove/lower hazard to aircraft	ST	FAA, County of Humboldt	2014	\$150,000
County of Humboldt	*Design windsock and segmented circle	ST	FAA, County of Humboldt	2015	\$130,000
County of Humboldt	Construct windsock and segmented circle	ST	FAA, County of Humboldt	2016	\$88,000
County of Humboldt	*Construct west end storm drain improvements	ST	FAA, County of Humboldt	2017	\$300,000
County of Humboldt	*Construct fence and gates	ST	FAA, County of Humboldt	2018	\$166,400
County of Humboldt	Design ramp improvements	ST	FAA, County of Humboldt	2018	\$50,000
<i>Subtotal</i>					<i>\$934,400</i>
Garberville Airport					
County of Humboldt	Study removing or lowering hazards to aircraft	ST	FAA, County of Humboldt	2014	\$150,000
County of Humboldt	*Design runway	ST	FAA, County of Humboldt	2014	\$52,5000
County of Humboldt	*Remove or lower hazards to aircraft	ST	FAA, County of Humboldt	2014	\$100,000
County of Humboldt	*Construct runway RNR	ST	FAA, County of Humboldt	2015	\$368,000
County of Humboldt	*Construct ramp RNR and expansion	ST	FAA, County of Humboldt	2017	\$562,500
County of Humboldt	*Design runway safety area drainage	ST	FAA, County of Humboldt	2017	\$68,000
County of Humboldt	*Construct runway safety area drainage	ST	FAA/County of Humboldt	2018	\$564,000
<i>Subtotal</i>					<i>\$2,276,300</i>
Kneeland Airport					
County of Humboldt	*Study removing or lowering hazards to aircraft	ST	FAA, County of Humboldt	2014	\$50,000
County of Humboldt	RSA study	ST	FAA, County of Humboldt	2012	\$156,825
County of Humboldt	*Design fencing and gates	ST	FAA, County of Humboldt	2013	\$45,000
County of Humboldt	*Construct fencing and gates	ST	FAA, County of Humboldt	2014	\$350,000

County of Humboldt	*Design stabilization	ST	FAA, County of Humboldt	2014	\$107,800
County of Humboldt	*Construct stabilization	ST	FAA, County of Humboldt	2016	\$1,077,600
<i>Subtotal</i>					\$1,787,225
Murray Field Airport					
County of Humboldt	Construct wildlife perimeter fencing/gates	ST	FAA, County of Humboldt	2012-13	\$608,708
County of Humboldt	Design AWOS, upgrade of RWY/TWY lighting system and connecting security lights to emergency generator	ST	FAA, County of Humboldt	2014	\$63,000
County of Humboldt	*Construct upgrade of RWY/TWY lighting system	ST	FAA, County of Humboldt	2015	\$350,000
County of Humboldt	*Install and implement AWOS type system	ST	FAA, County of Humboldt	2015	\$270,000
County of Humboldt	*Design RWY/TWY RNR	ST	FAA, County of Humboldt	2016	\$63,000
County of Humboldt	*Construct RWY/TWY RNR	ST	FAA, County of Humboldt	2017	\$753,000
County of Humboldt	*Design entry road rehabilitation	ST	FAA, County of Humboldt	2017	\$40,000
County of Humboldt	*Construct entry road rehabilitation	ST	FAA, County of Humboldt	2018	\$480,000
<i>Subtotal</i>					\$1,874,708
Rohnerville Airport					
County of Humboldt	*Construct RWY/TWY RNR (design in 2006)	ST	FAA, County of Humboldt	2014	\$933,000
County of Humboldt	Design completion of wildlife exclusion fence/gates	ST	FAA, County of Humboldt	2015	\$180,000
County of Humboldt	Construct completion of wildlife exclusion fence/gates	ST	FAA, County of Humboldt	2016	\$609,000
County of Humboldt	*Construct ramp RNR (design in 2009-10)	ST	FAA, County of Humboldt	2017	\$660,450
County of Humboldt	Design and construct Phase II ramp improvements	ST	FAA, County of Humboldt	2017	\$1,081,300
County of Humboldt	Design beacon replacement	ST	FAA, County of Humboldt	2019	\$67,500
<i>Subtotal</i>					\$3,531,250
Samoa Field (Formerly Eureka Municipal)					
City of Eureka	Remove/lower hazard to aircraft	ST	Caltrans/City of Eureka	2014	\$30,000
City of Eureka	Design T-hangars	ST	City of Eureka	2014	\$20,000
City of Eureka	Construct T-hangars	ST	City of Eureka	2015	\$240,000
City of Eureka	Resurface runway/taxiways/repaint markings	ST	Caltrans/City of Eureka	2019	\$160,000
City of Eureka	Construct wildlife exclusion fence/gates	ST	Caltrans/City of Eureka	2021	\$240,000
<i>Subtotal</i>					\$690,000
Hoopa Airport, Samoa Field Airport, Shelter Cove Airport —No information available/TBD.					

¹ Short-term is 0-10 years; long-term is 11-20 years. ² To estimate the cost in year of implementation, assume a 3% annual rate of inflation.

*Project is listed in the “California Aviation System Plan: Capital Improvement Plan Year 2012-2023” (Caltrans, ~~September 2011~~ August 2013).

Acronyms: Reconstruct and Rehabilitate (RNR), Automated Weather Observation System (AWOS), taxiway (TWY), runway (RWY), Aircraft Rescue and Fire Fighting Building (ARFF)

Emergency Transportation Proposed Regional Projects

(From RTP Update 2013/14, Table *Emergency-1*)

<p>PROJECT 1 - Rural ITS Planning Project</p>	<p>Work with partner agencies to implement an Intelligent Transportation System (ITS) project to improve the region’s rural transportation safety solutions. This project will evaluate which ITS application(s) would be most valuable and feasible for the region to pursue first. Examples of ITS technological applications include: traveler information websites, satellite positioning technology, emergency vehicle preemption, and variable message signs.</p> <p>This project would be coordinated with and would build upon HCAOG’s “Transit Intelligent Transportation System” project from the 2012-13 Overall Work Program.</p>
<p>PROJECT 2 – Interagency Emergency Transportation Planning Project</p>	<p>Foremost through the SCC, HCAOG will explore opportunities to create a formal framework between transit operators and emergency planners. The framework may identify, establish, and standardize information sharing between transit agencies and emergency operations centers (EOCs). This project could also address improving communications and leadership between the agencies and training within transit agencies.</p>



9. Project objectives:

Under its authority as the Regional Transportation Planning Agency for Humboldt County, HCAOG is updating its Regional Transportation Plan, *VROOM*, in conformance with the California Transportation Commission's adopted RTP Guidelines, and pursuant to Government Code §65080 et seq. of Chapter 2.5, federal legislation; U.S. Code, Title 23, §134 and §135 et seq.

The RTP update is intended to fulfill these objectives:

- Adopt RTP policies that will guide the development of an efficient, coordinated, balanced regional transportation system, and to improve the mobility of Humboldt County residents, visitors, and goods.
- Assess the current modes of transportation and the potential of new travel and goods movement options within the region;
- Identify and document specific actions necessary to address the region's needs for mobility, accessibility, and goods movement for the next 20 years.
- Identify objective criteria for measuring the performance of the transportation system;
- Identify and document public policy decisions by local, regional, state and federal officials regarding transportation expenditures and financing;
- Identify needed transportation improvements in sufficient detail to serve as a foundation for:
 - Developing the Federal Transportation Improvement Program (FTIP), the Regional Transportation Improvement Program (RTIP) and the Interregional Transportation Improvement Program (ITIP);
 - Facilitating National Environmental Protection Act (NEPA)/404 integration process decisions;
 - Identifying project purpose and needs; and
 - Developing an estimate of emissions impacts for demonstrating conformity with the air quality standards identified in the State Implementation Plan (SIP).
- Promote consistency between the California Transportation Plan, the regional transportation plan and other transportation plans developed by cities, counties, districts, private organizations, tribal governments, and state and federal agencies;
- Provide a forum for: (1) participation and cooperation, and, (2) facilitating partnerships that reconcile transportation issues which transcend regional boundaries and;
- Involve the public, federal, State and local agencies, and local elected officials early in the transportation planning process by including them in dialogue and decisions on the social, economic, air quality and environmental issues related to transportation.

10. Surrounding land uses and setting:

The RTP's planning area encompasses areas throughout the region, covering the seven incorporated cities, the unincorporated county, tribal lands, and state highways. Land within Humboldt County's political boundaries covers 3,500 square miles of beaches, dunes, estuaries, river valleys, bay land, coastal terraces, agricultural lands and forested hills—with rural and relatively urban communities and cities dispersed throughout. The county is mostly mountainous except for the level plain which surrounds Humboldt Bay. The elevation runs from sea level to 6,934 feet.

What is now known as Humboldt County is the ancestral land of several Native American Tribes. There are eight Native American Reservations and Rancherias in Humboldt County: Bear River Band of Rohnerville Rancheria, Big Lagoon Rancheria, Blue Lake Rancheria,



Hoopa Valley Tribe, Karuk Tribe, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Wiyot Tribe, and the Yurok Tribe.

The seven incorporated cities in Humboldt are Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad. The City of Eureka is the city with the largest population (27,000); Trinidad has the smallest population (400).

Major highways in the region include U.S. 101, and State Routes 36, 169, 200, 211, 254, 255, 271, 283, and 299. Highway 96 connects State Route 255 with Interstate 5 north of Yreka, along the scenic Klamath River canyon. . U.S. 101 and State Route 299 are two of California's Focus Routes. The Focus Routes represent ten State corridors that are highest priorities for bringing to minimum facility concept standards over the next 20 years.

Humboldt County is bounded to the west by the Pacific Ocean. It is north of Mendocino County, south of Del Norte County, and west of Trinity and Siskiyou Counties. The planning area includes Townships 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, & 12 North, and Townships 1, 2, 3, 4 & 5 South; and Ranges 1, 2, & 3 West and 1, 2, 3, 4, & 5 East of the Humboldt Base & Meridien. (See *Figure 1, Regional Location.*)

11. Other public agencies whose approval is required:

Approval of the proposed project is at the discretion of HCAOG, which is the lead agency for the 2013/14 RTP. It should be noted that additional environmental review may be required to be conducted by the project sponsor, as the lead agency for the individual projects contained within the 2013/14 RTP, prior to project implementation. Depending on the location of the project, future approvals for individual transportation projects identified in the 2013/14 RTP would have to be completed by one or more of the following agencies or governments:

- Humboldt County Association of Governments
- Blue Lake Rancheria, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Hoopa Valley Tribe, Karuk Tribe, and Yurok Tribe
- California Department of Transportation (Caltrans)
- Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad
- County of Humboldt
- Humboldt Bay Harbor, Recreation, and Conservation District
- Humboldt Transit Authority
- Klamath Trinity Non-Emergency Transit (K-T NeT)
- North Coast Railroad Authority



ENVIRONMENTAL FACTORS AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is “Potentially Significant” or “Potentially Significant Unless Mitigation Incorporated” as indicated by the checklist on the following pages.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forest Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology/Soils |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |



DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed Project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed Project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature

Date

Printed Name

Environmental Checklist

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
I. <u>AESTHETICS</u> – Would the Project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a- b, c) The majority of RTP policies and projects will have minimal to no adverse aesthetic impacts. For example, non-physical projects, such as ones to conduct transportation planning or public transportation service, have no aesthetic impacts. Most of the proposed physical projects are to maintain existing facilities and improve facilities within existing rights-of-way on public roads, airports, and harbor sites. Additionally, most physical projects consist of infrastructure at ground level (roadways, sidewalks, trails, tarmacs, runways, piers) that does not involve vertical visual elements other than amenities such as lampposts, street signs, traffic lights, or windsocks. The proposed projects, as conceptualized, will not substantially change views or visual quality in the region because the projects will occur in pre-existing developed areas and will not introduce new uses that are out of character with the surroundings.

There are currently no Officially Designated State Scenic Highways in Humboldt County, although State Routes 36, 96, 101, and 299 are Eligible State Scenic Highways.¹ The RTP's project concepts do not propose constructing infrastructure that would substantially alter or damage a valued scenic resource (e.g., trees, rock outcroppings, or historic buildings). However, once designed, the scale or location of a project could be found to potentially negatively impact aesthetic resources. For example, if a project were to extensively cut or fill a hillside, or remove extensive native vegetation, it could adversely impact aesthetic resources. Projects will require environmental assessment at the project level, and jurisdictions have their own policies and regulations (such as land use codes) that will be applied to protect aesthetic resources. In addition to tiered assessment at the project level, the mitigation measures outlined below will ensure that potentially adverse impacts to aesthetic resources are less than significant.

Aesthetic Resources-Mitigation Measures:

I(a,b)-1. If an RTP project is located within an identified scenic vista or a designated scenic highway, the project shall be designed and constructed to avoid significantly degrading the scenic quality. New facilities and infrastructure should be designed to be as compatible as possible with the aesthetic character of the immediate vicinity.

¹ Caltrans' webpage, California Scenic Highway Mapping System/Scenic Route. Accessed October 15, 2013.



I(c)-1. The RTP projects shall be designed to avoid significantly degrading the existing visual character or quality of natural, cultural, or biological aesthetic resources, including views to and along the ocean and scenic coastal areas. Project siting and construction shall minimize altering natural landforms and to the fullest extent feasible be aesthetically compatible with the surrounding areas.

I(c)-2. During project design and environmental review processes, project proponents should provide plans that show elevation views of the project location with the proposed project, including proposed structures, utilities, fencing, lighting, landscaping, and signage elements.

The RTP includes, in the Complete Streets Element, the “101 Corridor Improvement Project” proposed by Caltrans (the full name is the Eureka-Arcata Route 101 Corridor Improvement Project). Caltrans’ preferred plan proposes to build a grade-separated (elevated) highway interchange at Indianola Cutoff, which has the potential to substantially alter the bay view from the Indianola Cutoff roadway (looking north/northwest).

Caltrans has analyzed the project’s potential aesthetic impacts in an earlier Draft EIS/EIR, pursuant to NEPA and CEQA. The project EIS/EIR includes mitigation measures to reduce visual impacts; however, the EIS/EIR identifies Unavoidable Significant Environmental Effects for aesthetic impacts. The following impacts would remain significant even after mitigation measures are taken for some of the project alternatives: “The removal of approximately 300 eucalyptus trees on the west side of the roadway. Alternatives 2 and 3 would remove an additional 25 trees to construct the interchange” at Indianola Cutoff.²

The Coastal Commission has conditionally concurred to certify that Caltrans’ proposed project is consistent with the California Coastal Act. One of the conditions the Commission has concerns scenic vistas and resources:

Visual Impact Mitigation. Prior to or concurrent with its submittal to the Commission of a coastal development permit application for the project Caltrans will develop and submit a plan to provide mitigation for the visual impacts of the project by removing, to the maximum extent feasible, all billboards along the corridor, as well as other overhead infrastructure (such as power poles and power lines), and by steepening the inside slopes of the interchange to maximize the view towards the bay from Indianola Cutoff.³

Because the lead agency, Caltrans, has been conducting project-level environmental analysis for the Eureka-Arcata Route 101 Corridor Improvement Project, HCAOG will not analyze the project further for the RTP Update’s current CEQA analysis.

d) Some projects proposed for physically improving a roadway/highway, airport, or harbor facility may include adding new or upgrading existing lighting. Jurisdictions in the region have their own applicable policies (including land use codes) to ensure that projects avoid or mitigate lighting or glare adversely impacting daytime and nighttime views. In addition to tiered assessment at the project level, the mitigation measures below would further ensure that potential light and glare impacts would be less than significant.

² US DOT, Eureka-Arcata Route 101 Corridor Improvement Project Draft EIS/EIR, 2007.

³ Caltrans’ website, “Eureka-Arcata Route 101 Corridor Improvement Project News.” Accessed October 15, 2013.



Aesthetic Resources – Mitigation Measures:

I(d)-1. RTP projects shall be designed to include landscape screening and lighting elements that minimize the visibility of new transportation facilities from adjacent communities.

I(d)-2. RTP projects shall be designed so that proposed lighting will cause minimal spillover or glare for adjacent uses. Lighting shall be directed downward and shielded to be unobtrusive to adjacent residential uses. Lighting shall use the lowest intensity brightness compatible with safety.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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II. AGRICULTURE AND FOREST RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. -- Would the Project:

a) Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

a-e) The RTP’s policies do not promote actions involving converting agriculture or forest resources to non-agricultural or non-forest uses. No projects are proposed on agricultural land, farmland, forest land, or timberland. However, some RTP projects are proposed along roadways, trails, or other areas that border lands with an agricultural land use designation or zoning. Some proposed commuter trail projects, for example, may propose to widen the shoulder of a rural roadway or construct a new trail for pedestrian and bicycle use adjacent to agricultural land. A proposed RTP trail project could potentially encroach on agricultural land to



non-agricultural use if site constraints prohibit alternative alignments and it is infeasible to design or engineer the project to fully avoid farmland. Potential encroachments would be predominantly in the form of narrow bands adjacent to existing roadways or trails. The percentage of agricultural land converted to non-agricultural use, as a result of RTP projects, would not be substantial relative to the county's total agricultural acreage.

Multiple levels of policy prohibit, discourage and/or mitigate converting farmland to another use. The draft RTP's Policy Trails-4 states: "HCAOG shall support entities to design and locate regional trails to minimize impacts to environmentally sensitive habitat areas and prime agriculture lands to the maximum extent feasible." Local jurisdictions have general plan policies that prohibit converting prime agricultural land and/or agricultural land to non-agricultural use. The federal Farmland Protection Policy Act and the California Coastal Act, among others, have restrictive policies. One or more levels of protection would apply to RTP projects, based on the project location, lead agency, and sources of funding.

In addition to these policies and tiered environmental assessment at the project level, the potential impact can be reduced to less than significant with the mitigation measure below.

Agriculture Resources – Mitigation Measure:

II(b,e)-1. RTP projects shall be sited and designed to avoid, to the greatest extent feasible, encroaching on lands with agricultural land use and zoning designations. Prior to approving the design of RTP projects, the implementing agency should assess the project area for the presence of important farmlands (prime farmland, unique farmland, farmland of statewide importance) and other agricultural constraints; and, if present, perform a Land Assessment and Site Evaluation (LESA).

II(b,e)-2. If the improvement cannot be designed to completely avoid important or significant farmlands, the implementing agency should compensate for unavoidable conversion impacts in accordance with the Farmland Protection Policy Act and local and regional standards. For permissible conversions for transportation infrastructure, the area converted should not be of a size that inhibits economically viable agricultural production. The implementing agency should employ conflict minimization and/or continue viability studies, as warranted.



	Impact to be Addressed in the EIR	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
III. AIR QUALITY -- Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a-e) State air quality oversight for Humboldt County is provided by the North Coast Unified Air Quality Management District (the District). The District is responsible for implementing programs and regulations required by the Federal and State Clean Air Acts and has jurisdiction over Humboldt, Del Norte, and Trinity counties in Northern California. The air basin in Humboldt, Del Norte, and Trinity County is considered to be "in attainment" of state and federal ambient air quality standards except for the State's 24-hour PM₁₀ standard. Humboldt County's sunny climate, pollution-trapping mountains and valleys, and the growing population, all contribute to the non-attainment status for PM₁₀.⁴

Implementing the RTP could increase pollutant emissions from policies or projects to improve existing transportation infrastructure or develop additional infrastructure. Future development associated with the RTP's proposed transportation projects may increase air pollution due to construction activities and/or operational emissions. Buildout of the proposed RTP could create isolated objectionable odors. Air quality impacts associated with the RTP will be assessed in the EIR.

⁴ "Air Quality Information for the North Coast" available on the District's Homepage, accessed October 2013.



	Impact to be Addressed in the EIR	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
IV. <u>BIOLOGICAL RESOURCES</u> --				
Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a-f) Existing undeveloped lands in the county provide open space and support habitats that are considered sensitive. Transportation projects contained in the RTP may have the potential to affect sensitive species, their habitats, and wildlife corridors.

Humboldt County contains a wide variety of native plant communities, sensitive habitats, and other important wildlife habitats due to the size of the county and its diverse geographic, topographic, and hydrological features. Humboldt County is part of the Klamath/North coast



bioregion. In general, this bioregion is characterized by its rocky coastline, forested montane areas, and sparse human settlement.⁵ Much of the bioregion is covered by forest. The Humboldt coastal area is rich in natural resources. Bays and estuaries and other tidal inlets provide a variety of habitats supporting many species of resident and migratory wildlife. Humboldt Bay is an important habitat for many invertebrates, fish, birds, and mammals. The Humboldt Bay National Wildlife Refuge was established in 1971 in recognition of the area's unique fish and wildlife values (*Ibid*).

The inland area of Humboldt County is home to a wealth of fish and wildlife due to the region's ample rainfall and the mild, consistent climate of the region. In addition, nearly 400,000 acres of the county's undeveloped forest and coastline habitats are designated as parkland in the State and National Park systems, leaving large tracts of existing habitat untouched (*Ibid*). The county is composed mainly of coastline and mountainous areas with dense coniferous forests interspersed with grass or chaparral covered slopes. Six wild rivers run through the county providing habitats for fish and wildlife as well as important water resources (*Ibid*). In addition, there are currently four Habitat Conservation Plans (HCP) located in Humboldt County including: the Green Diamond Resource Company California Timberlands Northern Spotted Owl HCP (HCP Permit #767798); the Green Diamond Resource Company 2007 Aquatic Habitat Conservation Plan/Candidate Conservation Agreement with Assurances (AHCP/CCAA); the Humboldt Redwoods Company (HCP Permit #TE828950-0); and, the Humboldt Bay Municipal Water District HCP.

Impacts to biological resources which may occur as a result of implementation of the RTP will be analyzed in the EIR.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
V. <u>CULTURAL RESOURCES</u> --				
Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a-c) Depending on their proximity, projects located at or near an historical archaeological, paleontological, or unique geologic feature or site may impact cultural resources. During construction and maintenance activities, earthmoving and dredging can potentially disturb or destroy recorded and unrecorded cultural resources. Paleontological and

⁵ Humboldt County General Plan Update, Draft EIR: Section 3.11: Biological Resources, April 2012.



archaeological resources are particularly sensitive to excavation by heavy equipment, by which valuable stratigraphic information can be lost. Historic resources still in use (e.g. bridges, road corridors, structures) could potentially be altered or lost by projects that will widen a transportation corridor or retrofit a structure for seismic safety.

RTP policies promote enhancing the regional transportation system by emphasizing improving and maintaining existing facilities, not creating or extending new facilities in undeveloped areas.

RTP projects that involve construction activities are all within developed areas, and almost all projects will occur where transportation facilities already exist, for example, within roadway rights-of-way, port areas and marine channels, airport boundaries, or railroad corridors. Some projects would occur in gaps between or adjacent to existing rights-of-way where the land is already developed (or disturbed).

The following recommended measures to reduce potential impacts to cultural resources are from HCAOG's 2008 RTP Program EIR, and are based on Policy 3531 of the Humboldt County General Plan (1984). These measures would apply to the 2013/14 RTP.

Cultural Resources – Mitigation Measures:

V(a,b,c)-1. For projects that include construction, excavation, or other activities that may potentially disturb cultural resources (including but not limited to unique archaeological, paleontological, and geological sites, grave sites, and cemeteries), all project phases (design, construction, and implementation) shall be carried out so that cultural resources are identified where feasible, assessed for significance, and if found to be significant shall be protected from loss or destruction.

V(a,b,c)-2. During project review, project proponents shall consult the Northwest Information Center of the California Historical Resources Information Center, Tribal Historical Protection Officers, and other pertinent experts with knowledge of local historical organizations, historic or prehistoric cultural resources, in order to identify known or potentially extant cultural resources in the project site, and follow steps to protect significant resources.

V(a,b,c)-3. Archaeological and paleontological resources shall not be knowingly destroyed or lost through discretionary action unless the site or resource has first been found to be of insignificant value and so recorded by a relevant expert(s) and representative(s) of the cultural resources community.

Compliance with 1, 2, and 3 will ensure impacts remain less than significant.

d) RTP projects are not proposed in any areas where they would disturb formal cemetery grounds. Most project areas are completely within existing roadway rights-of-way, airports, marine navigation channels, developed harbor areas, or railway corridors. Projects in these areas will not disturb human remains interred outside of formal cemeteries. Sponsors of projects included in the RTP will be required to comply with State Public Resources Code and Health and Safety Code requirements regarding accidental discovery of human remains. When there is reason to believe that a project site potentially holds interred human remains, the mitigation measures V(a,b,c)-1, -2, and -3 for cultural resources will ensure impacts remain less than significant.



	Impact to be Addressed in the EIR	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
VI. <u>GEOLOGY AND SOILS</u> –				
Would the Project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-e) Humboldt County is located within a seismically active area of California. Cape Mendocino (offshore of the county) experiences the highest concentration of earthquake events in the continental United States. In addition to causing ground shaking, an earthquake can trigger other natural disasters such as fire, landslides, and flooding, resulting in loss of life and property damage. Seismic hazards in the county include earthquake ground shaking, surface fault rupture, liquefaction, and tsunami potential in the coastal zone areas. Geologic hazards that are not specifically related to earthquakes include landslides and unstable soils.⁶ Transportation projects contained in the RTP have the potential to expose people or structures to adverse effects. These issues will be examined in the EIR.

The RTP does not include projects that contain septic systems. Therefore the RTP would not result in impacts related to soils incapable of supporting septic systems.

⁶ Humboldt County General Plan Update, Draft EIR: Section 3.8: Geology and Soils, April 2012.



	Impact to be Addressed in the EIR	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
VII. <u>GREENHOUSE GAS EMISSIONS</u> -				
Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

α-b) One of the main objectives/planning priorities of the RTP is to help achieve the goals of the California Global Warming Solutions Act of 2006 (AB 32) and the Sustainable Communities and Climate Protection Act of 2008 (SB 375), which are intended to reduce greenhouse gas (GHG) emissions in California. However, transportation projects in the RTP may result in an increase in GHG emissions due to construction activities and/or operational emissions. Greenhouse gas emissions associated with the RTP will be assessed in the EIR.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. <u>HAZARDS AND HAZARDOUS MATERIALS</u> - Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, or would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS - Would the Project:				
f) For a project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-c) Other than the use of oil, diesel, asphalt, paints, and other materials typical of construction activities, RTP projects would not transport, use, or dispose of hazardous materials, and thus would not create a significant hazard to the public associated with these materials. The RTP projects do not involve routinely transporting hazardous materials via the roadway, aviation, marine, or railway systems. Neither do any of the projects propose to use or dispose of hazardous materials. No project sites have known hazardous materials that would be released into the environment.

RTP projects are required to conduct project-level environmental review in accordance with CEQA, and are required to comply with applicable federal, state, and regional laws as well as local standards and precautions, which serve to reduce impacts related to hazardous materials to a less than significant level.

d) With respect to hazardous materials sites listed under Government Code Section 65962.5, the majority of transportation improvements involve modifying existing facilities, rather than constructing new facilities, and would not occur on known hazardous sites. With regard to future projects that would develop new facilities, due to the programmatic nature of the project, it is not possible to determine accurately whether future projects located on previously undisturbed land would contain hazardous materials. However, such projects would be required to address any on-site environmental issues, including any potential hazardous materials and mitigate such impacts accordingly. Although the majority of RTP physical projects will take place within existing roadway rights-of-way and airport runways or tarmacs, some project sites could occur either in or within proximity to a site with potential contamination—for instance, where a project would widen a roadway, connect a trail, or construct new infrastructure at an airport or port area.

Many state and federal laws regulate hazardous materials and hazardous wastes. Laws regulate how to handle, store, transport, dispose of, treat, reduce, and clean-up hazardous substances. Such laws, and the regulatory agencies that enforce them, prescribe what procedures shall be undertaken if a project is on a hazardous material site, is within a specified



distance of such a site, or in the event that previously unknown contamination is discovered. Regulations apply to remediation and worker-safety actions, among others.

Any project that has the potential to disturb, generate, use, store, or dispose of a hazardous material must comply with all applicable local, state, and federal laws and regulations governing those activities. Subject laws include, but are not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), the Resource Conservation and Recovery Act of 1976, the Toxic Substances Control Act, the Clean Water Act and Clean Air Act (all federal), and the California Health and Safety Code. Such laws, and the regulatory agencies that enforce them, prescribe what procedures shall be undertaken in the event that previously unknown contamination is discovered, such as remediation and worker-safety actions.

Some RTP projects include construction that will include grading, excavating, or other ground-disturbing activities. All RTP projects that propose activities that could potentially involve hazardous materials or wastes must comply with applicable laws, including CEQA and NEPA. With compliance with existing regulations, impacts would be less than significant.

e, f) The RTP's "Aviation System Element" has the following objectives and policies aimed at increasing safety (three are carried over from the adopted 2008 RTP; Policy AS-9 is new):

Specific Aviation Objective for Equitable & Sustainable Use of Resources:

Reduce aircraft noise, ground access congestion, and encroachment concerns resulting from conflicts between incompatible land uses and airport space.

Policy AS-8: *HCAOG supports lead agencies' regulatory authority to ensure that land use and proposed development in the vicinity of public airports are compatible with airport activities. HCAOG encourages the Humboldt County Airport Land Use Commission to update the "1993 Airport Land Use Compatibility Plan–Humboldt County Airports" and to maintain a current ALUCP.*

Specific Aviation Objective for Safety:

Provide support and coordination for the continued operation of safe and efficient aviation services and facilities in Humboldt County.

Policy AS-9 {New} *Support the ALUC (Airport Land Use Commission) and airport operators in identifying, avoiding, and eliminating activities which introduce potential aviation safety, airspace hazards, or security hazards.*

Aviation projects listed in the RTP also include improvements to improve safety, such as constructing wildlife perimeter fencing/gates and removing/lowering hazard to aircraft. No projects are anticipated to result in a safety hazard for people residing or working in the vicinity of an airport or airport land use plan area.

g) The RTP Update includes a new element on "Emergency Transportation" which has policies aimed at improving how agencies can coordinate and share transportation resources when implementing an adopted emergency response plan or emergency evacuation plan. The RTP is expected to have a positive impact on planning for and implementing emergency plans, not a negative impact.

h) RTP projects include highway sites that may be adjacent to wildland areas. These roadways help emergency responders access wildland fires, and help evacuate people to safety in the



event of wildland fires. Thus, RTP roadway projects can help *reduce* exposure to and risks from wildland fires. No RTP projects will extend transportation facilities into areas where wildland fires pose a serious risk.

	Impact to be Addressed in the EIR	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
IX. <u>HYDROLOGY AND WATER QUALITY</u> – Would the Project:				
a) Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



	Impact to be Addressed in the EIR	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
IX. <u>HYDROLOGY AND WATER QUALITY</u> – Would the Project:				
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a-f) Drainage patterns may be altered as a result of future development associated with RTP projects. Transportation projects listed in the RTP may introduce impervious surfaces in undeveloped areas, which could result in increased surface runoff that has the potential to affect surface water quantities, result in changes to absorption rates, discharge degraded surface water quality, affect the capacity of existing or planned drainage systems, and/or create erosion. Landscaping and other project features may decrease groundwater supplies. The EIR will analyze these potential impacts.

g) The proposed RTP would not result in housing that would be placed within a flood hazard area. No impacts would result.

h-i) Some features of the RTP's proposed projects could potentially impede or redirect flood flows and expose people or structures to risk related to flooding. The EIR will analyze these impacts.

j) The western border of Humboldt County is the Pacific Ocean and thus projects listed in the RTP could be located in proximity to the Pacific Ocean, Humboldt Bay, and the low-lying areas near the shore. These areas potentially could be inundated by seiche or tsunami—most likely related to a seismic event (as described above in Section VI, *Geology and Soils*). In addition, some transportation projects may be subject to mudflows depending on the location (such as roadway improvements on a steep slope in the mountainous areas of the county). These impacts will be analyzed in the EIR.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
X. <u>LAND USE AND PLANNING</u> -- Would the proposal:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



- c) Conflict with an applicable habitat conservation plan or natural community conservation plan?

a) No RTP policy or project would physically divide an established community. RTP policies serve to improve transportation connections and alternative modes of transportation for people and goods traveling within and between communities in the region. RTP policies do not support, and no projects propose actions that will physically divide an established community.

b) RTP objectives and policies are consistent with existing and projected land uses in adopted land use plans, including city and county general plans and Local Coastal Programs. One of the RTP's objectives is Environmental Stewardship, to "Enhance the performance of the transportation system while protecting and enhancing the natural environment." Another objective is Equitable & Sustainable Use of Resources, to

Advocate for costs and benefits (financial, environmental, health, and social) to be shared fairly. ... Coordinate transportation systems with land use for efficient, sustainable use of resources and minimize the consumption and use of finite resources such as fossil fuels.

The RTP promotes strategies to "integrate land use and transportation planning to maximize limited natural and financial resources, to minimize impacts on the environment, and to support community values and quality of life." The RTP includes many policies to support these objectives as planning priorities. RTP policies promote improving the regional transportation system by investing in existing infrastructure, rather than creating new services or new infrastructure in undeveloped areas. The RTP project sites are in or adjacent to existing transportation corridors within residential, commercial, industrial, recreational, or other developed land use areas.

~~Furthermore,~~ infrastructure projects are generally not subject to land use standards and as such would not conflict with adopted land use plans. Proposed projects within the Coastal Zone, however, are still subject to all applicable Coastal Zone policies and regulations of the California Coastal Act. Such projects would be within the permitting jurisdiction of the California Coastal Commission and/or the local jurisdiction.

The RTP's objectives and policies support transportation projects to be designed, constructed, and maintained to avoid or mitigate adverse environmental impacts. At the programmatic level, the RTP does not conflict with applicable land use plans, policies or regulations adopted for the purpose of avoiding or mitigating adverse environmental impacts.

c) RTP policies emphasize improving the region's existing transportation facilities within existing transportation corridors; policies do not promote developing infrastructure or services in natural areas and do not conflict with adopted habitat conservation plans or natural community conservation plans. RTP projects are focused within existing transportation corridors and rights-of-way; projects are not in natural areas protected by habitat conservation plan or natural community conservation plan. As applicable, projects will go through project-level environmental review, which will provide more details on the natural areas and habitat communities within or near the proposed project areas.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XI. <u>MINERAL RESOURCES</u> --				
Would the Project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-b) The RTP policies and projects do not involve extracting or losing availability to a known mineral resource.



	Impact to be Addressed in the EIR	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
XII. <u>NOISE</u> – Would the Project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels above levels existing without the Project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-f) The RTP contains policies that would minimize noise impacts from transportation noise sources within the County. However, implementing the RTP transportation projects has the potential to increase noise-generating uses and vehicular traffic. Short-term increases could arise from project construction, while long-term increases may be associated with changes in traffic patterns and volumes. The EIR will evaluate these issues. In addition, the EIR will analyze the noise impacts related to the RTP's aviation projects (contained in the Aviation System Element) and determine whether these projects could expose people residing or working in the vicinity of one of the county's public airports to excessive noise levels.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIII. <u>POPULATION AND HOUSING</u> —				
Would the Project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) The RTP sets policies and plans projects to improve the mobility of goods and people, consistent with planned growth in the region. Projects are based on projected land uses in adopted land use plans, including city and county general plans.

The RTP is not expected to contribute substantially to population growth in the county. Although the RTP should expand mobility in alternative transportation modes, it will not significantly expand overall capacity. RTP policies and projects do not propose actions that are known to induce population growth, such as creating a large number of new, permanent jobs, building a lot of new housing, or developing new residential or commercial areas.

The RTP does not include policies or projects for developing transportation infrastructure or services in undeveloped areas. RTP actions include projects to enhance and improve transportation facilities, but none to extend major infrastructure (roads, navigable channels, airports) into undeveloped areas. The major roadway infrastructure projects include connecting system gaps (such as the Eureka Waterfront Trail).

b-c) No RTP policies or projects will displace existing housing in the region. RTP projects would not demolish any residential units. Thus, the project would not displace housing units or people, or necessitate constructing replacement housing.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. <u>PUBLIC SERVICES</u>				
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. PUBLIC SERVICES				
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a.i-ii) The RTP does not necessitate altering or constructing new governmental facilities in order to maintain acceptable service ratios or response times for fire or police services. RTP policies and projects will not expand infrastructure into undeveloped areas, which otherwise might increase fire or police service areas. Neither will the RTP affect population growth such that it increases fire or police departments' service populations.

RTP policies and projects are proposed, in part, to decrease congestion and improve safety. Related objectives will support fire and police response times, for example:

❖ Overall RTP Objective for Efficient & Viable Transportation System –

Make the transportation system operate more efficiently, such as by reducing traffic congestion and using Intelligent Transportation System (ITS) management...

Specific Objectives for Efficient & Viable Transportation System –

Complete Streets Element:

- ◆ Maintain the roadway system in a condition that maximizes resources and minimizes disruptions.
- ◆ Maintain existing infrastructure in order to maximize use and minimize costs.

Emergency Transportation Element:

- ◆ Attain regionally coordinated, multi-modal planning for emergency preparedness and evacuation, search and rescue, and recovery.

Some projects in the Complete Street Element (see Appendix CS-1 (comprehensive list) or Table Streets-5 (top priority list)) propose "traffic calming" improvements, which potentially include speed humps or speed bumps. Speed humps/bumps slow down emergency response vehicles, which affects response times and may potentially adversely affect minimum acceptable response times (particularly if a new speed hump/bump is aggregated with other conditions that slow traffic on a route). The RTP projects are not at a level of detail that identifies if any projects do, in fact, propose speed humps/bumps. This level of detail is required when the conceptual projects are designed. At that time, the applicable lead agency will assess the potential impact at the project level, and potentially significant impacts can be mitigated, and/or the project design can be revised to reduce impacts to less-than-significant.

(a.iii) The RTP does not propose policies or projects that will construct or physically alter a public school. The physical effect on public schools is limited to regional projects that would improve sidewalks, roadways, or intersections adjacent to school grounds. However, even in these cases, the transportation improvements will take place within the city, county, or tribal jurisdiction's right-of-way. RTP projects will not impact the school's service ratio.

(a.iv) The RTP does not propose policies or projects that will construct or physically alter a public park facility, except where a proposed multi-use trail may traverse through a park. Proposed multi-use trails will not significantly impact a park's service ratios and therefore will not require constructing a park facility that would cause significant environmental impacts.



(a.v) RTP policies support investing in public transportation to increase and improve service. The RTP has the following objective:

Specific Objective for Efficient & Viable Transportation System –

Public Transportation Element:

- ◆ *Ensure that transit systems meet minimum performance standards.*

The RTP will not result in substantial adverse physical impacts from constructing or altering a public transit facility in order to maintain acceptable service ratios or other performance standards. The RTP identifies that public transportation funding is constrained in the short-term, and likely the (20-year) long-term. Therefore, most public transportation funding is proposed to be invested in existing services (i.e. systems and routes) and in replacing buses when needed. Most construction projects for public transportation consist of installing a bus shelter or improving ADA access to the bus stop. By their nature, these project sites are located in developed areas, within or adjacent to the public right-of-way.

The RTP policies in the Aviation Element emphasize planning, keeping compatible land uses around public-use airports, and maintaining links to the national aviation network for freight and passenger service. Similarly, RTP policies for Goods Movement emphasize improving existing harbor, aviation, trucking, and rail facilities where expanding freight services will be most viable. The proposed project concepts are within or adjacent to existing facilities, and do not propose constructing or altering a public facility in order to maintain acceptable service ratios, the construction of which would have substantial adverse physical impacts. When projects are at the design stage, project-level environmental analysis will be conducted as required.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XV. RECREATION --				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a, b) RTP projects will not create access to parks or similar recreational facilities that are not already accessible under current conditions. RTP policies and projects are not expected to measurably increase the number of visitors or trips to parks or similar recreational facilities; therefore, we conclude that implementing the RTP will not accelerate facilities' physical deterioration.

The RTP has policies supporting projects to enhance, improve, and develop trail facilities; we assume multi-use trails will be used for recreation as well as for travel (commuting). Proposed trail areas are in rights-of-way that are already developed, such as roadway rights-of-ways and dormant railroad corridors (i.e., not in service). We do not expect proposed trail projects to pose



adverse physical effects on the environment. Additionally, trail projects will be subject to environmental review at the project level when they move from concept level to design.

	Impact to be Addressed in the EIR	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
XVI. TRANSPORTATION / TRAFFIC --				
Would the Project:				
a) Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a-f) Implementing RTP policies and projects may increase traffic volumes on certain roads, and/or alter existing traffic patterns. Either individually or cumulatively, these projects have the potential to exceed a level of service standard for designated roads or highways, which may conflict with an applicable plan, ordinance, policy or congestion management program. RTP projects also have the potential to change air traffic patterns, including increasing traffic levels or relocating an aviation service in order to reduce safety risks. Implementing individual RTP projects may increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). These projects would also potentially result in inadequate emergency access, or conflict with adopted policies, plans, or programs supporting alternative transportation. These issues will be discussed in the EIR.



	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS -- Would the Project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a, b, d, e) The RTP does not involve constructing or expanding water or wastewater treatment facilities. The RTP policies and projects will have a nominal effect on water usage and water supplies. Some proposed construction projects will use water for cleaning equipment and for dampening soil and dust to mitigate air quality impacts. Both uses are normal for the day-to-day public works' maintenance and operations. Therefore, implementing the RTP will not necessitate new or expanded entitlements for water supply.

RTP policies and projects will not measurably increase inflows to wastewater treatment facilities. The biggest inflows to a wastewater treatment facility will be from some construction projects, which will be temporary and will not use significant water volumes. Therefore, implementing the RTP will not exceed wastewater treatment requirements.



c) RTP policies do not directly concern storm water drainage facilities. Some of the RTP's proposed Complete Streets, Trails, and possibly Goods Movement projects, however, will include storm water drainage improvements as part of constructing roadway improvements. Most drainage improvements will be for collecting and conveying storm water runoff from existing impervious surfaces (e.g. concrete or asphalt), and most drainage improvements will be where there are already pipes, gutters, and drains. The project concepts do not propose any major construction or expansions that would cause significant environmental effects. Therefore, impacts to storm water conveyance facilities would be less than significant.

f, g) Implementing the RTP will result in minimal solid waste in terms of landfill capacity for the region. Some construction projects will generate solid waste, and will be able to dispose of the solid waste through Humboldt Waste Management Authority's (HWMA's) disposal agreements with Anderson Landfill in Shasta County, California, and Dry Creek Landfill in Jackson County, Oregon.

HWMA administers waste disposal for its six Member Agencies: Humboldt County and the Cities of Arcata, Blue Lake, Eureka, Ferndale, and Rio Dell. According to HWMA's draft Request for Proposals for Transportation and Disposal Services of Municipal Solid Waste,⁷ the City of Trinidad will submit a letter requesting consideration to become a Member Agency of HWMA. The City of Fortuna contracts with Eel River Disposal and Resource Recovery Inc., which collects municipal solid waste and sends it to the Anderson Landfill.⁸ Residents and non-member agencies (including tribal entities) can dispose of solid waste, for a fee, at HWMA and other transfer facilities.

HWMA's disposal agreement with Anderson Landfill will expire on June 1, 2014. HWMA's disposal agreement with Dry Creek Landfill will expire on October 31, 2016. HWMA has adopted "Strategy 1.1: Secure Long-term Disposal Capacity" as a Phase I: Immediate Strategy, to be completed by 2014.⁹ HWMA is in the process of procuring future disposal capacity and anticipates selecting the disposal site(s) by March, 2014.

Under the HWMA's current and future disposal agreements, the RTP projects are expected to have sufficient permitted landfill capacity. Respective lead agencies for RTP projects will comply with federal, state, and local statutes and regulations related to solid waste.

⁷ Staff report from Jill Duffy to the HWMA Board, dated September 4, 2013.

⁸ City of Fortuna General Plan 2030, Draft Program EIR. July 2010.

⁹ Humboldt Waste Management Authority Strategic Plan, May 19, 2013.



	Impact to be Addressed in the EIR	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
XVIII. <u>MANDATORY FINDINGS OF SIGNIFICANCE</u> —				
a) Does the project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a-c) The RTP is a guide for developing transportation improvements within the plan area, consistent with the existing local General Plan policies and land use designations as specified by the local agencies. The RTP includes policies that would reduce or prevent impacts to the environment. Nevertheless, the RTP may generate impacts in the following areas: Air Quality, Biological Resources, Geology and Soils, Greenhouse Gas Emissions, Hydrology and Water Quality, and/or Transportation and Traffic. These issue areas, as well as cumulative impacts, will be evaluated in the EIR, and any feasible mitigation measures will be identified to avoid and/or reduce any significant impacts.



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Appendix B

Mitigation Monitoring and Reporting Program (MMRP)



MITIGATION MONITORING AND REPORTING PROGRAM

CEQA requires that a reporting or monitoring program be adopted for the conditions of project approval that are necessary to mitigate or avoid significant effects on the environment. The mitigation monitoring and reporting program is designed to ensure compliance with adopted mitigation measures during project implementation. For each mitigation measure recommended in the Final Environmental Impact Report and identified in the final Initial Study (Appendix A), specifications are made herein that identify the action required and the monitoring that must occur. In addition, a responsible agency is identified for verifying compliance with individual conditions of approval contained in the Mitigation Monitoring and Reporting Program (MMRP).

Agencies considering approval of future projects under the RTP 2013/14 Update would utilize the EIR as a basis in determining potential mitigation measures for subsequent activities. The agencies responsible for implementing the mitigation measures, described as “project sponsors” in the EIR, will be the lead agency for the individual future projects under the RTP 2013/14 Update. The project sponsor for individual projects will involve one of the following agencies:

- Humboldt County Association of Governments
- Blue Lake Rancheria, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Hoopa Valley Tribe, Karuk Tribe, and Yurok Tribe
- California Department of Transportation (Caltrans)
- Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad
- County of Humboldt
- Humboldt Bay Harbor, Recreation, and Conservation District
- Humboldt Transit Authority
- Klamath Trinity Non-Emergency Transit (K-T NeT)
- North Coast Railroad Authority

The project sponsor, which will be the lead agency for individual future projects under the RTP 2013/14 Update, will be responsible to monitor mitigation measures that are required to be implemented for the project.



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
AESTHETICS							
I(a,b)-1. If an RTP project is located within an identified scenic vista or a designated scenic highway, the project shall be designed and constructed to avoid significantly degrading the scenic quality. New facilities and infrastructure should be designed to be as compatible as possible with the aesthetic character of the immediate vicinity.	Project design shall avoid significantly degrading scenic quality and will be as compatible as possible with the aesthetic character of the immediate vicinity.	During site design	Once	Project sponsor			
I(c)-1. The RTP projects shall be designed to avoid significantly degrading the existing visual character or quality of natural, cultural, or biological aesthetic resources, including views to and along the ocean and scenic coastal areas. Project siting and construction shall minimize altering natural landforms and to the fullest extent feasible be aesthetically compatible with the surrounding areas.	Project design shall avoid significantly degrading existing visual character or quality of natural, cultural, or biological aesthetic resources.	During site design and construction	Once	Project sponsor			
I(c)-2. During project design and environmental review processes, project proponents should provide plans that show elevation views of the project location with the proposed project, including proposed structures, utilities, fencing, lighting, landscaping, and signage elements.	Provide plans that show elevation views of the project location with the proposed project.	During project design and individual environmental review	Once	Project sponsor			
I(d)-1. RTP projects shall be designed to include landscape screening and lighting elements that minimize the visibility of new transportation facilities from adjacent communities.	Project design shall include landscape screening and lighting elements.	During site design and individual environmental review	Once	Project sponsor			
I(d)-2. RTP projects shall be designed so that proposed lighting will cause minimal spillover or glare for adjacent uses. Lighting shall be directed downward and shielded to be unobtrusive to adjacent residential uses. Lighting shall use the lowest intensity brightness compatible with safety.	Project design shall minimize spillover or glare for adjacent uses.	During site design	Once	Project sponsor			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
AGRICULTURE AND FOREST RESOURCES							
II(b,e)-1. RTP projects shall be sited and designed to avoid, to the greatest extent feasible, encroaching on lands with agricultural land use and zoning designations. Prior to approving the design of RTP projects, the implementing agency should assess the project area for the presence of important farmlands (prime farmland, unique farmland, farmland of statewide importance) and other agricultural constraints; and, if present, perform a Land Assessment and Site Evaluation (LESA).	Project design shall avoid, to the greatest extent feasible, encroaching on lands with agricultural land use and zoning designations.	During project design and individual environmental review	Once	Project sponsor			
II(b,e)-2. If the improvement cannot be designed to completely avoid important or significant farmlands, the implementing agency should compensate for unavoidable conversion impacts in accordance with the Farmland Protection Policy Act and local and regional standards. For permissible conversions for transportation infrastructure, the area converted should not be of a size that inhibits economically viable agricultural production. The implementing agency should employ conflict minimization and/or continue viability studies, as warranted.	Project shall compensate for unavoidable conversion impacts. Project sponsors should employ conflict minimization and/or continue viability studies, as warranted.	During project design and individual environmental review	Once	Project sponsor			
AIR QUALITY							
AQ-1(a). The RTP project sponsor shall ensure that NCUAQMD Rule 430 precautionary measures are implemented. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. NCUAQMD Rule 430 precautionary measures include, but are not limited to, the following: <ul style="list-style-type: none"> • Covering trucks when used for transporting materials likely to give rise to airborne dust. • Installing and using hoods, fans, and 	Construction plans shall show NCUAQMD Rule 430 precautionary measures; project sponsor shall ensure implementation.	Prior to issuance of grading permits; periodically during construction	Once during plan review; periodically during construction	Project sponsor and on-site construction manager			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>fabric filters to enclose and vent the handling of dusty materials, and requiring containment methods during sandblasting and other similar operations.</p> <ul style="list-style-type: none"> Using water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, and the clearing of land. Applying asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dust. Paving roadways and maintaining them in a clean condition. Promptly removing earth or other material from paved streets onto which earth or other material has been transported by construction equipment, wind, water, or other means. 							
<p>AQ-1(b). The RTP project sponsor shall ensure registration with the NCUAQMD prior to engaging in specific activities covered by the Program for Naturally Occurring Asbestos. As part of the registration process, the applicant may be required to submit a dust control plan. Notification shall be made to the NCUAQMP at least 14 days before activity begins.</p>	<p>Ensure registration with the NCUAQMD. If necessary, submit a dust control plan.</p>	<p>Prior to construction</p>	<p>Once during plan review.</p>	<p>Project Sponsor</p>			
<p>AQ-1(c). The RTP project sponsor shall ensure that fleet owners of mobile construction equipment are subject to the California Air Resources Board Regulation for In-use Off-road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, § 2449), the purpose of which is to reduce diesel particulate matter and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles. The project sponsor</p>	<p>Ensure that diesel construction equipment meet the California Air Resources Board Tier 2 or higher emission standards for off-road heavy-duty diesel engines, to the maximum extent feasible; if not feasible,</p>	<p>Prior to issuance of grading permits; periodically during construction</p>	<p>Once during plan review; periodically during construction</p>	<p>Project sponsor and on-site construction manager</p>			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
shall also ensure to the maximum extent feasible, that diesel construction equipment meeting the California Air Resources Board Tier 2 or higher emission standards for off-road heavy-duty diesel engines is used. If using Tier 2 equipment it not feasible, diesel construction equipment meeting Tier 1 emission standards shall be used. These measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections.	diesel construction equipment meeting Tier 1 emission standards shall be used. Construction plans shall show the measure above and that fleet owners of mobile construction equipment are subject to the California Air Resources Board Regulation for In-use Off-road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, § 2449).						
AQ-1(d). The project sponsor shall ensure that, to the extent possible, construction activity utilizes electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.	Ensure to the extent possible that construction activity utilizes electricity from power poles.	Periodically during construction	Periodically during construction	Project sponsor and on-site construction manager			
AQ-1(e). The project sponsor shall ensure that removing underground storage tanks and other project excavation is a permitted activity in accordance with NCUAQMD rules and regulations. This shall be accomplished through issuing NCUAQMD permits to the project sponsor prior to issuing a grading permit.	Ensure that removing underground storage tanks and other project excavation is a permitted activity in accordance with NCUAQMD rules and regulations.	Prior to issuance of grading permits	Once during plan review	Project sponsor			
BIOLOGICAL RESOURCES							
B-1(a) Biological Resources Screening and Assessment. On a project-by-project basis, when final design is completed, a preliminary biological resource screening shall be performed as part of the environmental review process; the screening shall determine whether the project has any potential to impact biological resources. If it	Projects shall conduct a preliminary biological resource screening; if determined the project has potential to impact biological resources, a biological resources assessment or similar	Prior to construction	Once	Project sponsor			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>is determined that the project has no potential to impact biological resources, no further action will be required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a biological resources assessment (BRA) or similar type of study to (1) document the existing biological resources within the project footprint plus a buffer, and (2) determine the potential impacts to those resources. The BRA shall evaluate the potential for impacts to all biological resources including, but not limited to special status species, nesting birds, wildlife movement, sensitive plant communities/critical habitat, and other resources judged to be sensitive by local, state, and/or federal agencies. The results of the BRA may determine that design alterations, further technical studies (i.e. protocol surveys) and/or consultations with the USFWS, CDFW and/or other local, state, and federal agencies may be required.</p> <p>The following mitigation measures [B-1(b) through B-1(k)] shall be incorporated, only as applicable, into the BRA for projects where specific resources are present or may be present and impacted by the project. Note that specific surveys described in the mitigation measures below may be completed as part of the BRA where suitable habitat is present.</p>	shall be conducted.						
<p>B-1(b) Special Status Plant Species Surveys. If the project-specific BRA determines that special status plant species may occur on-site, surveys for special status plants shall be completed prior to removing vegetation, grubbing, or other construction activity of each segment (including staging and mobilization). The surveys shall be</p>	If applicable, surveys for special status plants shall be completed.	During individual environmental review	Once	Project sponsor			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>floristic in nature and shall be seasonally-timed to coincide with the target species identified in the project-specific BRA. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency, and shall be conducted no more than two years before initial ground disturbance. All special status plant species identified on site shall be mapped onto a site-specific aerial photograph and topographic map. Surveys shall be conducted according to the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results shall be submitted to the implementing agency, and the CDFW and/or USFWS, as appropriate, for them to review and approve.</p>							
<p>B-1(c) Special Status Plant Species Avoidance, Minimization, and Mitigation. If State listed or California Rare Plant List 1B species are found during special status plant surveys [pursuant to mitigation measure B-1(b)], then the project shall be re-designed to avoid impacting these plant species, if feasible. Rare plant occurrences that are not within the immediate disturbance footprint, but are located within 50 ft of disturbance limits, shall have bright orange protective fencing installed to protect them from harm. Fencing shall be installed at least 30 ft beyond their extent, or other distance as approved by a qualified biologist.</p>	<p>If applicable, project shall be redesigned to avoid impacting rare plant species.</p>	<p>During project design and individual environmental review</p>	<p>Once</p>	<p>Project sponsor</p>			
<p>B-1(d) Restoration and Monitoring. If special status plants species cannot be avoided and will be impacted by a project implemented under the RTP, all impacts shall be mitigated by habitat restoration at a ratio of 1:1 to 4:1 or higher as applied on a</p>	<p>If applicable, project plans shall include project-specific mitigation measures to mitigate impacts at a ratio 1:1 to 4:1 or higher</p>	<p>During project design and individual environmental review</p>	<p>Once</p>	<p>Project sponsor</p>			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p>case-by-case project basis by local jurisdictions in consultation with appropriate resource agencies (number of acres/individuals restored to number of acres/individuals impacted) for each species. A restoration plan shall be submitted to and approved by the jurisdiction overseeing the project. (Note: if a State listed plant species will be impacted, the restoration plan shall be submitted to the CDFW for approval). The restoration plan shall include, at a minimum, the following components:</p> <ul style="list-style-type: none"> • Description of the project/impact site (location, responsible parties, areas to be impacted by habitat type); • Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved]; • Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values); • Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan); • Maintenance activities during the monitoring period, including weed removal as appropriate (activities, responsible parties, schedule); • Monitoring plan for the compensatory mitigation site, including a monitoring schedule to be determined by the sponsoring agency implementing the individual transportation project (performance standards, target 	<p>as applied on a case-by-case project basis by local jurisdictions in consultation with appropriate resource agencies and a restoration plan shall be prepared meeting all requirements.</p>						



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports);</p> <ul style="list-style-type: none"> • Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type; • An adaptive management program and remedial measures to address any shortcomings in meeting success criteria; • Notification of completion of compensatory mitigation and agency confirmation; and • Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism). 							
<p>B-1(e) Endangered/Threatened Species Habitat Assessment and Protocol Surveys. Specific habitat assessment and survey protocol surveys are established for several federally and State Endangered or Threatened species. If the results of the BRA determine that suitable habitat may be present any such species, protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or USFWS protocols prior to issuance of any construction permits. If through consultation with the CDFW and/or USFWS it is determined that protocol habitat assessments/surveys are not required, said consultation shall be documented prior to issuance of any construction permits. Each protocol has different survey and timing requirements. The applicants for each project shall be responsible for ensuring</p>	<p>If applicable, protocol habitat assessments/surveys shall be completed in accordance with protocols.</p>	<p>During project design and individual environmental review</p>	<p>Once</p>	<p>Project sponsor</p>			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
they understand the protocol requirements.							
<p>B-1(f) Endangered/Threatened Species Avoidance and Minimization. The habitat requirements of endangered and threatened species throughout Humboldt County are highly variable. The potential impacts from any given project implemented under the RTP 2013/14 Update are likewise highly variable. However, there are several avoidance and minimization measures which can be applied for a variety of species to reduce the potential for impact, with the final goal of no net loss of the species. The following measures may be applied to aquatic and/or terrestrial species. Project sponsors shall select from these measures as appropriate.</p> <ul style="list-style-type: none"> • Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern within or adjacent to the limits of disturbance shall have highly visible orange construction fencing installed between said area and the limits of disturbance. • All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed between April 1 and October 31, if feasible, to avoid impacts to sensitive aquatic species. • All projects occurring within or adjacent to sensitive habitats that may support federally and/or state Endangered/ Threatened species shall have a CDFW and/or USFWS-approved biologist present during all initial ground disturbing/vegetation 	If applicable, project plans shall include project-specific mitigation measures to avoid and minimize impacts to endangered or threatened species.	During project design and individual environmental review	Once	Project sponsor			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>clearing activities. Once initial ground disturbing/vegetation clearing activities have been completed, said biologist shall conduct daily pre-activity clearance surveys for Endangered/Threatened species. Alternatively, and upon approval of the CDFW and/or USFWS, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are being fully implemented.</p> <ul style="list-style-type: none"> • No Endangered/Threatened species shall be captured and relocated without expressed permission from the CDFW and/or USFWS. • If at any time during construction of the project an Endangered/Threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. A CDFW/USFWS-approved biologist shall document the occurrence and consult with the CDFW and/or USFWS as appropriate. • For all projects occurring in areas where Endangered/ Threatened species may be present and are at risk of entering the project site during construction, exclusion fencing shall be placed along the project boundaries prior to start of construction (including staging and mobilization). The placement of the fence shall be at the discretion of the CDFW/USFWS-approved biologist. This fence shall consist of solid silt fencing placed at a minimum of 3 feet 							



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>above grade and 2 feet below grade and shall be attached to wooden stakes placed at intervals of not more than 5 feet. The fence shall be inspected weekly and following rain events and high wind events and shall be maintained in good working condition until all construction activities are complete.</p> <ul style="list-style-type: none"> • All vehicle maintenance/fueling/staging shall occur not less than 100 feet from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian habitat or water bodies. • No equipment shall be permitted to enter wetted portions of any affected drainage channel. • All equipment operating within streams shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access. • If project activities could degrade water quality, water quality sampling shall be implemented to identify the pre-project baseline, and to monitor during construction for comparison to the baseline. • If water is to be diverted around work sites, a diversion plan shall be submitted (depending upon the species that may be present) to the CDFW, RWQCB, USFWS, and/or NMFS for their review and approval prior to the start of any construction 							



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>activities (including staging and mobilization). If pumps are used, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system.</p> <ul style="list-style-type: none"> • At the end of each work day, excavations shall be secured with cover or a ramp provided to prevent wildlife entrapment. • All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling. • The CDFW/USFWS-approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic habitat whenever observed and shall dispatch them in a humane manner and dispose of properly. • If any federally and/or state protected species are harmed, the CDFW/USFWS-approved biologist shall document the circumstances that led to harm and shall determine if project activities should cease or be altered in an effort to avoid additional harm to these species. Dead or injured special status species shall be disposed of at the discretion of the CDFW and USFWS. All incidences of harm shall be reported to the CDFW and USFWS within 48 hours. • Considering the potential for projects to impact Federal and State listed species and their habitat, upon implementation of projects included in the RTP, but on a project-by-project basis, if the results of the BRA determines that impacts to Federal and State threatened or 							



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
endangered species habitat are expected, HCAOG and sponsor agencies shall explore species-appropriate mitigation bank(s) in the County for purchase of mitigation credits.							
<p>B-1(g) Non-Listed Special Status Animal Species Avoidance and Minimization. Depending on the species identified in the BRA, several of the measures identified under B-1(f) shall be applicable to the project. In addition, the following measures are recommended to be selected by sponsor agencies if it is necessary to reduce potential for impacts to non-listed special status animal species that would result from individual transportation projects:</p> <ul style="list-style-type: none"> For non-listed special-status terrestrial amphibians and reptiles, coverboard surveys shall be completed within three months of the start of construction. The coverboards shall be at least four feet by four feet (4' x 4'), constructed of untreated plywood, and placed flat on the ground. The coverboards shall be checked by a qualified biologist once per week for each week after placement up until the start of vegetation removal. All non-listed special status and common animals found under the coverboards shall be captured and placed in five-gallon buckets for transport to relocation sites. All relocation sites shall be reviewed by the project sponsor and shall consist of suitable habitat. Relocation sites shall be as close to the capture site as possible but far enough away to ensure the animal(s) is not harmed by construction of the project. Relocation shall occur on the same day as capture. 	If applicable, project plans shall include project-specific mitigation measures to reduce impacts to non-listed special status species.	During project design and individual environmental review	Once	Project sponsor			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>CNDDDB Field Survey Forms shall be submitted to the CFDW for all special status animal species observed.</p> <ul style="list-style-type: none"> • Pre-construction clearance surveys shall be conducted within 14 days of the start of construction (including staging and mobilization). The surveys shall cover the entire disturbance footprint plus a minimum 200 foot buffer, if feasible, and shall identify all special status animal species that may occur on-site. All non-listed special status species shall be relocated from the site either through direct capture or through passive exclusion (e.g., American badger). A report of the pre-construction survey shall be submitted to HCAOG and/or the local jurisdiction for their review and approval prior to the start of construction. • A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal to recover special status animal species unearthed by construction activities. • Upon completion of the project, a qualified biologist shall prepare a Final Compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project. • If special status bat species may be present and impacted by the project, a qualified biologist shall conduct presence/absence surveys for special status bats where suitable roosting habitat is present. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may roost. 							



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>Surveys shall be conducted within 30 days of the start of construction and in consultation with the CDFW. If active roosts are located, exclusion devices such as netting shall be installed to discourage bats from occupying the site. If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the size of the hibernaculum and shall be determined through consultations with the CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until a qualified biologist determines that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.</p>							
<p>B-1(h) Preconstruction Surveys for Nesting Birds. For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the California Fish and Game Code and the Migratory Bird Treaty Act shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal. The surveys shall include the entire segment disturbance area plus a 200 ft buffer around the site. If active nests are located, the qualified biologist shall determine an appropriate buffer zone from the nest, and all construction work shall be conducted outside the buffer zone. The buffer shall be a minimum of 50 feet for non-raptor bird species and at least 150 ft for raptor</p>	<p>If applicable, a survey for nesting birds shall be completed; if necessary, a buffer shall be created.</p>	<p>Prior to construction activities; during construction activities if required.</p>	<p>Once prior to construction; as needed during construction activities.</p>	<p>Project sponsor</p>			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
species. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer zone(s) shall be closed to all construction personnel and equipment until the adult and young birds are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removing the buffer. A report of these preconstruction nesting bird surveys shall be submitted to the local jurisdiction.							
B-1(i) Worker Environmental Awareness Program (WEAP). Prior to initiating construction activities (including staging and mobilization) for individual transportation projects determined to have potentially significant impacts to biological resources, all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the project area. The specifics of this program shall include identifying sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and a review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to other personnel involved with constructing the project. All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them. To document compliance, the form shall be submitted to the local jurisdiction overseeing the	If applicable, construction personnel shall attend WEAP training.	Prior to construction activities.	Once	Project Sponsor			



Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
transportation project.							
<p>B-1(j) Tree Protection. If it is determined that construction may impact trees, including their root systems, protected by local agencies, the project sponsor shall procure all necessary tree removal permits. A tree protection and replacement plan shall be developed by a certified arborist as appropriate. The plan shall include, but would not be limited to, an inventory of trees to within the construction site, setbacks from trees and protective fencing, restrictions regarding grading and paving near trees, direction regarding pruning and digging within root zone of trees, and requirements for replacing and maintaining trees. If protected trees will be removed, replacement tree plantings of like species in accordance with local agency standards, but at a minimum ratio of 2:1 (trees planted to trees impacted). Replacement trees shall be installed on-site or at an approved off-site location. A restoration and monitoring program shall be developed in accordance with B-1(d) and shall be implemented for a minimum of seven years or until stasis has been determined by a certified arborist. If a protected tree shall be encroached upon but not removed, a certified arborist shall be present to oversee all trimming of roots and branches.</p>	<p>If applicable, tree removal permits shall be acquired and a tree protection and replacement plan shall be developed with requirements. Replacement planting/restoration shall be monitored until stasis is achieved.</p>	<p>Review plan prior to construction activities. Review restoration annually for minimum of seven years or until stasis is achieved.</p>	<p>Once prior to construction; annually after restoration until stasis is achieved.</p>	<p>Project sponsor</p>			



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<p>B-2(a) Jurisdictional Delineation. If projects implemented under the RTP 2013/14 Update occur within or adjacent to wetland, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the CDFW, USACE, RWQCB, California Coastal Commission, and/or local governments with regulatory authority granted by the Coastal Act, a qualified biologist shall complete a jurisdictional delineation. The jurisdictional delineation shall determine the extent of the jurisdiction for each of these agencies and shall be conducted according to requirements set forth by each agency. The result shall be a preliminary jurisdictional delineation report that shall be submitted to the implementing agency, USACE, RWQCB, CDFW, California Coastal Commission, and delegated local governments as appropriate, for review and approval. If jurisdictional areas are expected to be impacted, then the RWQCB would require a Waste Discharge Requirements (WDR) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature falls under federal jurisdiction). If CDFW asserts its jurisdictional authority, then a Streambed Alteration Agreement pursuant to Section 1600 <i>et seq.</i> of the California Fish and Game Code would also be required prior to construction within the areas of CDFW jurisdiction. If the USACE asserts its authority, then a permit pursuant to Section 404 of the Clean Water Act would likely be required.</p>	<p>If applicable, a jurisdictional delineation shall be completed. Receipt of regulatory agency permits, if necessary, shall be verified.</p>	<p>During project design and individual environmental review; verify permit acquisition prior to issuance of grading permits</p>	<p>Once during environmental review; once prior to issuance of grading permits; as needed, during and following construction.</p>	<p>Project sponsor</p>			



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<p>B-2(b) Wetland and Riparian Habitat Restored. Impacts to jurisdictional wetland and riparian habitat shall be mitigated at a ratio of 1:1 to 4:1 or higher (acres of habitat restored to acres impacted) as applied on a case-by-case project basis by local jurisdictions in consultation with appropriate resource agencies, and shall occur on-site or as close to the impacted habitat as possible. A mitigation and monitoring plan shall be developed by a qualified biologist in accordance with mitigation measure B-1(d) above and shall be implemented for no less than five years after construction of the segment, or until the HCAOG/local jurisdiction and/or the permitting authority (e.g., CDFW or USACE) has determined that restoration has been successful.</p>	<p>If applicable, project plans shall mitigate impacts to jurisdictional wetlands and riparian habitats at a ratio of 1:1 to 4:1 or higher as applied on a case-by-case project basis by local jurisdictions in consultation with appropriate resource agencies and a MMRP shall be developed. Compliance with permit conditions shall be verified.</p>	<p>During environmental review. Verify compliance with permit conditions as necessary during following construction.</p>	<p>Once during environmental review; as needed, during and following construction.</p>	<p>Project sponsor</p>			
<p>B-2(c) Landscaping Plan. If landscaping is proposed for a specific project, a qualified biologist/landscape architect shall prepare a landscape plan for that project. This plan shall indicate the locations and species of plants to be installed. Drought tolerant, locally native plant species shall be used. The plan shall prohibit planting noxious, invasive, and/or non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List, and/or California Invasive Plant Council Lists 1, 2, and 4. Species selected for planting shall be similar to those species found in adjacent native habitats.</p>	<p>If applicable, a landscaping plan shall be prepared and include all requirements; species shall be similar to those in adjacent native habitats.</p>	<p>During environmental review</p>	<p>Once</p>	<p>Project sponsor</p>			
<p>B-2(d) Invasive Weed Prevention and Management Program. Prior to starting construction for each project, a qualified biologist shall evaluate the potential for introduction or spreading of invasive weeds, and if warranted develop an Invasive Weed Prevention and Management Program to prevent invasion of native habitat by non-</p>	<p>A qualified biologist shall evaluate the potential for introduction or spreading of invasive weeds. If warranted, an Invasive Weed Prevention and Management Program</p>	<p>Prior to construction activities; during construction activities</p>	<p>Once; ongoing during construction</p>	<p>Project sponsor</p>			



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native plant species. A list of target species shall be included, along with measures for early detection and eradication. All disturbed areas shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding shall occur where no construction activities have occurred within six (6) weeks since ground disturbing activities ceased. If exotic species invade these areas prior to hydroseeding, weed removal shall occur in consultation with a qualified biologist and in accordance with the restoration plan.	shall be developed; disturbed areas shall be hydroseeded.						
<p>B-3(a) Fence and Lighting Design. All projects that include long segments (approximately ¼ mile or greater in length) of fencing and lighting shall be designed to minimize impacts to wildlife. Fencing shall not block wildlife movement through riparian or other natural habitat. Where fencing is required for public safety concerns, the fence shall be designed to permit wildlife movement by incorporating design features such as:</p> <ul style="list-style-type: none"> • A minimum 16 inches between the ground and the bottom of the fence to provide clearance for small animals; • A minimum 12 inches between the top two wires, or top the fence with a wooden rail, mesh, or chain link instead of wire to prevent animals from becoming entangled; and • If privacy fencing is required near open space areas, openings at the bottom of the fence measure at least 16 inches shall be installed at reasonable intervals to allow wildlife movement. <p>If fencing must be designed in such a manner that wildlife passage would not be</p>	Project plans for projects with fencing and lighting shall be designed to minimize impacts to wildlife.	During environmental review	Once	Project sponsor			



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<p>permitted, wildlife crossing structures shall be incorporated into the project design as appropriate.</p> <p>Similarly, lighting installed as part of any project shall be designed to disrupt wildlife as little as feasible. This may be accomplished by using hoods to direct light away from natural habitat, using low intensity lighting, and using as few lights as necessary to achieve the goals of the project.</p>							
<p>B-3 (b) Construction Best Management Practices. The following construction Best Management Practices (BMPs) shall be incorporated into all grading and construction plans. BMPs developed for individual projects could consult the handbooks from the California Stormwater Quality Association.</p> <ul style="list-style-type: none"> • Designate a 20 mile-per-hour speed limit in all construction areas. • All vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas. Clearing vegetation for vehicle access shall be avoided to the greatest extent feasible. • The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the goal of the project. • Locate equipment washout and fueling areas within the limits of grading at a minimum of 100 feet from waters, wetlands, or other sensitive resources as identified by a qualified biologist. Washout areas shall be designed to fully contain polluted water and materials to be removed subsequently 	<p>Construction plans shall incorporate best management practices to minimize impacts to biological resources.</p>	<p>Prior to issuance of grading permits</p>	<p>Once during plan review</p>	<p>Project sponsor and on-site construction manager</p>			



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<p>from the site.</p> <ul style="list-style-type: none"> • Daily construction work schedules should be limited to daylight hours only. • Mufflers shall be used on all construction equipment and vehicles shall be in good operating condition. • Drip pans shall be placed under all stationary vehicles and mechanical equipment. • All trash shall be placed in sealed containers and shall be removed from the project site a minimum of once per week. • No pets are permitted on project site during construction. 							
<p>B-4(a) Habitat Conservation Plan Screening and Compliance. On a project-by-project basis upon completion of final design, a screening analysis shall be performed as part of the environmental review process to determine whether the project is located within an area covered by an adopted HCP. If it is determined that the proposed project is a covered activity under the HCP, HCOAG and sponsor agencies shall ensure that the project complies with the adopted HCP.</p>	<p>If applicable, a screening analysis will be conducted to determine whether the project is located within an area covered by an adopted HCP; if necessary, the project will comply with adopted HCP.</p>	<p>During project design and individual environmental review</p>	<p>Once</p>	<p>Project sponsor</p>			
<p>CULTURAL RESOURCES</p>							
<p>V(a,b,c)-1. For projects that include construction, excavation, or other activities that may potentially disturb cultural resources (including but not limited to unique archaeological, paleontological, and geological sites, grave sites, and cemeteries), all project phases (design, construction, and implementation) shall be carried out so that cultural resources are identified where feasible, assessed for significance, and if found to be significant shall be protected from loss or destruction.</p>	<p>Project plans shall include required components to limit impacts to cultural resources.</p>	<p>During project design and individual environmental review</p>	<p>Once</p>	<p>Project sponsor</p>			



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V(a,b,c)-2. During project review, project proponents shall consult the Northwest Information Center of the California Historical Resources Information Center, Tribal Historical Protection Officers, and other pertinent experts with knowledge of local historic or prehistoric cultural resources, in order to identify known or potentially extant cultural resources in the project site, and follow steps to protect significant resources.	Project plans shall include required components to limit impacts to cultural resources.	During project design and individual environmental review	Once	Project sponsor			
V(a,b,c)-3. Archaeological and paleontological resources shall not be knowingly destroyed or lost through discretionary action unless the site or resource has first been found to be of insignificant value and so recorded by a relevant expert(s) and representative(s) of the cultural resources community.	Project plans shall include required components to limit impacts to cultural resources.	During project design and individual environmental review	Once	Project sponsor			
GEOLOGY AND SOILS							
GEO-2. If an RTP 2013/14 Update project is located in an area of moderate to high liquefaction potential, the local jurisdiction in which this project is located shall ensure that the project is designed based upon appropriate geology, soils and earthquake engineering studies. Possible design measures include deep foundations, removal of liquefiable materials and dewatering.	Place conditions of approval on the project, when applicable, to ensure that a site-specific geotechnical investigation is conducted.	During project design and individual environmental review	Once	Project sponsor			
GEO-3(a). If an RTP 2013/14 Update project involves cut slopes over 15 feet in height, the local jurisdiction in which the project is located shall ensure that specific slope stabilization studies are conducted. Possible stabilization methods include buttresses, retaining walls and soldier piles.	Place conditions of approval on the project, when applicable, to ensure that a site-specific geotechnical investigation is conducted.	During project design and individual environmental review	Once	Project sponsor			
GEO-3(b). If an RTP 2013/14 Update	Place conditions of	During project	Once	Project sponsor			



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project is located in an area of expansive soils, the local jurisdiction in which the project is located shall ensure that a site-specific geotechnical investigation is conducted. The investigation will identify hazardous conditions and recommend appropriate design factors to minimize hazards. Such measures could include concrete slabs on grade with increased steel reinforcement, removal of highly expansive material and replacement with non-expansive import fill material, or chemical treatment with hydrated lime to reduce the expansion characteristics of the soils.	approval on the project, when applicable, to ensure that a site-specific geotechnical investigation is conducted.	design and individual environmental review					
GREENHOUSE GAS EMISSIONS							
GHG-1. The project sponsor shall ensure that applicable GHG-reducing diesel particulate and NOx emissions measures for off-road construction vehicles are implemented during construction. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. Applicable GHG-reducing measures include the following: <ul style="list-style-type: none"> Using diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and complying with the State Off-Road Regulation; Using on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and complying with the State On-Road Regulation; All on and off-road diesel equipment shall not idle for more than 5 minutes at any one time. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the 5 minute idling limit; 	Construction plans shall incorporate standard GHG control measures; project sponsor shall ensure implementation.	Prior to issuance of grading permits; periodically during construction	Once during plan review; periodically during construction	Project sponsor and on-site construction manager			



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<ul style="list-style-type: none"> Using electric equipment when feasible; Substituting gasoline-powered in place of diesel-powered equipment, where feasible; and Using alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel. 							
HYDROLOGY AND WATER RESOURCES							
<p>W-1(a). The sponsor of an RTP project that contains or would implement landscaping and that would need the use of fertilizers or pesticides shall ensure that fertilizer/pesticide application plans for any new right-of-way landscaping are prepared to minimize percolation of contaminants. The plans shall specify the use of products that are safe for use in and around aquatic environments.</p>	Fertilizer/pesticide application plans for any new right-of-way landscaping shall be prepared to minimize deep percolation of contaminants.	During project design and individual environmental review	Once	Project sponsor			
<p>W-1(b). The sponsor of an RTP widening or roadway extension project shall ensure that the improvement directs runoff in a manner that would allow for the removal of urban pollutants, fertilizers, pesticides, and other chemicals and shall implement best management practices (BMPs) for erosion control and runoff management of drainage into nearby bodies of water including but not limited to creeks, rivers, wetland and/or coastal waters. BMPs developed for individual projects should consult the handbooks from the California Stormwater Quality Association.</p>	Improvements shall direct runoff in a manner that would allow for the removal of urban pollutants, fertilizers, pesticides, and other chemicals.	During project design and individual environmental review	Once	Project sponsor			
<p>W-2(a). The sponsor of an RTP 2013/14 Update project shall ensure that, where economically feasible and available, reclaimed water is used for dust suppression during construction activities. This measure shall be noted on construction</p>	Where economically feasible, reclaimed and/or desalinated water shall be used for dust suppression during construction activities.	Prior to issuance of grading permit	Once	Project sponsor			



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Mitigation Monitoring and Reporting Program

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plans and shall be spot checked by the local jurisdiction.							
W-2(b). The sponsor of an RTP 2013/14 Update project shall ensure that low-water-use landscaping (i.e., drought tolerant plants and drip irrigation) is installed. When feasible, native plant species shall be used.	Low water use landscaping (i.e., drought tolerant plants and drip irrigation) shall be installed.	During project design and individual environmental review	Once	Project sponsor			
W-2(c). The sponsor of an RTP 2013/14 Update project shall ensure that, if feasible, landscaping associated with proposed improvements is maintained using reclaimed water.	If feasible, landscaping associated with proposed improvements is maintained using reclaimed and/or desalinated water.	During project design and individual environmental review	Once	Project sponsor			
W-2(d). The sponsor of an RTP 2013/14 Update project shall ensure that porous pavement materials are utilized, where feasible, to allow for groundwater percolation. Rural bicycle trails shall be left unpaved where appropriate.	Use porous pavement materials where feasible.	During project design and individual environmental review	Once	Project sponsor			
W-2(e). The sponsor of an RTP 2013/14 Update project that requires potable water service should coordinate with water supply system operators to ensure that the existing water supply systems have the capacity to handle the increase. If the current infrastructure servicing the project site is found to be inadequate, infrastructure improvements for the appropriate public service or utility should be provided by the project sponsor. In addition, wherever feasible, reclaimed water should be used for landscaping purposes instead of potable water.	Provide infrastructure improvements for the appropriate public service or utility as needed.	During project design and individual environmental review	Once	Project sponsor			
W-3(a). If an RTP project is located in an area with high flooding potential due a storm event or dam inundation, the project sponsor shall analyze the flood risk and ensure that the project complies with the applicable local ordinance for flood risk	Project design shall ensure that the project complies with applicable local ordinances for flood risk reduction.	During project design and individual environmental review	Once	Project sponsor			



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reduction. The potential for flooding shall be analyzed considering potential impacts from sea level rise.							
W-3(b). In areas subject to potential tsunami effects, the project sponsor shall ensure that RTP projects involving new transportation infrastructure are located outside the tsunami hazard area or are designed to resist tsunami forces, consistent with Designing for Tsunamis (NOAA et al, 2001; or subsequent revisions). The area of potential tsunami inundation shall be analyzed considering potential impacts from sea level rise.	Locate RTP projects involving new transportation infrastructure outside the tsunami hazard area or project design shall resist tsunami forces.	During project design and individual environmental review	Once	Project sponsor			
NOISE							
N-1(a). Project sponsors of RTP 2013/14 Update projects shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites, appropriate measures are implemented to ensure consistency with local noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restricting construction timing, using sound blankets on construction equipment, and using temporary walls and noise barriers to block and deflect noise.	Ensure consistency with local noise ordinance requirements relating to construction for sensitive uses.	Prior to issuance of grading permits	Once	Project sponsor			
N-1(b). If a particular project within 800 feet of sensitive receptors requires pile driving, the local jurisdiction in which this project is located shall require the use of pile drilling techniques instead, where feasible. This shall be accomplished by placing conditions on the project during its individual environmental review.	Place mitigation measures or conditions of approval on project to require the use of pile drilling techniques when applicable and feasible.	During project design and individual environmental review	Once	Project sponsor			
N-1 (c). Project sponsors shall ensure that equipment and trucks used for project construction utilize the best available noise control techniques (including mufflers, use	Ensure that equipment and trucks use best available noise control techniques.	During project design and individual environmental	Once	Project sponsor			



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of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds).		review					
N-1(d). Project sponsors shall ensure that impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, using an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can reduce noise 5 dBA. Whenever feasible, quieter procedures shall be used, such as drilling rather than operating impact equipment.	Ensure that equipment is hydraulically or electrically powered; that an exhaust muffler is used; that external jackets on impact equipment is used; or quitter procedures are used, when feasible and applicable.	During project design and individual environmental review	Once	Project sponsor			
N-1(e). Locate stationary noise sources as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors will be adequately muffled.	Ensure that stationary noise sources are located away from sensitive receptors or muffled.	During project design and individual environmental review	Once	Project sponsor			
N-2(a). If an RTP 2013/14 Update project is located within 1,000 feet of sensitive uses, the project sponsor shall ensure that a noise survey is conducted to determine potential alternate alignments which allow greater distance from, or greater buffering of, noise-sensitive areas. The noise survey shall be sufficient to indicate existing and projected noise levels, which shall be used to determine how much to attenuate noise to reach an exterior noise level of 65 dBA or less for sensitive uses. This survey shall be accomplished during the project's individual environmental review pursuant to the regulations of the applicable agency.	A noise survey shall be conducted, if applicable, to determine alternate alignments which allow greater distance from, or greater buffering of, noise-sensitive areas; noise survey shall be sufficient to indicate existing and projected noise levels, to determine the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards.	During project design and individual environmental review	Once	Project sponsor			



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<p>N-2(b). Where new or expanded roadways are found to expose receptors to noise exceeding normally acceptable levels, the project sponsor shall consider various sound attenuation techniques. The preferred methods for mitigating noise impacts will be to use appropriate setbacks and sound attenuating building design, including retrofitting existing structures with sound attenuating building materials where feasible. In instances where using these techniques is not feasible, using sound barriers (earthen berms, sound walls, or some combination of the two) will be considered. Long expanses of walls or fences should be interrupted with offsets and enhanced with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements should be used, including solid fences, walls, and landscaped berms. Appropriate noise attenuation measures will be assessed on a case-by-case basis during a project's individual environmental review, pursuant to the regulations of the applicable agency.</p>	<p>Development plans shall consider various sound attenuation techniques where new or expanded roadways are found to expose receptors to noise exceeding normally acceptable levels; applicable agency shall assess and determine appropriate noise attenuation barriers on a case-by-case basis.</p>	<p>During project design and individual environmental review</p>	<p>Once</p>	<p>Project sponsor</p>			

