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Filed	12/21/21
180 th Day	6/19/22
Staff:	C. Holloway-A
Staff Report:	3/18/22
Hearing Date:	4/7/22

STAFF REPORT: REGULAR CALENDAR

Application No.: 1-20-0560

Applicant: Humboldt County Dept. of Public Works

Agent: GHD

Location: Along the existing railroad on the northeastern shore of Humboldt Bay between the existing Humboldt Bay Trail North at Brainard Slough, Arcata and the existing Eureka Waterfront Trail at Y Street, Eureka, with separately permitted offsite wetland mitigation at Tuluwat Island, Eureka and at a 70-acre agricultural property west of Arcata.

Project Description: Construct 4.25 miles of Class 1 multi-use trail as part of the California Coastal Trail including three bridges, up to two viewing platforms, interpretive signs, fencing, drainage improvements, removal of approximately 200 Eucalyptus trees, repair and maintenance of eroding segments of existing railroad berm, and mitigate for wetland fill impacts under separate CDP authorizations.

Staff Recommendation: Approval with conditions

SUMMARY OF STAFF RECOMMENDATION

The Humboldt County Department of Public Works proposes to construct the Humboldt Bay Trail South project, a 4.25-mile-long Class 1 multi-use trail segment of the California Coastal Trail (CCT) along Humboldt Bay between Eureka and Arcata that will include three new bridges, new overlook areas and interpretive signage, and a cable barrier safety fence between the trail and Highway 101. The proposed new CCT segment will be located within the Eureka-Arcata Highway 101 Corridor between the existing railroad and the highway. The trail will connect to an existing 6.3-mile-long waterfront trail CCT segment in Eureka and an existing 3-mile-long trail CCT segment along the Arcata Bay waterfront to create a continuous 13-mile-long CCT trail route linking the regions two largest cities. The proposed project also includes the removal of a portion of a stand of Eucalyptus trees (approximately 200 trees) growing along the southbound lanes of Highway 101, between the proposed trail and the highway.

Significant portions of the trail that run within the railroad right-of-way use a “rail-with-trail” design in which the trail is located on the inland side of the railroad tracks (between the tracks and the highway) rather than on top of the tracks. The existing railroad, originally constructed over 100 years ago, has been non-operational since 1998 due to issues of geologic instability and failed rail infrastructure in inland portions of Humboldt and Mendocino counties. The railroad remains in “active” status, however, and there is an active recreational excursion use on portions of the line with “speeders” (rail cars) running through the City of Eureka and through the southern portion of the project area north of Eureka.

The primary Coastal Act issues raised by the proposed trail project relate to public access and recreation, wetland fill, protection of marine resources and water quality, protection of visual resources, and minimizing risks associated with coastal hazards.

Construction of the trail will result in approximately 6 acres of permanent fill in coastal wetlands. Most of the wetland impacts are associated with impacts to estuarine intertidal and palustrine emergent wetlands of the existing drainage ditch in between Highway 101 and the railroad prism. This ditch will be graded and partially filled to accommodate the new trail and then re-established adjacent to its previous location. Staff believes that the wetland fill associated with the proposed trail is allowable as a nature-study use consistent Coastal Act section 30233(a)(7), because the trail would be constructed in a manner that is integral to the appreciation and comprehension of biophysical elements that comprise the wetlands and designed to minimize intrusions into wetlands to the smallest feasible area and least impacting routes. Staff recommends Special Conditions 5 through 9 and 11 through 16 to ensure that the impacts are minimized and fully mitigated. Required mitigation measures include, but are not limited to, requirements for wetland mitigation, measures to protect rare species of plants, fish, and amphibians, and water quality protection measures.

Construction of the proposed trail also would require the removal of approximately 200 Eucalyptus trees along a distance of approximately 2,500 feet growing within the embankment of Highway 101. The row of mature trees poses a safety risk to trail users,

as the trail would be situated within the failure zone of many tree limbs. The trees proposed for removal represent approximately 40% of the total area of the linear Eucalyptus tree stand within the Eureka-Arcata Highway 101 corridor. The Eucalyptus trees, planted approximately 100 years ago, are not considered ESHA, and although considered an important local landmark by some, the Eucalyptus stand is not eligible for listing on the National Register of Historic Places or the California Register of Historic Resources. Removal of that portion of the stand that currently partially blocks views of the bay available to motorists traveling the Eureka-Arcata Highway 101 corridor is consistent with visual resources protection under the Coastal Act, because the proposed project as conditioned will enhance the quality of views to and along Humboldt Bay available from public vantage points, the project minimizes the alteration of natural landforms, and would be visually compatible with the character of the surrounding area.

With respect to coastal hazards, the proposed project would construct a segment of the CCT in an area vulnerable to coastal hazards and where it would rely on shoreline protection provided by the existing railroad infrastructure. As part of the project, the County would repair damaged sections of the railroad prism within the railroad historical footprint in trail construction segments 4, 7, 8, and 9 for a total repair length of approximately 6,600 feet within the 22,200-foot-long project area (this equates to repairs to approximately 30% of the project area in areas where the rail prism is damaged). Repairs involve placing rock slope protection (RSP) along the bayward edge of the railroad either keyed into existing rock or in areas where RSP has eroded/washed away over time. While primary purpose of the project is to construct a portion of the coastal trail in the railroad right-of-way, the proposed rail-with-trail configuration of the project, which matches connecting rail-with-trail segments of the CCT to the north and south, involves certain key design constraints that relate to coastal hazards. The proposed rock repair work is permissible under section 30235 of the Coastal Act to protect an existing structure (railroad) and a coastal dependent use (CCT). At this time there are no feasible alternatives to locating the proposed Coastal Trail in this area without partial reliance on shoreline armoring. There are, however, current ongoing planning efforts among Caltrans, local governments, and other stakeholders to adapt or retreat infrastructure associated with the Eureka-Arcata Highway 101 Corridor. Staff therefore recommends Special Condition 18 which, among other things, would limit the term of authorization for the proposed trail project until July 1, 2046, which is when the County's lease with the NCRA or its successor agency expires (although the lease may be extended through agreement by both parties) and also is the approximate projected time frame for when portions of the trail with the lowest elevations may be flooded on a near monthly basis. Special Condition 18 also would require removal if the trail becomes unsafe for use due to damage from coastal hazards, if LCP policies for sea level rise adaptation require removal, or if the trail requires new and/or augmented shoreline protective devices that conflict with relevant LCP or Coastal Act policies. Special Condition 18 would allow the Commission and the County to revisit the appropriateness of the trail siting in the future and evaluate whether, with the benefit of regional planning efforts and further understanding of the predicted coastal hazards for the area, there are feasible alternatives for trail siting at that time that would further minimize coastal hazards risks and protect coastal resources.

1-20-0560 (Humboldt County DPW)

In summary, staff believes that the proposed Humboldt Bay Trail South project is a critical public access project and important link in the CCT with components that will be sited and designed in such a way as to provide maximum public benefit along Humboldt Bay while protecting coastal resources consistent with the Coastal Act. The motion to adopt the staff recommendation of approval with special conditions is on [page 6](#).

TABLE OF CONTENTS

I. MOTION AND RESOLUTION.....	6
II. STANDARD CONDITIONS.....	6
III. SPECIAL CONDITIONS	7
IV. FINDINGS AND DECLARATIONS	21
A. PROJECT DESCRIPTION	21
B. SETTING.....	28
C. OTHER AGENCY APPROVALS	30
D. PERMISSIONS TO BUILD RAIL-WITH-TRAIL PROJECT AS CONDITIONED	32
E. PUBLIC ACCESS AND RECREATION.....	35
F. REPAIR AND MAINTENANCE OF RAIL PRISM	43
G. WETLANDS IMPACTS	46
H. MARINE RESOURCES AND WATER QUALITY	65
I. ENVIRONMENTALLY SENSITIVE HABITAT AREAS	70
J. VISUAL RESOURCES.....	72
K. COASTAL HAZARDS	76
L. PROTECTION OF ARCHAEOLOGICAL RESOURCES	88
M. REIMBURSEMENT OF COSTS AND FEES	89
N. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)	89

LIST OF APPENDICES

[Appendix A – Substantive File Documents](#)

LIST OF EXHIBITS

[Exhibit 1 – Vicinity Map](#)

[Exhibit 2 – Trail Overview Maps](#)

[Exhibit 3 – Trail Alignment Figures](#)

[Exhibit 4 – Proposed Eucalyptus Tree Removal](#)

[Exhibit 5 – Project Plans \(Excerpts\)](#)

[Exhibit 6 – Visual Resources Assessment \(Excerpts\)](#)

[Exhibit 7 – Eucalyptus Tree Assessments](#)

[Exhibit 8 – Proposed Mitigation and Monitoring Measures \(MMRP\)](#)

[Exhibit 9 – Site Photos](#)

I. Motion and Resolution

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve Coastal Development Permit Application No. 1-20-0560 pursuant to the staff recommendation.

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby **approves** Coastal Development Permit Application No. 1-20-0560 for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either (1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or (2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. Standard Conditions

This permit is granted subject to the following standard conditions:

- 1. **Notice of Receipt and Acknowledgment.** The permit is not valid until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
- 2. **Expiration:** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
- 3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. Special Conditions

This permit is granted subject to the following special conditions:

1. **California Public Utilities Commission (CPUC) Approval.** PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall provide to the Executive Director a copy of a final permit, license, review-approval, or other authorization issued by the CPUC for all new trail crossings of the North Coast Railroad Authority rail corridor and cooperative use of the Eureka Slough Railroad Bridge, or evidence that no permit or grant of authority is required. The applicant shall inform the Executive Director of any changes to the project required by the CPUC. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.
2. **U.S. Army Corps of Engineers Approval.** PRIOR TO COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall provide to the Executive Director a copy of a permit issued by the Army Corps of Engineers, or letter of permission, or evidence that no permit or permission is required. The permittee shall inform the Executive Director of any changes to the project required by the Army Corps of Engineers. Such changes shall not be incorporated into the project until the permittee obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.
3. **California Department of Transportation (Caltrans) Encroachment Permit.** PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall submit to the Executive Director for review and written approval, evidence of an encroachment permit from Caltrans. The encroachment permit or exemption shall evidence the ability of the applicant to develop within State properties, including the U.S. Highway 101 public right-of-way. The applicant shall inform the Executive Director of any changes to the project required by Caltrans. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.
4. **Evidence of Legal Ability of Applicant to Undertake Development as Conditioned**
 - A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall submit to the Executive Director for review and written

approval evidence that clearly demonstrates that the North Coast Railroad Authority (NCRA) or its successor agency and the California Transportation Commission have formally agreed in writing that the applicant may undertake development within the railroad right-of-way pursuant to Coastal Development Permit 1-20-0560 and as conditioned by the Commission herein.

- B. If the NCRA's or its successor agency's application to railbank the portion of the railroad in the project area is denied by the Surface Transportation Board (STB), the applicant shall inform the Executive Director of any changes to the project necessitated by STB's denial. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

5. Ensuring Success of the Proposed Offsite Wetland Mitigation Program.

- A. The applicant shall ensure successful implementation of Spartina densiflora (Spartina) eradication activities on Tuluwat Island (APNs 405-011-010 and 405-011-011) to mitigate for wetland impacts resulting from the Humboldt Bay Trail South project and the successful restoration of at least 24.64 acres of salt marsh habitat in accordance with the wetland mitigation credit program approved under CDP 1-18-1078 Special Condition 5. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall submit, for the review and written approval of the Executive Director a signed and executed copy of the Memorandum of Understanding (MOU), cooperative agreement, or similar legally binding agreement, with Caltrans that provides for: (1) the implementation of the Spartina removal, (2) monitoring and maintenance for five years after meeting the removal success criteria, (3) subsequent long term monitoring and maintenance conducted in perpetuity, and (4) the permanent protection of the areas of Spartina removal from future development as defined by section 30106 of the Coastal Act except for the ongoing removal of Spartina and other non-native invasive species, maintenance of native vegetation, and habitat restoration.
- B. The applicant shall ensure that Caltrans successfully completes the primary treatment work involving the removal of at least 24.64 acres of Spartina (in accordance with the approved wetland mitigation credit program) from Tuluwat Island consistent with Special Condition 5 of CDP 1-18-1078 within three (3) years of the date of approval of CDP 1-20-0560 (by April 7, 2025). If the mitigation work is not completed within three (3) years of permit approval, the applicant shall submit a revised or supplemental mitigation program to compensate for the additional temporal loss of habitat associated with the delay in implementing the wetland mitigation plan. The revised mitigation program shall be processed as an amendment to this coastal development permit.

6. Reestablishing and Monitoring of Onsite Drainage Ditch Wetlands. As proposed by the County in the final CEQA document adopted for the project, where trail construction would fill 0.98-acre of drainage ditch wetlands between the railroad and Highway 101 (i.e., segments 3-9), an equivalent area of drainage ditch wetlands shall be restored onsite inboard of the trail at an appropriate depth for drainage functionality similar to the existing drainage ditch depth (to provide capacity for a 25-year rain event) and shall be reseeded/replanted with regionally appropriate native wetland plant species. The reestablished drainage ditch wetlands shall be monitored for successful plant reestablishment for at least one year following impacts and ditch reconstruction. By December 31st of the first year following filling/reestablishment of drainage ditch wetlands, the applicant shall provide as-built plans for the reestablished drainage ditch wetlands and a monitoring report demonstrating that a minimum of 0.98-acre of drainage ditch wetlands have been successfully reestablished and revegetated with native plant species at a coverage and density similar to vegetation in surrounding undisturbed drainage ditch wetlands. If the monitoring report indicates that the reestablished drainage ditch wetlands do not have a similar native vegetation density and cover to the surrounding wetlands, the applicant shall submit a revised or supplemental restoration program to achieve the objective. The revised or supplemental restoration program shall be processed as an amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

7. Final Site and Construction Plans

- A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall submit to the Executive Director for review and written approval final site and construction plans that (1) substantially conform with the project description and draft plans submitted to the Commission (Exhibit 5), and (2) are consistent with all special conditions of CDP 1-20-0560. The final plans shall include, at a minimum, the following:
- i. Plan and profile drawings for all segments of the trail including bridges and railway, roadway, and driveway crossings;
 - ii. Identification of the specific location of all construction area boundaries, staging areas, and construction access corridors in site plan view;
 - iii. Evidence that a licensed professional has reviewed and approved all final design, construction, and drainage plans and has certified that each of those plans is consistent with all applicable recommendations specified in the geotechnical report dated June 2019 prepared by Crawford & Associates, Inc.
- B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans

shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

8. As-Built Plans and Post-Construction Report. WITHIN SIX MONTHS OF COMPLETION OF CONSTRUCTION OF EACH TRAIL SEGMENT, the applicant shall submit the following documentation:

- A. As-built plans for the project that substantially conform with the plans submitted on December 17, 2020 that demonstrate, at a minimum, that railroad repairs along segments 4, 7, and 8 are confined to the railroad berm's historical footprint and not further bayward;
- B. For segment 6, a post-construction report for the temporary construction access road along a portion of the bay needed for bridge construction that includes (i) as-built plans that demonstrate that dewatering, temporary access, and bridge construction was completed consistent with approved project plans and (ii) documentation that the site was restored to pre-project conditions following dewatering and construction of the temporary access road.
- C. For segment 9, a post-construction report for the Brainard Slough restoration work that includes (i) as-built plans that demonstrate that rock-slope protection (RSP) placed outside of the historic footprint was confined to the 575-sf portion required to protect the new bridge abutments and culvert; and (ii) documentation of cleanup activities (removal of railroad debris) including photographs and written descriptions of the newly restored channel.

9. Final Design Plans for All Signage and Trail Amenities.

- A. PRIOR TO COMMENCEMENT OF DEVELOPMENT OF SIGNAGE AND TRAIL AMENITIES AUTHORIZED BY COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall submit to the Executive Director for review and written approval final design plans for all signage and trail amenities (i.e., viewing platforms, fencing, seating, interpretive panels, etc.) that (1) substantially conform with the project description and preliminary plans (Exhibit 5) submitted to the Commission, and (2) are consistent with all special conditions of CDP 1-20-0560. The final plans shall:
 - i. Demonstrate that the signage, viewing platforms, fencing, seating, and other site improvements to be erected at the project site: (a) are visually compatible with the character of surrounding areas with respect to height and bulk, including signs that are no larger than those currently installed along the nearby Eureka Waterfront Trail and Humboldt Bay Trail North and which do not significantly obstruct views from public vantage points; and (b) conform in architectural style, construction materials, surface treatments, and physical appearance

with other similar public improvements along the Bay waterfront and Arcata Marsh.

- ii. At a minimum include: (a) a site plan showing the locations of all signage, lighting, viewing platforms, fencing, and seating; (b) design specifications for the new lighting at the Bracut driveway entrance demonstrating that the new lighting has been designed using appropriate fixture type, cut off angles, shields, lamp arm extensions, and/or pole height to direct light downward and away from natural areas, including the Bracut Marsh; (c) to-scale, dimensioned elevation plan depictions of the signage, including clear representative of sign verbiage, symbology, and size; (d) a description of the materials and colors of the sign elements, fencing, and seating; and (e) interpretive signage related to Wiyot Tribe cultural history and natural resources of the project area with design and content developed in consultation with the Tribal Historic Preservation Officers (THPOs) of the Wiyot Tribe, Blue Lake Rancheria, and Bear River Band of the Rohnerville Rancheria.

- B. The applicant shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

10. Use, Maintenance, Modification, and Abandonment of Trail. By acceptance of this permit, the applicant acknowledges and agrees that:

- A. The trail shall be a Class I multi-use trail available for shared public use 24 hours a day daily free of charge. The County may temporarily restrict public trail access when required to address an unforeseeable emergency (i.e., extreme weather, threats to public health or safety, or other such seriously disruptive events) and for required maintenance activities. Where such circumstances arise, the subject closure shall be: (i) for the minimum amount of time necessary to ensure the health and safety of the public; (ii) limited to the least disruption of public access necessary to respond to specific trail concerns; and (iii) communicated immediately to the Executive Director, subject to an emergency permit or Notice of Impending Development as applicable.
- B. The applicant shall be responsible for maintenance of the multi-modal trail and motorized vehicles shall be permitted access by the County and its agents for construction, maintenance and emergency purposes;
- C. The applicant shall maintain continuously all trail improvements in good order and repair and shall allow no nuisances to exist or be maintained therein.

Proposed activities that add to, enlarge, extend, heighten, or otherwise expand the authorized structures (trail, RSP, bridges, overlook) in any way shall not be considered maintenance and shall require an amendment to this permit or a new CDP depending on the nature and extent of the proposed activities.

- D. No portion of the trail owned by the County of Humboldt in fee or by grant of easement may be abandoned by the County until a grant of easement is transferred to another entity, approved by the Executive Director, who can operate that portion of the trail in conformance with all terms and conditions of this coastal development permit; and
- E. Any proposed changes, including any proposed change in the above-identified scope and manner of use or any proposed relocation or abandonment of any portion of the multi-modal trail, shall require an amendment to CDP 1-20-0560 approved by the Commission unless the Executive Director determines that no amendment is legally required.

11. Pile Driving Protections. All project activities associated with the installation of temporary or permanent piles or sheet-piles shall be undertaken in accordance with the requirements set forth herein as recommended by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS):

- A. Pile-driving shall be limited to July 1 – September 31 when salmonids are least likely to be present in the north bay.
- B. Pile-driving shall be isolated from coastal waters by installing piles during periods of minus ebb tides.
- C. Piles shall be driven using vibratory methods to the maximum extent possible, with use of impact hammer limited to the final five feet of pile driving if required to verify load capacity.
- D. Clear water diversions (e.g., cofferdams) shall be installed as necessary to ensure cast-in-place concrete elements of the CRC North and Brainard Slough bridges are isolated from coastal waters until cured and thus minimize the transport of sediment and concrete pollution to coastal waters. Clear water diversions shall be installed and removed during periods of minus ebb tides and consistent with the requirements of Special Condition 13.

12. Protection of Biological Resources. The permittee shall undertake development in compliance with the avoidance, minimization, and mitigation measures to protect sensitive biological resources proposed in the final “Mitigation Monitoring and Reporting Program” adopted by the County for the project (Exhibit 8) including, but not limited to, the following:

- A. BIO-1: Avoidance and Protection Measures for Special Status Plants

- B. BIO-2 and BIO-3: Avoidance and Minimization Measures for Fish
- C. BIO-4: Northern Red-Legged Frog Avoidance and Minimization Measures
- D. BIO-5: Avoidance and Protection Measures for Nesting Birds

The permittee shall submit the results of the proposed pre-construction surveys for rare plants, frogs, and birds to the Executive Director prior to commencement of construction, including maps that identify the locations of any sensitive species habitat identified by the survey(s) [e.g., rare plants; sensitive nesting birds; northern red-legged frog adults, subadults, tadpoles, or egg masses], delineation of any required no-disturbance buffer zones, and a narrative description of avoidance and minimization measures.

13. Construction Requirements to Protect Marine Resources and Water Quality.

- A. All mitigation measures proposed by the permittee shall be implemented, including all mitigation measures included in the final "Mitigation Monitoring and Reporting Program" adopted by the County for the project (Exhibit 8) and in permits and/or consultations issued by CDFW, USFWS and NOAA-Fisheries (NMFS), including, but not limited to, the following proposed measures as modified herein:
 - i. Timing of Work: Isolation of the in-water work area and construction within stream channels and the bay shall only occur between July 1 and September 31st during low tides to avoid sensitive fish species, and to reduce the chance of stormwater runoff occurring during construction.
 - ii. Erosion, Sediment, and Runoff Control:
 - (a) Staging and stockpile areas shall be located at least 50 feet from coastal waters and drainage courses and all other wetlands and silt fencing shall be installed around all temporary staging and stockpile areas to prevent sediment- and pollutant-laden runoff from exiting the site(s).
 - (b) During construction, silt fencing or similar runoff and sediment control BMPs shall be used to isolate work areas from surrounding channels and other sensitive areas and to capture any sediment-laden runoff that might flow from the site;
 - (c) Following completion of construction or prior to the onset of precipitation capable of generating runoff, whichever comes first, all disturbed soil areas shall be treated with appropriate erosion control devices (e.g., seeding, straw mulch, wood mulch, matting, etc.);

- (d) Only certified weed-free straw shall be used for mulching, and biodegradable geotextile fabrics shall be used where possible; and

iii. Additional Water Quality and Fish Protection Measures:

- (a) Drip pans shall be used for stationary equipment to capture any drips or leaks; and
- (b) Cofferdams or barrier nets shall be installed prior to dewatering work areas in the bay or slough channels, and appropriate protocols for fish handling and relocation shall be followed in consultation with CDFW and NOAA-Fisheries.

B. The permittee shall also implement the following additional mitigation measures imposed by this CDP that are necessary to further protect coastal resources:

i. Additional Water Quality Protection Measures:

- (a) Project construction shall implement the final approved Stormwater Pollution Prevention Plan (SWPPP) consistent with Special Condition 14.
- (b) All earth-disturbing activities shall be limited to the dry season, April 15 through October 31. The Executive Director may grant an extension of the work windows through November 30th for good cause upon written request, provided evidence is submitted that continued dry weather is forecast by the National Weather Service during the requested extension period.
- (c) Fueling and maintenance of construction equipment and vehicles shall be conducted off site if feasible. Any fueling and maintenance of equipment required on site shall take place only at designated staging areas located in upland areas at least 50 feet from coastal waters, drainage courses, and storm drain inlets, if feasible (unless those inlets are blocked to protect against fuel spills). All fueling and maintenance areas shall be designed to fully contain any spills of fuel, oil, or other contaminants. Equipment that cannot be feasibly relocated to a designated fueling and maintenance area may be fueled and maintained in other areas of the site, provided that procedures are implemented to fully contain any potential spills;
- (d) Following construction, as appropriate staging area shall be ripped or disked for decompaction, and post-construction erosion control measures shall be implemented, including spreading weed-free straw mulch over bare soils.

- (e) Heavy equipment used in project construction shall be in good condition, shall be inspected for leakage of coolant and petroleum products, and shall be repaired offsite, if necessary, prior to entering the property. If equipment must be washed, washing shall occur offsite only;
 - (f) Equipment operators shall be trained in the procedures to be taken should an accidental spill occur. Absorbent materials designed for spill containment and cleanup shall be kept onsite during construction for use in the event of an accidental spill;
 - (g) If temporary plugs are installed within the construction backwater channel to minimize potential turbidity impacts, plugs shall be removed from upstream to downstream with the downstream-most plug removed during a rising tide to minimize turbidity impacts related to channel connection.
 - (h) If treated wood is used in trail facilities and amenities such as the bridge railings, viewing platforms, and signage, the following additional BMPs shall be implemented: (i) no creosote-treated wood shall be utilized; (ii) whenever possible, cutting or drilling of treated wood shall occur at least 100 feet away from coastal waters and wetlands, and any sawdust, drill shavings, and wood scraps shall be contained and collected to prevent the discharge of treated wood to the marine environment; and (iii) treated wood materials shall be stored during construction in a contained, covered area to minimize exposure to precipitation.
- ii. Minimizing Vegetation Removal & Soil Compaction:
- (a) The damage or removal of non-invasive vegetation (including trees, native vegetation, and root structures) during construction shall be minimized to maintain transpiration, vegetative interception, pollutant uptake, shading of waterways, erosion control, and other water quality benefits;
 - (b) Soil compaction due to construction activities shall be minimized to retain the natural stormwater infiltration capacity of the soil; and
- iii. Erosion and Sediment Control Measures:
- (a) No construction materials, debris, or waste shall be placed or stored where it may be able to enter or be washed by stormwater runoff into coastal waters;
 - (b) Saturated soils shall be handled and transported in a manner that prevents excess discharge or spillage of soils or water to surrounding areas;

- (c) Erosion-control seeding shall not include the use of the invasive species Italian ryegrass (*Lolium multiflorum* also known as *Festuca perennis*), a common component of erosion-control seed-mixes.

14. Final Storm Water Pollution Prevention Plan

- A. PRIOR TO COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall submit to the Executive Director for review and written approval a final Storm Water Pollution Prevention Plan (SWPPP). The final SWPPP shall include, at a minimum, provisions for all of the following:
- i. Runoff from the project site shall not increase sedimentation in coastal waters or wetlands post-construction. During construction runoff from the project site shall not increase sedimentation in coastal waters beyond what's allowable under the final Water Quality Certification approved for the project by the North Coast Regional Water Quality Control Board;
 - ii. Runoff from the project site shall not result in other pollutants entering coastal waters or wetlands during construction or post-construction;
 - iii. Best Management Practices (BMPs) shall be used to prevent the entry of polluted stormwater runoff into coastal waters and wetlands during construction and post-construction, including use of relevant BMPs as detailed in the current California Storm Water Quality Best Management Handbooks (<http://www.cabmphandbooks.com>);
 - iv. An on-site spill prevention and control response program, consisting of best management practices (BMPs) for the storage of clean-up materials, training, designation of responsible individuals, and reporting protocols to the appropriate public and emergency services agencies in the event of a spill, shall be implemented at the project to capture and clean-up any accidental releases of oil, grease, fuels, lubricants, or other hazardous materials from entering coastal waters or wetlands;
 - v. A schedule for installation and maintenance of appropriate construction source-control BMPs to prevent entry of stormwater runoff into the construction site and the entrainment of excavated materials into runoff leaving the construction site; and
 - vi. The SWPPP shall be consistent with the provisions of all other terms and conditions of Coastal Development Permit 1-20-0560.
- B. The applicant shall undertake development in accordance with the approved final storm water pollution prevention plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to

this coastal development permit, unless the Executive Director determines that no amendment is legally required.

15. Final Soil and Groundwater Management Plan. PRIOR TO COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall submit to the Executive Director for review and written approval a Soil and Groundwater Management Plan. The plan shall include minimization measures proposed by the applicant in the adopted CEQA document and CDP application materials and shall be prepared by a qualified geologist or engineer.

A. The plan shall include, at a minimum, the following:

- i. A description of the specific locations, methods, and procedures for staging, stockpiling, managing, characterizing, and properly disposing of soil, groundwater, and waste material expected to be encountered during construction;
- ii. Provisions for ensuring that all staging, stockpiling, management, and disposal of waste is consistent with the special conditions of this CDP;
- iii. BMPs for dust control, including, but not limited to, measures to reduce the potential for exposure of staged and stockpiled materials to wind and stormwater runoff;
- iv. Measures to demonstrate that all contaminated soil and groundwater encountered during construction, including soil impacted with arsenic and lead in segments 4, 7, and 8, and soils impacted with dioxins in segment 5, shall be contained, handled, and properly disposed of in a manner that prevents discharge of contaminated soil and groundwater to the surrounding environment. Excess soil from each segment shall be properly disposed of off-site consistent with the approved final disposal plan required by Special Condition 16.
- v. Measures to minimize risks of exposure by construction workers to contaminated soils and groundwater, including proper training of contractors and construction workers.

B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this CDP unless the Executive Director determines that no amendment is legally required.

16. Final Construction Stockpiling and Debris Disposal Plan.

A. PRIOR TO COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall submit to

the Executive Director for review and written approval a final plan for (1) the temporary stockpiling of construction materials, (2) the disposal of all construction debris, waste, and vegetative spoils expected to be generated by the authorized work, and (3) if applicable, for the stockpiling of railroad infrastructure for future use if required by the NCRA or its successor agency. The plan shall demonstrate that:

- i. All temporary stockpiles of construction debris, excess sediments, vegetative spoils (including Eucalyptus tree slash), and any other debris and waste associated with the authorized work shall be located at least 50 feet from coastal waters and drainage courses and limited to areas where stockpiles can feasibly be contained with appropriate BMPs to prevent any discharge of pollutants to surrounding coastal waters and wetlands; and
- ii. All construction debris, excess spoils, and any other debris and waste generated by the authorized work shall be disposed of at an authorized disposal site(s) capable of receiving such materials; and
- iii. If required by the NCRA or its successor agency, all railroad infrastructure removed for the permitted trail project shall be stored at an appropriate upland location at a County Corp Yard or an alternate location owned by the County and shall incorporate appropriate BMPs outlined in subsection A(i) above

The plan shall include, at a minimum, the following:

- i. A site plan showing all proposed locations for the temporary stockpiling of construction debris, soils and vegetative spoils, excess materials, and any other debris and waste associated with the authorized work in relation to coastal waters, drainage courses, storm drain inlets, and project features;
 - ii. Identification of all potential debris disposal sites that will be used; and
 - iii. A schedule for the ultimate removal of all stockpiles, construction debris, excess materials, and all debris and waste associated with the authorized work.
- B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

17. Protection of Archaeological Resources.

- A. In segments 8 and 9, a qualified tribal or archaeological monitor shall be present onsite during construction activities that may extend beyond the depth of existing fill materials within mapped areas of the known cultural resources.
- B. In all segments of the trail construction project area that involve ground disturbance, if cultural materials such as chipped or ground stone artifacts, discarded dietary remains (e.g., shell, burned bone), ash-stained midden deposits, etc. or human remains are discovered during the course of the project, all construction within 66 feet (20 meters) of the discovery site shall cease and shall not recommence until a professional archaeologist who meets the Secretary of the Interior's Standards and Guidelines analyzes the significance of the find and prepares a supplementary archaeological plan (SAP) in consultation with the Tribal Historic Preservation Officers of the Wiyot Tribe, Bear River Band of the Rohnerville Rancheria, and Blue Lake Rancheria. The SAP shall be submitted for the review and written approval of the Executive Director, and either: (A) the Executive Director approves the SAP and determines that the SAP's recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, or (B) the Executive Director reviews the SAP, determines that the changes proposed therein are not de minimis, and the permittee has thereafter obtained an amendment to CDP 1-20-0560.

18. Length of Development Authorization. Development authorized by this permit is authorized only so long as (1) the permittee is legally authorized by the property owner(s) to use the site until July 1, 2046 (i.e., the expiration date of the County's lease with the railroad authority or its successor agency unless extended) except that the Executive Director has authority to extend authorization up to 5 years for good cause and any further extensions to the authorization period require approval by the Commission pursuant to an amendment to this CDP; (2) until the County or any government agency with legal jurisdiction has issued a final order, not overturned through any appeal or writ proceedings, determining that the authorized development is currently and permanently unsafe for use due to damage or destruction from waves, flooding, tsunami run-up, liquefaction, or other hazards related to coastal processes or seismic hazards, and that there are no feasible measures that could make the development suitable for use without the use of shoreline protective devices; (3) removal is required pursuant to LCP policies for sea level rise adaptation planning; or (4) the development does not require new and/or augmented shoreline protective devices that conflict with relevant LCP or Coastal Act policies. In addition, the development approval does not permit encroachment onto public trust lands, and any future encroachment must be removed unless the Commission determines that the encroachment is legally permissible pursuant to the Coastal Act and authorizes it to remain. Any future encroachment would also be subject to the State Lands Commission's (or other designated trustee agency's) leasing approval. The permittee shall obtain a CDP for removal of approved development unless the Executive Director determines that no coastal development permit is legally required.

19. Assumption of Risk, Waiver of Liability, and Indemnity Agreement. By acceptance of this permit, the permittee acknowledges and agrees (i) that the site may be subject to hazards from, storms, flooding, erosion, earth movement, and other natural hazards, many of which will worsen with future sea level rise; (ii) to assume the risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

20. Liability for Costs and Attorney's Fees. The permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorney's fees [including but not limited to such costs/fees that are: (1) charged by the Office of the Attorney General; and (2) required by a court] that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the permittee against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit, the interpretation and/or enforcement of permit conditions, or any other matter related to this permit. The permittee shall reimburse the Coastal Commission within 60 days of being informed by the Executive Director of the amount of such costs/fees. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

21. State Lands Commission Review. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-20-0560, the applicant shall provide to the Executive Director a written determination from the State Lands Commission that: (A) no State or public trust lands are involved in the development; or (B) State or public trust lands are involved in the development and all permits required by the State Lands Commission have been obtained; or (C) State or public trust lands may be involved in the development, but, pending a final determination, an agreement has been made with the State Lands Commission for the approved project as conditioned by the Commission to proceed without prejudice to that determination.

22. Agreement To Record a Deed Restriction if Coastal Trail Property Owned by the County is to be Conveyed. PRIOR TO ANY CONVEYANCE OF ANY COASTAL TRAIL PROPERTIES OWNED BY THE COUNTY OF HUMBOLDT (APNs 501-241-005, 404-141-002, 501-241-030, 501-241-031), the permittee shall submit to the Executive Director for review and approval, documentation demonstrating that the permittee as landowner has executed and recorded against the property to be conveyed a deed restriction, in a form and content acceptable to the Executive Director, which authorizes the Coastal Trail in the scope and manner set forth in Special Condition 10 above. The deed restriction shall run with the land binding all successors and assigns and shall be recorded free of prior liens that the

Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Commission amendment to this coastal development permit.

IV. Findings and Declarations

The Commission hereby finds and declares as follows:

A. Project Description

The Humboldt County Department of Public Works (Humboldt County DPW) (hereafter “County”) proposes to construct the Humboldt Bay Trail South project, which includes 4.25 miles of Class 1 multi-use trail along the Humboldt Bay waterfront and the existing railroad line as part of the California Coastal Trail (Exhibits 1-3). The purpose of the project is to complete the California Coastal Trail (CCT) along Humboldt Bay between the cities of Eureka and Arcata. Currently, existing segments of the CCT previously permitted by the Commission include the 6.3-mile-long Eureka Waterfront Trail (rail-with-trail) Project (including the Hikshari’ Trail, and extending from Pound Road near the Elk River along the majority of the City waterfront to Tydd Street at Eureka Slough) and the 3-mile-long Humboldt Bay Trail North (rail-with-trail) Project (extending from Brainard Slough northward through the Arcata Marsh and Wildlife Sanctuary to Samoa Blvd. at L Street in Arcata).¹ The proposed Humboldt Bay Trail South Project is the final interconnecting link needed for a continuous CCT route that extends along the existing railroad right-of-way over 13 miles throughout Eureka and Arcata, the corridor along the bay between the two cities, and connects to an additional 12-mile-long stretch of CCT segments north of Arcata to Little River State Beach.

The project is situated along Highway 101 and the railroad corridor (which runs parallel to and bayward of the highway), with the exception of a proposed levee trail segment along the outer (bayward) perimeter of an existing mill site at the northeastern edge of Eureka owned by California Redwood Company (“CRC”).² Significant portions of the trail that run within the railroad right-of-way use a “rail-with-trail” design in which the trail is located on the inland side of the railroad tracks (between the tracks and the highway) rather than on top of the tracks. The trail would be located directly on top of railroad tracks only for the segment just north of the Eureka Slough Railroad Bridge and the segment that crosses the 725-foot-long railroad bridge over Eureka Slough. As explained in Finding B below, the existing railroad, originally constructed over 100 years ago, has been non-operational since 1998 due to issues of geologic instability and failed

¹ The Coastal Commission approved CDP 1-11-037 (City of Eureka – Hikshari’ Trail) on March 9, 2012; CDP 1-15-2054 (City of Eureka – Eureka Waterfront Trail) on May 11, 2016; and CDP 1-16-0122 (City of Arcata – Humboldt Bay Trail North) on October 5, 2016.

² The CRC property is also referred to locally as the “Brainard Mill” and has been used for lumber operations since 1947. To avoid confusion with the Brainard Slough portion of the project, this report refers to the mill property as the “CRC property.”

rail infrastructure in inland portions of Humboldt and Mendocino counties. The railroad remains in “active” status, however, and there is an active recreational excursion use on portions of the line with “speeders” running through the City of Eureka, through the southern portion of the project area north of Eureka, and along the segment of rail between Samoa and Manila (on the western side of Humboldt Bay).³ As part of this trail project, the County proposes to repair and maintain damaged portions of the existing railroad prism (berm) along the planned trail route by supplementing existing armored areas of the railroad berm with additional rock.

Improvements proposed as part of the trail project include three bridges, up to two new overlook areas, benches, interpretive signage, fencing, road crossings, and a cable barrier fencing. The project also proposes to remove a portion of a stand of Eucalyptus trees (approximately 200 trees) growing along the southbound lanes of Highway 101, between the highway and proposed trail segment 7.

The County also proposes to mitigate for 6.16 acres of permanent palustrine and estuarine wetland impacts associated with trail construction off site at a 4:1 mitigation ratio through a cooperative agreement with Caltrans involving (1) the substantial restoration of salt marsh on Tuluwat Island in Eureka (owned by the Wiyot Tribe) through the removal of invasive Spartina densiflora, and (2) the enhancement of palustrine emergent and brackish marsh wetlands on a Caltrans-owned parcel west of Arcata.

For design and construction purposes, the County has organized the trail project into nine segments (See Table 1 below and **Exhibits 2-3**). The various components of the proposed project are explained in more detail below.

Table 1. Description of the proposed trail, by design/construction segment starting from its southern end at the existing Eureka Waterfront Trail (EWT) CCT to its northern end in Arcata at the existing Humboldt Bay Trail North (HBTN) CCT.

Segment No.	Location	Length (ft) Width (ft)	Alignment Description
1	Connection with EWT to Eureka Slough Crossing	100-ft-long 10 ft wide + 2-ft shoulders	Trail on top of railroad prism. Cooperative use of rail using flangeway fillers
2	Eureka Slough Railroad Bridge Crossing	725-ft-long 17-ft-wide (existing bridge width)	Cooperative use of existing Railroad Bridge using flangeway fillers. Includes bridge railing improvements.

³ The NCRA has agreed to cooperative use of segments of the railroad around Humboldt Bay by both trail users and by the Timber Heritage Association (THA) for use of the rail with smaller-scale railroad equipment for scenic excursion train recreational rides, including a rail truck and former maintenance of way vehicles (“Speeder Cars”). See <https://timberheritage.org/ride-the-rails-on-a-historic-speeder-crew/>.

3	From the easterly approach to the Eureka Slough Bridge	1,850-ft-long 10 ft wide + 2-ft shoulders	Trail adjacent to railroad prism. Reduced (2.5-ft) setback from the railroad centerline and trail shoulder to minimize wetland impacts.
4	Along Eureka Slough to south end of CRC Levee	4,875-ft-long 10 ft wide + 2-ft shoulders	Trail between railroad and highway. New 48-ft-long single-span concrete bridge at south end of segment. Includes repairs to railroad prism, culvert upgrades, and new cable barrier fencing
5	Around the CRC Levee	5,375-ft-long 8 ft wide + 6-ft shoulders ⁴	Trail on perimeter levee. Includes 1 or 2 viewing platforms and interpretive signage
6	Northern bridge crossing from northern CRC Levee	200-ft-long 10 ft wide + 2-ft shoulders	New 170-ft-long three-span concrete bridge connection over bay to connect segments 5 and 7
7	From north of the CRC Levee through the northern Eucalyptus area	2,550-ft-long 10 ft wide + 2-ft shoulders	Trail in between railroad and Highway 101. Requires widening, raising, and rocking railroad prism and culvert upgrades. Includes removal of ~200 Eucalyptus trees
8	South of Bracut Industrial Park	4,050-ft-long 10 ft wide + 2-ft shoulders	Trail in between railroad and Highway 101. Requires widening, raising, and rocking railroad prism. Also includes culvert upgrades, and new cable barrier fencing
9	Bracut to Brainard Slough and connection to HBTN	2,630-ft-long 10 ft wide + 2-ft shoulders	Trail in between railroad and highway. Includes Bracut driveway crossing (ladder style crosswalk striping with detectable warning surfaces at each end), new light standard, new 80-ft-long single-span concrete bridge over Brainard Slough, railroad

⁴ The trail would have a five-foot-wide shoulder on the bay side (one foot paved and four feet unpaved) and a one-foot-wide paved shoulder on the interior side of the levee.

			berm repairs, and cable barrier fencing
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Trail Width and Surface

The standard trail width would be 10 feet of asphalt with two-foot-gravel shoulders (for a 14-foot-wide trail). Trail construction would consist mostly of excavating, grading, scarifying, and compacting existing railroad and trail fill soils, adding aggregate base, and applying an asphalt concrete surface. The trail would have a typical pavement structural segment consisting of 12 inches of aggregate base and approximately three inches of asphalt concrete. In areas of poor soils, the structural section may be increased to up to three feet of aggregate/engineered fill base or incorporate other soil stabilization measures including geotextiles. In compliance with Federal Highway Administration and Caltrans standards for a Class 1 bikeway and Americans with Disability Act (ADA) accessibility standards, the trail, including bridges, would be designed with a 2% or less cross slope and a 5% or less running slope. Safety railing and fencing would be installed along viewing platforms, the CRC levee, on bridges, at the Bracut driveway, and at the edge of the trail when adjacent to steep embankments or drop-offs. See **Exhibit 3 and 5** for details of the trail design.

Use of and Modifications to CRC Levee for Trail Use

Approximately 1.1 miles of the proposed trail alignment follows the outer perimeter levee surrounding the CRC property. The CRC property is located on former tidal flats west of Highway 101 that were filled for industrial use in the early 1900s. The existing levee varies in width from 12 feet to more than 30 feet wide and averages approximately 10 feet higher than the adjacent Humboldt Bay mud flats. The bayward edge of the levee consists of rock armoring that is in good condition and needs no repairs. The standard trail section would be maintained along the levee and would include additional fencing, railing, and slope/drop-off protection as needed on one or both sides of the trail. See **Exhibit 3**, pg. 5 and **Exhibit 5**, pg. 2 for the trail alignment on the CRC levee.

Bracut Driveway Encroachment

The proposed trail would cross the driveway entrance off of Highway 101 into the Bracut Industrial Park. The trail crossing would have ladder style crosswalk striping with detectable warning surfaces at each end. Roadway and driveway crossings would be ADA-accessible and include warning signage and markings both on the trail and the approaching vehicular way. Stop signs would be placed at each end of the intersection to convey that trail users must stop for vehicles, removable bollards would be installed to prevent unauthorized vehicles from entering the trail, and pavement markings would be established on the driveway (see **Exhibit 5, pg. 22**). One new light standard would be constructed to enhance visibility at the intersection.

Use of and Modifications to Existing Eureka Slough Railroad Bridge for Trail Use

Because it currently is infeasible to locate the trail along the shoulder of the existing southbound Highway 101 Bridge that crosses Eureka Slough,⁵ and to avoid environmental impacts and project cost associated with construction of a new trail bridge across the tidal slough, the County proposes to modify the existing 725-foot-long Eureka Slough railroad bridge, which was constructed prior to enactment of the Coastal Act, to accommodate both existing railroad use⁶ and new trail use across the bridge. Flangeway fillers are proposed in segments 1 and 2 where the direction of travel of the trail is parallel to the rails. A flangeway filler is a strip of rubber that provides a semi-compressible surface adjacent to the interior side of a railroad rail. Flangeway fillers are designed to compress under the weight of heavy rail vehicles yet remain incompressible under the weight of pedestrians, bicycles, wheelchairs, and light vehicles.

Trail improvements in these segments include replacing the existing cross ties along the concrete approach spans, regrading the ballast, and installing geotextile fabric and aggregate base to support the proposed new asphalt concrete trail surface. The project would repair some structural elements of the bridge, including deteriorated hardware and sections of damaged concrete, but would not require any changes to the existing pile system or to any in-water bridge elements. The existing bridge railings would be replaced with new, treated glue-laminated timber railings.

Three New Pedestrian Bridges for Trail Use

Three new bridges would be constructed along the trail alignment. An approximately 48-foot-long single-span concrete bridge would be installed near the southern end of the CRC mill property and would cross mud flats and salt marsh to connect the trail prism to the levee. A second 170-foot-long three-span concrete bridge would be installed near the northern end of the CRC levee to connect the levee trail back to an alignment in between the railroad prism and the highway. Both bridges would be at least 10-feet wide in between railings and would match the design characteristics of existing bridges along the trail segments from Eureka to Arcata. The bridges would be supported on each end with abutments and wingwalls and up to seven 14-inch diameter Cast-in-Steel Shell (CISS) piles approximately 50 feet deep (the piles are driven pipe piles filled with cast-in-place reinforced concrete). The longer northern bridge would consist of three spans and would include two bents to support mid-spans located within the bay. The bents would be supported by four 24-inch diameter CISS piles that would be driven 50-60 feet deep. Bridge piles would be driven by using a vibratory pile driver for the majority of the length and would be proofed for the final 5 to 10 feet using an impact hammer driver. The third bridge, which would cross over the outlet of Brainard Slough, consists of an 80-foot long, single-span concrete bridge and would be designed in the same manner as the two CRC bridges. The proposed new bridges' support structures,

⁵ Caltrans is currently in the preliminary planning and design phases for the replacement of the Eureka Slough Bridges, currently targeted for construction in 2029.

⁶ The existing rail is limited to recreational excursion rides on speeder rail cars operated by the Timber Heritage Association (THA). The THA has an agreement from 2011 with the railroad operator (North Coast Railroad Authority) for use of the railroad for the excursion rides.

including abutments, footings, and piles, require wetland fill. See **Exhibit 5**, pgs. 10, 17, and 26-27 for the proposed bridge plans.

Nature Study Viewing Platforms

One or two new viewing platforms would be installed along segment 5 on the CRC levee. Specific locations and designs have not been completed, but the platforms would either consist of low-profile landscaped areas or raised deck platforms comprised of either steel, asphalt concrete, wood, or crushed rock. Interpretive signage at the viewing platforms and elsewhere along the trail alignment would provide information on habitat types, species diversity, and socio-cultural history to encourage nature and cultural study.

Cable Barrier Safety Fencing

Cable barrier safety fencing would be installed between Highway 101 and the trail to protect trail users from errant vehicles and help delineate the boundary between the two uses. The cable barrier fence consists of steel wire ropes mounted on steel posts secured in concrete foundations and spaced 10.5 feet apart. The fence includes a two-foot concrete weed mat on either side of the fence. Cable barrier fencing would be installed where the trail runs parallel to Highway 101 along segments 4, 8, and 9 for a total length of approximately 11,000 feet. Barrier fencing would also be installed along the existing Humboldt Bay Trail North where the trail runs parallel to Highway 101 for approximately 5,230 feet and where there currently is no cable barrier fencing.

Railroad Berm Repairs and Removal of Failed Railroad Infrastructure

Trail segments 4, 7, 8, and 9 would be constructed by effectively widening the railroad prism (also referred to as berm) towards the highway and placing the new trail adjacent to the railroad. The railroad in these segments was constructed along the outer margin of Humboldt Bay over 100 years ago, and its existing prism functions as the hardened shoreline edge of the bay. Where the existing railroad prism (which consists largely of earthen and rock fill with rock armoring along its bayward edge) has been damaged and eroded by wave attack, the County proposes to repair eroded areas by adding RSP within the historical railroad berm footprint. Trail segment 9 includes a new trail bridge crossing over Brainard Slough, and in this area the County proposes to restore the slough bed by removing the failed railroad infrastructure, including culvert debris, broken railroad rails and ties, and scattered ballast rocks that currently litters the channel. The ends of the railroad prism on either side of the bridge crossing and the new bridge abutments would be stabilized with RSP. The project would repair approximately 6,600 feet of the railroad prism associated with segments 4, 7, 8, and 9. See **Exhibit 5**, pgs. 3, 8, 18-35 for the proposed railroad berm repair plans.

Culvert Repairs and Upgrades

The trail would typically have a cross slope of two percent or less to allow surface water to flow off the trail surface. When the trail is directly adjacent to the railroad or highway, the cross slope of the trail would be away from the railroad/highway in order to convey runoff towards existing or new drainage facilities. A total of six existing cross-culverts

that pass through the railroad prism in segments 4, 7, and 8 would either be replaced in their current location, or slip-lined⁷ to extend their useful life. The drainage ditch situated between the railroad prism and Highway 101 would either remain in place or, where the trail alignment necessitates it, be re-established adjacent to the trail and would continue to provide capacity for a 25-year rain event.

Eucalyptus Tree Removal

The project area includes a row of mature blue gum Eucalyptus trees (Eucalyptus globulus) that comprises a linear, narrow stand extending for approximately one mile along the southbound lanes of Highway 101 bayward of the highway and inland of the railroad prism. The non-native Eucalyptus trees were originally planted in the 1920s to serve as a windbreak. The stand of trees is split into two groups (a northern stand and southern stand) separated by the main driveway into the CRC mill property. To protect the trail and the safety of trail users, the County proposes to remove the northern group of trees, which represents approximately 42% of the total number of trees in the linear stand over a distance of approximately 2,500 feet along trail segment 7. The remaining 58% of trees in the southern grouping are located along trail segment 5 where the trail alignment follows the CRC levee. These southern trees would not pose a threat to future trail users and would remain in place. The northern portion of trees would be limbed and cut down in ten-foot segments using rigging or a crane. The removal operation would require the temporary closure of one southbound lane of Highway 101 during tree removal work.

Construction Staging and Access

Construction staging and stockpiling areas would occur on existing paved or graveled areas at the CRC mill site and on property owned by the County at Bracut Industrial Park as authorized by temporary construction easements. The staging areas do not contain wetlands or other sensitive habitat areas. Construction access would be limited to access to and from the designated staging areas and would utilize Highway 101, the entrance into the CRC mill site, and the entrance into Bracut Industrial Park.

Construction equipment for the proposed project includes the following: earthwork and rough grading for trail construction would be conducted with a bulldozer, backhoe or excavator, while fine grading of base would be performed by a grader; a vibratory roller would be used for compacting base and rolling pavement; dump trucks, concrete trucks, and trailers would be used for delivery of equipment and materials; Eucalyptus tree removal would be conducted by feller bunchers; concrete bridge abutments, bents and footings would be cast-in-place and piles would be driven with a vibratory hammer and

⁷ Slip-lining involves inserting a plastic liner and securing it to the interior surface of the culvert with grout. If slip-lined, the culverts would be extended to convey flow through the new trail embankment as well as the existing railroad prism. New flap gates would be provided.

an impact hammer; and cranes and/or excavators would be used for lifting and placing pre-manufactured bridge decks onto bridge support structures.

Construction Timing

Project construction would require approximately 18 months to complete. Construction activities would occur between 7:00 am and 7:00 pm, Monday through Friday with occasional work at night and on weekends. Vegetation clearing would either occur during the non-bird nesting season, between August 16 and March 14, or would be preceded by nesting bird surveys. Work within waterways would be limited to low tides occurring between July 1st and September 30th when water is not present. Certain project elements could be implemented separately and before or after the main trail construction and include Eucalyptus tree removal, cable barrier fence installation, shoreline revetment work, viewing platforms, and trail amenities.

B. Setting

The proposed Humboldt Bay Trail South project is located along the eastern shoreline of Arcata Bay (Northern Humboldt Bay) in low lying areas ranging from 9-17 feet in elevation (NAVD 88)⁸ In addition to County lands, the trail alignment would cross properties owned by other entities, including the railroad right-of-way (operated by the North Coast Railroad Authority), the privately owned CRC property, and public lands owned/managed by the City of Eureka and the federal government (the Eureka Slough Unit of the Humboldt Bay National Wildlife Refuge), and would travel adjacent to the privately owned Bracut property.

The Humboldt Bay area hosts over 300 bird species and is situated along the Pacific Flyway, a major migratory route for thousands of birds. Humboldt Bay and its tributaries also provide habitat for over 100 species of fish and marine invertebrates, many of which contribute to sport and commercial fisheries.

The project area runs primarily between Highway 101 and the railroad, both of which were constructed over 100 years ago within tidelands associated with Humboldt Bay. As such, the project area is biologically rich, including a number of tidal sloughs and extensive coastal salt marsh, tidal mudflats, and the coastal waters of Humboldt Bay immediately adjacent to the trail route. A roadside ditch also runs parallel to the trail route and fed by rainwater and some tidal influence. The majority of the project's wetland impacts, as discussed in Finding G below, would be to the ditch wetlands in the project area. However, the trail project includes a new bridge structure across Brainard Slough, which is a tidally influenced stream formed from two drainages (Washington Gulch and Rocky Gulch) that merge east of the highway and cross under the roadway via a single reinforced box culvert at the project site. Rocky Gulch, just upstream from

⁸ All of the elevations in this report, unless otherwise noted, are based off of the North American Vertical Datum of 1988 (NAVD 88).

the slough outlet, supports small numbers of rearing coho salmon and is important overwintering habitat.

The railroad right-of-way utilized by this project is part of the Northwestern Pacific Railroad line which has been managed by North Coast Railroad Authority (NCRA) since 1992.⁹ The track embankment was constructed along the margin of the bay starting in 1900. In 1975, the rail company ran 65,000 cars a year or almost 200 cars per day through the Humboldt Bay area. Rail usage dropped dramatically in the following decades as the timber industry declined. In 1997, severe winter storms caused substantial landslides and erosion of the rail bed at numerous points in inland Mendocino and Humboldt counties resulting in the cessation of operations on the line. By the time commercial railroad operations ceased in 1998, the railroad was running only three to four trains per week. There has been sporadic maintenance of the railroad since that time, and the tracks and underlying prism are at different locations along the line in various states of disrepair.

Although the railroad has not been in use by freight or full-sized passenger rail equipment for over 20 years, the Timber Heritage Association (THA), a local nonprofit organization dedicated to the preservation of the local timber industry history, has been running speeder car rides (former maintenance of way vehicles that are used for scenic excursion train recreational purposes) on the railroad within portions of the project area since 2009. The THA has an agreement with NCRA for use of the railroad for the excursion rides. The passage of California Senate Bill (SB) 1029 (North Coast Railroad Authority Closure and Transition to Trails Act, Ch. 934, Stats. 2018) and SB 69 (Great Redwood Trail Act, Ch. 423, Stats. 2021) fundamentally changed the legislative mandate of the NCRA from managing the railroad to developing a public trail named the Great Redwood Trail within the rail right-of-way. This transition is still in the early stages, and it is likely to take several years before the Great Redwood Trail is complete. One of the first steps necessary for the transition is to railbank the railroad line, which is described in Finding D below.

The segment of Highway 101 adjacent to the proposed trail route is the segment that has been authorized for improvement under CDP 1-18-1078 for the Eureka-Arcata Route 101 Corridor Improvement Project.¹⁰ Caltrans and the Humboldt County Association of Governments (HCAOG) are currently in the process of implementing the permitted highway improvements. Once the permitted improvements are completed (likely at least 2-3 years to complete construction of the Indianola undercrossing and other permitted improvements), speeds along this stretch of highway are expected to

⁹ The NCRA is a California governmental agency that was formed in 1989 to oversee the Northwestern Pacific rail line from San Rafael (Marin Co.) to Humboldt Bay. On March 1, 2022, pursuant to Senate Bill 69 (Ch. 423, Stats. 2021), the NCRA's name changed to the Great Redwood Trail Agency. For consistency, this report references the agency as NCRA throughout.

¹⁰ Approved by the Commission on August 7, 2019. The staff report for approval with special conditions can be accessed from the Commission's website:

<https://documents.coastal.ca.gov/reports/2019/8/W11a/W11a-8-2019-report.pdf>

increase (the current speed limit along this stretch of highway is 50 mph), which will further decrease the safety of bicyclists who currently ride along the 10-foot-wide highway shoulder. The proposed trail project will provide a safe, separated bicycle/pedestrian path along a segment of Humboldt Bay that links the region's two largest cities and interlinks with adjacent CCT segments to the north and south.

C. Other Agency Approvals

Humboldt County Conditional Use Permit, Lot Line Adjustment and Special Permit

The project proposes a public trail on lands that are locally planned and zoned Natural Resource (NR) and Industrial General (MG) under the Humboldt County general plan and zoning regulations). Because coastal access facilities such as the proposed trail are a conditionally permitted use on MG lands, the County required a conditional use permit for the project. The County approved PLN-2020-16865 on August 5, 2021.

Humboldt Bay Harbor, Recreation, and Conservation District

The Harbor District is a county-wide district established by the legislature with permit jurisdiction over all the tidelands and submerged lands of Humboldt Bay. The Board of Commissioners of the Harbor District approved Permit No. 2021-01 for the Humboldt Bay Trail South Project on April 8, 2021 (Resolution No. 2021-04).

California Public Utilities Commission (CPUC)

The proposed project entails one new grade crossing of the NCRA rail corridor (at the driveway entrance of the Bracut Industrial Park) and cooperative use (use of the railroad both by trail users and by small rail trucks and railroad cars for the ongoing recreational excursion rides run by the THA) of the Eureka Slough Bridge. Pursuant to its delegated federal and state authority, the CPUC must approve and license the trail's grade crossings and the cooperative use of the existing Eureka Slough Bridge. The County has filed applications for the crossing and bridge use with the CPUC. The Commission attaches **Special Condition 1** requiring the applicant to submit evidence to the Executive Director that the applicant has obtained the necessary authorizations from the CPUC for the new crossings and cooperative bridge use prior to permit issuance. The condition requires that any project changes resulting from the CPUC's approval not be incorporated into the project until the applicant obtains any necessary amendments to this CDP.

U.S. Army Corps of Engineers

The Corps has regulatory authority over the proposed project under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. To ensure that the project ultimately approved by the Corps is the same as the project authorized herein, the Commission attaches **Special Condition 2**, which requires the permittee to submit to the Executive Director evidence of the Corps' approval of the project prior to the commencement of construction activities. The condition requires that any project changes resulting from the Corps' approval not be incorporated into the project until the permittee obtains any necessary amendments to this CDP.

National Marine Fisheries Service (NMFS)

Pursuant to Section 7(a) of the Endangered Species Act (ESA) of 1973, as amended (U.S.C. Sec 1531 et seq.), written concurrence was requested from the National Marine Fisheries Service (NMFS) that the proposed project is not likely to adversely affect listed species or their critical habitats. In a letter dated March 22, 2018, NMFS concurred that the project is not likely to adversely affect Southern Oregon/Northern California Coast coho salmon, California Coastal Chinook salmon, Northern California steelhead, Southern DPS of North American green sturgeon and designated critical habitat for these species (NMFS No.WCR-2018-9040), provided that certain water quality protection measures and BMPs are implemented. These measures have been incorporated into the project description, including, but not limited to, measures to minimize the potential for leaks and spills of hazardous materials, measures restricting the time period where in-channel work can occur, and measures to relocate any fishes found in dewatering areas. Special Conditions 12 and 13 require adherence to these measures.

U.S. Fish and Wildlife Service (USFWS)

USFWS oversees potential impacts to federally listed species in the project area, including, but not limited to, tidewater goby. USFWS determined that the project is covered under the 2011 programmatic Endangered Species Act Section 7 consultation regarding routine maintenance, repair, and small project activities within Humboldt County. This programmatic consultation requires various measures to avoid impacts to goby breeding burrows, measures to minimize potential impacts from pile driving, and other measures required to be implemented by Special Conditions 11-13.

North Coast Regional Water Quality Control Board (RWQCB)

The Regional Board has regulatory jurisdiction over the project pursuant to the Clean Water Act and California Water Code. The Regional Board issued a water quality certification for the project on July 14, 2021 (No. 1B21055WNHU).

California Department of Fish and Wildlife (CDFW)

CDFW has regulatory jurisdiction over the project pursuant to the California Fish and Game Code and the California Endangered Species Act (CESA) and the project requires a Section 1600 Streambed Alteration Agreement from CDFW. CDFW issued agreement No. EPIMS-HUM-19108-R1C on August 30, 2021.

California State Lands Commission (CSLC)

Although the Harbor District has jurisdiction over the tidelands and submerged lands of Humboldt Bay pursuant to a legislative grant, the project site is located in an area subject to the public trust and therefore under the oversight of the CSLC. To ensure that the applicant has the necessary authority to undertake all aspects of the project on these public trust lands, the Commission attached **Special Condition 21**, which requires that the project be reviewed and where necessary approved by CSLC prior to permit issuance.

D. Permissions to Build Rail-with-Trail Project as Conditioned

Under section 30601.5 of the Coastal Act, an applicant for a CDP does not need to be the owner of a fee interest in the property on which the proposed development is located as long as the applicant can demonstrate a legal right, interest, or other entitlement to use the property for the proposed development, and as long as all holders or owners of any other interests of record in the affected property are notified in writing of the permit application and invited to join as coapplicants. In addition, section 30601.5 requires that the applicant demonstrate authority to comply with all conditions of approval prior to issuance of a CDP.

As discussed above, the proposed trail alignment is located on lands primarily owned by the County, but also on lands associated with the NCRA railroad right-of-way, in an easement on the privately owned Brainard (CRC) property, and across public lands owned/managed by the City of Eureka and the federal government. The County has provided evidence that all the affected property owners have been notified of the proposed trail project and invited to join as coapplicants. In addition, the County has provided copies of (1) signed and approved purchase and sale agreements, temporary construction easements, and/or trail alignment agreements for the owners of Bracut and Brainard (CRC property); (2) an encroachment permit from the City of Eureka, dated October 7, 2022, for the connection of the Humboldt Bay Trail South to the Eureka Waterfront Trail (APN 002-231-002); and (3) a Special Use Permit from the Humboldt Bay National Wildlife Refuge Complex – Eureka Slough Unit, dated July 21, 2021 that authorizes a five-year permit term for construction of the trail on Wildlife Refuge lands owned by USFWS.

The County has not yet obtained and submitted an encroachment permit or any other form of evidence demonstrating the applicant has the authority to undertake the project in the Caltrans right-of-way. Therefore, to ensure consistency with section 30601.5, **Special Condition 3** requires the applicant to submit evidence prior to issuance of the CDP that clearly demonstrates that Caltrans has agreed that the applicant may undertake development on its property in compliance with CDP 1-20-0560 as conditioned by the Commission.

Permission to Use the Railroad Right-of-Way for the Proposed Rail-With-Trail Project

North Coast Railroad Authority (NCRA) was created in 1989 to maintain and operate freight rail service between the Bay Area and Humboldt Bay.¹¹ The NCRA has applied to the Surface Transportation Board (STB), an independent federal agency that regulates modes of surface transportation, with a request to railbank the rail line.¹² On

¹¹ As noted above, on March 1, 2022, pursuant to SB 69 (Ch. 342, Stats. 2021) the NCRA's name changed to the Great Redwood Trail Agency. For consistency, this report references the agency as NCRA throughout.

¹² According to a 2020 report to the State Legislature, railbanking is the legal process by which an unused rail line preserves its right-of-way status as a rail line and allows for an interim use, such as a multi-use

May 14, 2021, NCRA completed the first step and filed a notice to abandon 175.84 miles of rail line from the City of Willits to Eureka. This process is still under review by the STB. Given the continued use of the southern portion of the railroad tracks along the proposed trail alignment by speeders and potential future renewed operation of the railroad, the project incorporates design features consistent with NCRA Trail Guidelines and relevant legislation.¹³ The project incorporates the minimum 8.5-foot setback distance between the railroad centerline and edge of trail where feasible and incorporates flangeway fillers where the trail runs directly on top of the railroad (segment 1 – Eureka Slough Bridge and segment 2) and where the trail crosses the railroad to connect with the CRC Levee (segments 5 and segment 6).

The County has a signed lease agreement with NCRA, dated July 1, 2021, for the use of the rail corridor throughout the trail alignment from just before the Eureka Slough Bridge (Mile Post 285.5) to the southern terminus of the City of Arcata's Humboldt Bay Trail North Project (Mile Post 289.6). The term of the agreement is 25 years until July 1, 2046. The lease agreement is subject to special conditions imposed by the NCRA in its approval on December 17, 2020 and also to conditions imposed by the California Transportation Commission (CTC) in March of 2021. The NCRA-imposed conditions address general construction (including design requirements for minimum separation distance between rail and trail except where cooperative use is authorized), trail use, and maintenance of the trail. The CTC-imposed conditions in some ways are more complicated, because they require certain project modifications depending on whether railbanking is approved by the STB. The STB's decision is expected later this year, as explained below.

The CTC conditions outline three scenarios, and the project as proposed is consistent with all three. Scenario 1 allows the County to construct the trail prior to completion of the railbanking process provided that "any rail infrastructure that is relocated during construction to rehabilitate the railbed underneath must be fully documented and approved by NCRA prior to construction and replaced in its former location and

trail, while the right-of-way is not being actively used to operate rail. Railbanking retains the status of a rail line and allows for rail lines to be converted from a trail back into a railroad in the future if desired. Railbanking is a three-step process that begins when a railroad owner files a notice to abandon the line. Following the initial notice, potential qualified trail managers can express interest in railbanking the line. These potential trail managers would assume full legal and financial responsibility for the rail corridor. This is followed by the third step, which includes railbanking negotiations and the right-of-way transfer to the new trail manager.

¹³ SB 69 (Ch. 423, Stats. 2021) converts the NCRA into the Great Redwood Trail Agency, which will be under the oversight of the State Coastal Conservancy, as of March 1, 2022. The Great Redwood Trail Agency's mission is to masterplan, design, construct, operate, and maintain the Great Redwood Trail from the Sonoma-Mendocino County line to Humboldt Bay. The law requires the agency to, among other things, (1) inventory any parcel, easement, or contract related to its rail rights-of-way, (2) complete an environmental assessment of the conditions of its rail rights-of-way for purposes of trail development, (3) plan, design, construct, operate, and maintain a trail in, or next to, the rail rights-of-way, and (4) complete the federal railbanking process for its rail rights-of-way.

condition prior to project completion.”¹⁴ In Scenario 2 the STB approves NCRA’s application to railbank, and there is no requirement to replace railroad infrastructure (e.g., rails and ties along segments 7 and 8 where railroad will be raised) upon project completion.¹⁵ In Scenario 3 the STB denies the NCRA’s railbank application, and the County is required to replace railroad infrastructure upon project completion.¹⁶

The railbanking process is currently in abeyance due to a land ownership dispute over a separate rail segment east of Arcata disjunct from and unrelated to the Humboldt Bay Trail South project. However, even if the STB denies NCRA’s application to railbank (Scenario 3), the County could still construct the trail as proposed. For the segments of trail where the County has not acquired fee ownership of the land where the trail would be built (segments 1-4, from Target to Brainard), the proposed project will comply with NCRA-imposed conditions for design requirements, standards for cooperative use (e.g., use of flangeway fillers), and maintenance of the trail. The remaining segments of trail (segments 5-9) either are not along the railroad/within the rail right-of-way (segments 5-6, along the CRC Levee) or are owned in fee by the County and not relying on easement restrictions (segments 7-9, where the railroad has easements on County owned land).

Nevertheless, to ensure that the project will comply with the conditions imposed in the lease between the County and NCRA (or its successor agency), as conditioned by the CTC,¹⁷ and with requirements related to the forthcoming STB decision on railbanking, the Commission attaches Special Conditions 4 and 18. **Special Condition 4** requires that the County, prior to permit issuance, submit evidence that NCRA (or its successor agency) and the CTC have agreed in writing that the applicant may undertake

¹⁴ If required by the NCRA (or its successor agency) and/or the CTC, the County would store the rails and ties after removal at a County facility (e.g., County Corp Yard) for possible future use by a future railroad operator. The rails and ties only will be removed along the approximately one-mile-long stretch of the project area between the CRC mill site and Bracut to allow for the raising and repairing of the existing railroad prism in this segment. Returning the existing rails and creosote-treated wooden railroad ties back onto the repaired railroad prism would raise water quality concerns, but new railroad ties made out of wood, prestressed concrete, stone, steel or plastics are possible replacement options, if/when needed for future rail use. The County also proposes to remove debris (including ties, piles, culvert) associated with the failed Brainard Slough railroad crossing and does not propose to replace this crossing with a new bridge. The previous crossing failed several years ago and would need to be replaced if/when needed for future use.

¹⁵ There are other project examples where failed railroad infrastructure along the NCRA line has been removed for fish habitat restoration projects and not replaced upon project completion, e.g., two salmonid habitat restoration projects funded through the CDFW Fisheries Grant Restoration Program implemented by CalTrout on the Eel River at Bridge Creek in Humboldt County and Woodman Creek in Mendocino County. See <https://caltrout.org/regions/north-coast/bridge-creek-not-your-usual-fish-passage-project> and <https://caltrout.org/projects/woodman-creek-project>

¹⁶ Replacing the old, dilapidated railroad infrastructure, which includes creosote-laden railroad ties, would not be in the public interest due to water quality issues.

¹⁷ Includes APNs 014-031-002, 014-041-002, 014-051-003, 014-061-002, 014-101-002, 014-111-003, and 014-121-002.

development within NCRA's right-of-way pursuant to CDP 1-20-0560 as conditioned by the Commission. Although it is not expected to be necessary, the condition specifies that if the NCRA's or its successor agency's application to railbank the portion of the railroad in the project area is denied by the STB, the County must inform the Executive Director of any changes to the project necessitated by STB's denial and, if necessary, obtain a CDP amendment prior to making such changes to the trail project. **Special Condition 18** requires in part that development authorized by this permit is authorized only until July 1, 2046, the expiration date for the County's lease with the NCRA, unless the Commission Executive Director or the Commission authorizes an extension.

E. Public Access and Recreation

Coastal Act Sections 30210 through 30223 require that new development maximize public recreational access, provide visitor-serving recreational facilities, protect oceanfront land for recreational use and development, encourage recreational boating facilities, and in general establish that coastal-dependent, visitor-serving, and public recreational access developments have priority over other types of uses and development. In particular:

Section 30210: 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: 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.

Section 30212(a): Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects...

Section 30213: Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. ...

Section 30220: Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30221: Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Section 30222: The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or

general commercial development, but not over agriculture or coastal-dependent industry.

Section 30223: Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Finally, Coastal Act Section 30253(d) and (e) state that:

New development shall do all of the following:

...

(d) Minimize energy consumption and vehicle miles traveled.

(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

In applying the sections listed above related to public access and recreation, the Commission is also limited by the need to show that any denial of a permit application based on these sections or any decision to impose conditions requiring public access on the granting of a permit is necessary to avoid or offset a project's adverse impact on existing or potential access.

The proposed project will be located in part on public trust lands seaward of the first through public road and is adjacent to Humboldt Bay. The primary purpose of the project is to provide and expand public access and to bridge a gap in the California Coastal Trail (CCT) in an area where existing public access opportunities are currently lacking (except for, largely, highway motorists driving the stretch of highway adjacent to the bay). As such, construction of the project will not significantly impact public pedestrian and bicycle access, though public access may temporarily be interrupted at the southern and northern ends of the trail to facilitate connections to the existing Eureka Waterfront Trail and Humboldt Bay Trail North segments of the CCT. In order to connect the proposed trail project at its southern end with the Eureka Waterfront Trail, approximately 200 feet of the existing Eureka Waterfront trail will be raised and repaved, temporarily impacting trail use along this small stretch of trail. Likewise at the northern end, construction of the northern end of the proposed trail that will connect with the existing Humboldt Bay Trail North segment of the CCT will impact the southern terminus of the trail, although the trail will not need to be raised or repaved at this connection. Construction activities with the potential to impact traffic along Highway 101, such as Eucalyptus tree removal, will occur at night or on weekends when traffic volumes are lower.

An Important CCT Link

The CCT is an integrated network of trails that, when completed, will provide a multi modal opportunity to walk and bike the length of California's 1,230-mile-long coast, a visionary goal for the coastal program for over fifty years. The CCT was designated California's Millennium Legacy Trail in 1999 by Governor Davis. In conjunction with that

action, the White House Millennium Trail Council encouraged federal agencies to assist in developing the system, making lands available for completion of the CCT.

Subsequently, through Assembly Concurrent Resolution (2001-2002), the State Legislature declared the CCT to be an official state trail and found that completion of the CCT is an integral part of the State's responsibility to provide public coastal access for all in perpetuity. Recognizing public access to and along the coast of California to be protected under Article X of the California Constitution and the California Coastal Act, the Legislature urged the Commission and Coastal Conservancy to work collaboratively on the completion the trail. Not long after, the California Legislature required a status report on the trail, this report was prepared in 2003 – "Completing the California Coastal Trail." In 2007, the Legislature expanded the responsibility for CCT completion by adding both Caltrans and California State Parks to the on-going work being done by the Commission and the Coastal Conservancy. Most recently, in 2021, the Commission and Conservancy, in collaboration with Caltrans and California State Parks, jointly published the definitive California Coastal Trail map, which depicts existing segments of CCT. One of the main uses of this map is to identify gaps in the trail so that solutions to bridge the gaps can be identified and implemented.¹⁸

By providing non-automobile options for transportation along the coast, the CCT importantly supports the State's goals to provide affordable recreational, commuter and fitness options as well as to decrease greenhouse gas emissions by reducing miles driven. The trail system provides free opportunities for both local and statewide users alike and meets the State's Constitutional directive to provide public coastal access for the California citizenry in perpetuity. It is noteworthy that, regardless of the economic strata where the CCT is located, it serves all people of the state in an equitable manner and allows disadvantaged communities from wherever they may come to partake in its many attributes. These benefits include fresh and cooler ocean air, open space adjacent to the Pacific Ocean (and harbors, waterways, etc.), exercise, relief from chaotic urban activities, and a general sense of respite and wellbeing from just walking or biking along the edge of the California coastline. Thus, the CCT is a universally equitable statewide facility that is open to and service, all, including disadvantaged communities across California who seek out a coastal experience. These benefits become even more critical as climate change impacts continue to be felt across the state, especially for inland residents and visitors who do not or who cannot afford to live near the coast and who are expected to increasingly need reprieves from warming temperatures, increased wildfire risk, and associated health concerns.

The County proposes to construct, operate, and maintain an approximately 4.25-mile-long Class 1, ADA-accessible, non-motorized multi-use trail along Humboldt Bay that will serve as part of the CCT. As designed to meet Caltrans Class I multi-use trail design standards (Caltrans Highway Design Manual, Chapter 1000) and ADA design standards, the proposed trail will expand shoreline access for a variety of users

¹⁸ The map is accessible from this web link: <https://the-california-coastal-trail-1-coastalcomm.hub.arcgis.com/>.

including pedestrians, bicyclists, skaters, persons with mobility impairments, and other non-motorized outdoor users. The trail will provide a key connection in the CCT, promoting active transportation and reducing vehicle miles travelled, and will also promote access to the bay, Eureka Slough, and surrounding marshlands for nature study uses including bird watching, coastal and marine wildlife viewing, and educational activities.

The Humboldt Bay Trail South project is being developed as part of a collaborative effort among the Humboldt County Association of Governments (HCAOG), County of Humboldt, Caltrans, Cities of Arcata and Eureka, California State Coastal Conservancy, NCRA, Redwood Community Action Agency (RCAA), and other partners to develop a continuous trail from central Arcata to the southern end of Eureka.¹⁹ In 2017, the City of Arcata completed construction of the Humboldt Bay Trail North, a 3-mile Class 1, ADA-accessible, non-motorized multiuse trail between Foster Avenue in inland Arcata to the southern boundary of the City near Brainard's Slough along the Highway 101 corridor between Arcata and Eureka. In 2018, the City of Eureka completed construction of its 6.3-mile-long Class 1, ADA-accessible, non-motorized multi-use Eureka Waterfront Trail that extends along the length of the City's bayfront lands. The Humboldt Bay Trail South is the final interconnecting link needed for a continuous CCT route that extends over 13 miles throughout the County's two largest cities, the corridor along the bay between the two cities, and connects to an additional 12-mile-long stretch of CCT segments north of Arcata to Little River State Beach.

Increasing Free Public Access and Nature Study Uses

The proposed trail will increase free public access and nature study opportunities in an area where coastal access and other recreational opportunities are lacking. Currently, the only existing public access to the bay between Arcata and Eureka is the Bracut Marsh enhancement area (owned by the State Coastal Conservancy) at the south end of the Humboldt Bay Trail North. With multiple interpretive panels, viewing platforms, and bridge overlooks, the proposed trail extending along over four miles of bayfront land will provide trail users with unique viewing opportunities for marine life, birds, and scenic views. The entire trail alignment will provide expansive views of the bay and public access to a portion of the Humboldt Bay National Wildlife Refuge west of the highway that currently lacks public access opportunities.

Because the trail will be used by a wide array of users from pedestrians to parents with strollers to bicyclists, skateboarders, and other types of trail users, the proposed trail includes striping, signage, and unpaved shoulders to enhance user safety and minimize the potential for conflicts between trail users. In addition, roadway, railway, and driveway crossings will include warning signage and markings both on the trail and the approaching vehicular way. Bollards will also be installed at trail intersections and

¹⁹ In addition, the Humboldt Bay Trail will be integrated into The Great Redwood Trail – a 320-mile-long trail that extends between Humboldt Bay and San Francisco Bay – which is in the early phases of planning and development (see The Great Redwood Trail website: <http://www.thegreatredwoodtrail.org/>).

entrances to prevent vehicles from entering the trail. Cable barrier fencing will separate trail users from high-speed vehicles traveling along Highway 101. To avoid substantial conflicts between the rail line and trail users, the County will maintain minimum 8.5-foot setbacks from the railroad centerline as specified by NCRA Policy 0907 where possible²⁰ and install railroad crossing pavement markings and signage at crossing locations. The County will also work with the railroad operator (NCRA or its successor agency) to install additional controls at crossings if the railroad becomes active.

By completing a separated bike/pedestrian path between Eureka and Arcata, the proposed trail will increase opportunities for nonmotorized commuting between the two largest urban hubs in Humboldt County for cyclists of a wide array of experience and comfort levels.²¹ The Eureka-Arcata Highway 101 Corridor has the highest highway traffic volume within Humboldt County with an average annual daily traffic²² of 37,500 (2014 data). By encouraging additional bicycle commuting, the trail will not only facilitate safer public access and improve the user experience of existing nonmotorized commutes but also will support the Coastal Act section 30253(d) directive to minimize overall motorized vehicle miles traveled.

Parking

No new parking facilities are proposed as part of the trail project, as its alignment primarily fronts an existing four-lane highway. However, the lack of new trail-access parking will not discourage use of the trail, because adequate parking/trailhead facilities exist nearby associated with interconnecting CCT segments. Along the Humboldt Bay Trail North CCT, the Arcata Marsh and Wildlife Sanctuary in the southern portion of the City currently has four parking lots with parking capacity for approximately 100 vehicles. Parking in these lots is free and unrestricted except in some areas no overnight parking is allowed. The northern end of the Eureka Waterfront Trail near the junction with the proposed Humboldt Bay Trail South project currently has dedicated public access parking in the parking lot behind Target directly south of the Eureka Slough Bridge. Additional parking access with unused capacity is available in Eureka at various locations along the existing CCT trail route. As the proposed trail is not expected to result in a concentrated increase in demand at any one parking location, the Commission finds that the proposed project is served by adequate parking.

²⁰ Resolution 2012-13 adopted by the NCRA in 2009 specifies that, within Humboldt Bay, NCRA will consider clearly defined and strictly limited exceptions to its trail policy to enable development of a trail in the Humboldt Bay corridor without compromising the prospects of rail service restoration.

²¹ Currently there are three routes connecting Eureka and Arcata: State Route 255 across the north spit on the west side of the bay, the Eureka-Arcata Highway 101 Corridor along the east side of the bay, and Old Arcata Road/ Myrtle Avenue further inland. While all three of these routes allow cyclists on their shoulders, commuting by bicycle is unsafe due to high volumes of traffic, high motorized vehicle speeds, and/or narrow shoulders.

²² Annual average daily traffic is the total volume for the year divided by 365 days. The average cited is from the Highway 101 Corridor's intersection with Bayside Cutoff.

Environmental Justice

Coastal Act section 30604(h) gives the Commission, or the issuing agency, the authority to explicitly consider environmental justice, or the equitable distribution of environmental benefits throughout the state, in its permit decisions. Under Coastal Act section 30107.3, “environmental justice” includes, but is not limited to, “the availability of a healthy environment for all people.” The Commission adopted its Environmental Justice Policy (“EJ Policy”) in March 2019, committing to consider environmental justice principles, consistent with Coastal Act policies, in the agency’s decision-making process and ensuring coastal protection benefits are accessible to everyone. In approving the EJ Policy, the Commission recognized that equitable coastal access is encompassed in, and protected by, the public access policies of Chapter 3 of the Coastal Act.

The proposed project addresses environmental justice concerns related to the inequitable distribution of public access and recreation benefits in California. Throughout California’s history, low-income communities, communities of color, and other marginalized populations, generally referred to here as “underserved communities,” have faced disproportionate social and physical barriers that disconnect them from coastal access and recreational opportunities. Equitable coastal access and recreation opportunities for all populations has not been realized due to historic and social factors, such as discriminatory land use and economic policies and practices.²³ Spatial analysis of 2010 Census data shows a majority of Californians (70.9%) live within 62 miles of the coast, but populations closest to the coast are disproportionately white, affluent, and older than those who live farther inland.²⁴ However, wherever the CCT is located, it provides equitable access to all communities, including disadvantaged. Ensuring maximum and equitable public access to the California coastline as required by the Coastal Act public access policies cited above is consistent with the environmental justice principles reflected in the Coastal Act.

The proposed project provides a free, non-automotive, visitor, recreational, and commuter facility for the public that will increase coastal recreation and access benefits available to all types of users regardless of income level in an area with limited public access. The trail will provide a non-motorized connection between the cities of Arcata and Eureka, and as discussed above, free long-term parking is available to trail users at both ends of the proposed 4.25-mile-long infill trail segment (along connecting CCT trail segments to the north and south). The trail itself provides a free access opportunity for residents and visitors, and thus all CCT segments statewide provide mobility opportunities for disadvantaged communities, wherever they exist. Completion of a continuous stretch of the CCT between the County’s two largest cities will afford people the opportunity to safely (off the highway shoulder) walk or bike between communities rather than drive, which also will reduce pollution associated with car travel. A survey

²³ Robert Garcia & Erica Flores Baltodano, Free the Beach! Public Access, Equal Justice, and the California Coast, *Stanford Journal of Civil Rights and Civil Liberties*. Pages 143 (2005)

²⁴ Reineman, et al., Coastal Access Equity and the Implementation of the California Coastal Act , *Stanford Environmental Law Review Journal*, v. 36. Pages 96-98. (2016)

conducted by local non-profit Redwood Community Action Agency (in 1999) recorded an average of 60 cyclists per day using the Eureka-Arcata Highway 101 corridor shoulders (especially the southbound shoulder adjacent to the proposed trail route), and although Caltrans signage is posted stating that pedestrians are not allowed to use the shoulders of Highway 101, pedestrians routinely are observed walking along highway shoulders and existing railroad tracks to travel between the two cities. Notably, there are several low-income communities nearby, with median household incomes that qualify as “low-income” as defined in AB 1550.²⁵ Additionally, according to CalEnviroScreen 4.0,²⁶ census tracts near the trail have several population and pollution characteristics that rank highly compared to other census tracts in the state, including high rates of asthma, cardiovascular disease and exposure to groundwater threats and solid waste facilities. By providing a safe accessible route for people to walk or bike, the trail will generally contribute to improved public health and well-being, improve community cohesion, and promote further investment into surrounding low-income communities. Additionally, the trail’s location along the cooler North Coast will provide users from across the state an important reprieve from warming temperatures, increased wildfire risk, and associated health concerns as climate change is expected to increase temperatures, not just for coastal residents, but also for inland residents and visitors who do not or who cannot afford to live near the coast.

Protection of Coastal Resources

While it is a central Coastal Act principle to protect and provide for maximum public access and recreational opportunities along the coast, particularly free and lower cost access, the Act also recognizes that this access must be provided in a manner that protects other coastal resources. For example, section 30210 requires maximization of public access consistent with public safety needs and the need to protect natural resource areas from overuse. Section 30212(a) requires that public access be provided except where it is inconsistent with public safety and the protection of fragile coastal resources, and section 30212.5 looks to appropriately distribute access facilities. And finally, section 30214 explicitly requires that the Coastal Act’s public access provisions “be implemented in a manner that takes into account the need to regulate the time, place and manner of public access” depending on, among other things, “the capacity of the site to sustain use and at what level of intensity,” and the need to potentially limit access “depending on such factors as the fragility of the natural resources in the area.” Thus, while enhanced public access is generally encouraged by the Coastal Act, it is

²⁵ AB 1550 defines “Low-income communities” as census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the threshold designated as low-income by HCD’s State Income Limits adopted pursuant to Section 50093 of the Health and Safety Code. This provides a more reliable measure of low-income communities due to higher costs and wages in California than the Federal Poverty Level.

²⁶ CalEnviroScreen 4.0 identifies California communities most affected by pollution and ranks census tracts in California based on potential exposures to pollutants, adverse environmental conditions, socioeconomic factors, and the prevalence of certain health outcomes. For more information, see <https://calenviroscreen-oehha.hub.arcgis.com/>.

important to note that the Coastal Act requires a nuanced and site-specific analysis when making public access decisions.

As explained in the following Findings, the proposed Humboldt Bay Trail South project can be found consistent not only with the Coastal Act policies discussed in this finding, but also with the policies protecting wetlands, marine resources, water quality, visual resources, and Tribal Cultural Resources. In sum, as proposed and conditioned by this permit, the project will provide new public recreational access opportunities on the Humboldt Bay shoreline by providing a unique lateral public access experience along 4.25 miles of bay frontage between the region's two largest cities. As discussed above, the temporary construction interference with existing public access and recreational use of the site (at the northern and southern ends of the project area) will be limited to a relatively short duration, and the project will not interfere with existing pedestrian access in the area. As conditioned, the project represents a truly exceptional public access project and important link in the CCT with components that will be sited and designed in such a way as to provide maximum public benefit at this important public site along Humboldt Bay while protecting coastal resources (as explained in the Findings below). Therefore, the Commission finds that the proposed project, as conditioned, is consistent with the Coastal Act policies discussed in this finding.

Conclusion

As stated above, the trail will be developed as part of a 13-mile route from northern Arcata to southern Eureka and as part of the larger CCT network. Portions of the proposed trail segment are located within NCRA right-of-way, County-owned properties, and easements across private property and public lands owned/managed by the City of Eureka and the federal government (the Eureka Slough Unit of the Humboldt Bay National Wildlife Refuge). To avoid the potential for incomplete or inconsistent trail segments and to ensure that the trail safely functions as a coordinated and integrated continuous public access system, the Commission attaches **Special Condition 10**. Special Condition 10 identifies the fundamental provisions of the scope of trail use, most of which are already contained in the lease agreement between the NCRA and the County. Special Condition 10 includes the following requirements (among others): (a) the entire trail shall be a Class 1 multi-use trail available for shared public use 24 hours a day daily free of charge; (b) the County shall maintain continuously all trail improvements in good order and repair, and shall allow no nuisances to exist or be maintained therein; (c) no portion of the trail may be abandoned by the County until a grant of easement is transferred to another entity, approved by the Executive Director, who can operate that portion of the trail in conformance with all terms and conditions of this CDP; and (d) any proposed changes shall require an amendment to CDP 1-20-0560. As conditioned, the trail will more safely function as a coordinated and integrated continuous public access system, consistent with the access provisions of Coastal Act sections 30210-30214.

Finally, **Special Condition 22** requires that, prior to any conveyance of the properties owned by the County on which the trail is proposed, the applicant will execute and record a deed restriction that assures protection of the scope and manner of public use

along the trail and assures that future purchasers of the property are notified of the scope and manner of public use along the trail. Such notification of future purchasers will eliminate expectations on the part of the purchasers that they may be able to exclude the public from the trail property.

Therefore, the Commission finds that the proposed project as conditioned, which includes substantial new public access and fosters expanded use of existing coastal access and recreational facilities, is consistent with the public access and recreation policies of the Coastal Act.

F. Repair and Maintenance of Rail Prism

The proposed rail-with-trail project involves the repair and maintenance of portions of damaged railroad prism (berm) adjacent to the proposed new trail. As previously discussed, the railroad around Humboldt Bay was constructed over 100 years ago but has been non-operational since 1998 due to issues of geologic instability and failed rail infrastructure in inland portions of Humboldt and Mendocino counties. The railroad still is federally recognized as “active” status, and there is an active recreational use of portions of the existing railroad with speeders running along portions of the railroad within the project area. As part of this trail project, the County proposes to repair and maintain damaged portions of the existing railroad prism along the planned trail route by placing new rock slope protection (RSP) on top of existing eroded partially armored areas of the railroad berm. Table 2 summarizes the proposed repair and maintenance work.

Table 2. Summary of repair and maintenance work proposed for the proposed rail-with-trail project.

Seg. #	Segment Length (ft)	Length of Repairs (ft)	Description of Repairs
1	100	None	N/A
2	725	None	N/A
3	1,850	None	N/A
4	4,875	132	Reconstruct existing railroad rock using 30-inch diameter, 1-ton rock at the toe and 18-inch diameter, ¼-ton rock near the top; underlay with geotextile fabric; slope 1.5:1 feet (H:V) or flatter. Restrict rock reconstruction footprint to the historical rock footprint and match surrounding intact sections of RSP
5	5,375	None	N/A
6	200	None	N/A
7	2,550	6400	For these two sections, remove railroad rails and ties, raise the rail prism between 1.5 to 2 feet to a minimum elevation of 11.5 feet, and supplement the eroded edge of the prism with new RSP consisting of 18-inch diameter, ¼-ton rock and 30-inch diameter, 1-ton rock placed over geotextile fabric. The majority of the
8	4,050		

			repairs (approx. 5,825 feet) will consist of placing RSP on top of existing rock as needed for localized repairs; the remaining 575 feet will consist of rail prism reconstruction with the historical prism footprint and scaled to match surrounding intact sections of armored prism.
9	2,630	66	Repairs to rail prism on both sides of Brainard Slough involving removal of failed culvert pieces, timber ties, and loose rock from the slough channel and regrading and stabilizing with RSP rail prism at either ends of proposed bridge at this location.
TOTALS	22,200	6,598	~30% of the railroad prism will be repaired

The proposed design for several trail segments places the trail on the interior (inland) edge of the existing railroad prism. The rail-with-trail design is necessary, as previously described above in Finding D, to comply with federal design requirements for railroads that are in an “active” status. Because the trail is inland of the railroad prism, and because the railroad prism is damaged and in disrepair in certain areas due to erosion from wave energy, the County will repair damaged sections of the railroad prism in segments 4, 7, 8, and 9 for a total repair length of approximately 6,598 feet within the 22,200-foot-long project area (this equates to repairs to approximately 30% of the project area). Areas proposed for repair generally coincide with areas adjacent to the rail prism that lack salt marsh habitat (and therefore a natural shoreline buffer to attenuate wave action) on the bayward side of the rail prism (**Exhibit 9, pgs. 5, 9-16**). Some of these proposed repair areas have been severely eroded over the past 10 or 20 years by direct exposure to wind waves or failed infrastructure (e.g., high flows through a failed culvert at Brainard Slough outlet washed away much of the rail prism in this area). The proposed repair work will re-establish the footprint of the railroad prism within its historical footprint in areas where the rail prism is damaged, but the project will not enlarge or expand the rail prism bayward. Because the proposed repair work does not involve enlargement or expansion of the rail prism, this work constitutes repair and maintenance under the Coastal Act.

Coastal Act section 30610(d) generally exempts from Coastal Act permitting requirements the repair or maintenance of structures that does not result in an addition to, or enlargement or expansion of, the structure being repaired or maintained. However, the Commission retains authority to review certain extraordinary methods of repair and maintenance of existing structures that involve a risk of substantial adverse environmental impact as enumerated in section 13252 of the Commission regulations.

Section 30610 of the Coastal Act provides, in relevant part (emphasis added):

Notwithstanding any other provision of this division, no coastal development permit shall be required pursuant to this chapter for the following types of development and in the following areas: . . .

(d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities; provided, however, that if the commission determines that certain extraordinary methods of repair and maintenance involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained pursuant to this chapter.

Section 13252 of the Commission administrative regulations (14 CCR 13000 *et seq.*) provides, in relevant part (emphasis added):

(a) For purposes of Public Resources Code section 30610(d), the following extraordinary methods of repair and maintenance shall require a coastal development permit because they involve a risk of substantial adverse environmental impact:

...

(3) Any repair or maintenance to facilities or structures or work located in an environmentally sensitive habitat area, any sand area, within 50 feet of the edge of a coastal bluff or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams that include:

(A) The placement or removal, whether temporary or permanent, of rip-rap, rocks, sand or other beach materials or any other forms of solid materials;

(B) The presence, whether temporary or permanent, of mechanized equipment or construction materials.

All repair and maintenance activities governed by the above provisions shall be subject to the permit regulations promulgated pursuant to the Coastal Act, including but not limited to the regulations governing administrative and emergency permits. ...

Section 13252(b) of the Commission's regulations further limits what can be considered a repair or maintenance project, stating that "unless destroyed by natural disaster, the replacement of 50 percent or more of a single-family residence, seawall, revetment, bluff retaining wall, breakwater, groin or any other structure is not repair and maintenance under section 30610(d) but instead constitutes a replacement structure requiring a coastal development permit."

As summarized above, the County will complete repairs to approximately 30% of the railroad prism in the rail-with-trail project area. Repairs will be contained within the railroad berm's historical footprint and will not extend bayward of the existing rockered rail prism. The proposed repairs qualify as repair and maintenance activities under section 30601(d) of the Coastal Act and section 13252 of the Commission's regulations, because they do not involve an addition to or enlargement or expansion of the railroad prism, and repairs will be completed on less than 50% of the structure. The proposed development involves the placement of construction materials and removal and

placement of solid materials within 20 feet of coastal waters. Therefore, the proposed repair and maintenance work associated with the rail-with trail project is not exempt from CDP requirements under section 13252(a)(1) of the Commission regulations.

In considering a permit application for a repair or maintenance project pursuant to the above-cited authority, the Commission reviews whether the proposed method of repair or maintenance is consistent with the Chapter 3 policies of the Coastal Act. The Commission's evaluation of such repair and maintenance projects does not extend to an evaluation of the conformity with the Coastal Act of the underlying existing development, in this case, the railroad itself. The Commission does consider alternatives with respect to repair and maintenance activities, and in this case, alternatives to rock revetment are discussed in Findings G (Wetlands) and K (Hazards) below. The County has included a number of mitigation measures and Best Management Practices (BMPs) as part of the proposed repair and maintenance element of the rail-with-trail project, such as staging construction materials and equipment in upland areas, not allowing refueling of vehicles and equipment to occur on the rail prism to keep avoid spilled fuels from entering the bay, preparing and implementing a Stormwater Pollution Prevention Plan to protect water quality. These measures and others proposed by the applicant are appropriate; however, additional measures are also needed to further avoid, as necessary, or minimize impacts to water quality and wetlands, as discussed in the following Findings.

G. Wetlands Impacts

Section 30233 of the Coastal Act provides, in applicable part, as follows (emphasis added):

- a. The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

- (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
- (2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
- (3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.
- (4) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource dependent activities.

b. Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.

c. In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary...

Coastal Act section 30108.2 defines “fill” as “earth or any other substance or material, including pilings placed for the purposes of erecting structures thereon, placed in a submerged area.”

According to the current design plans, the construction of the trail will result in 6.16 acres of permanent fill in estuarine and palustrine wetlands. Wetland fill amounts by segment are summarized in Table 3 below and include impacts associated with fill for the new trail prism, bridge abutments and footings, cable barrier safety fence, and rock slope protection. Most of the wetland impacts associated with the proposed trail project are associated with impacts to estuarine intertidal and palustrine emergent wetlands of the existing drainage ditch in between Highway 101 and the railroad prism. This ditch will be graded and partially filled to accommodate the new trail. The drainage ditch will be re-established adjacent to its previous location. A small amount of the proposed wetland fill is associated with RSP to stabilize the railroad prism in segment 7 (all of the proposed RSP except for 600 square feet is associated with repair and maintenance of the existing railroad prism, as discussed in Finding F above). The remaining wetland fill impacts are associated with the proposed cable barrier safety fence and bridge infrastructure (abutments and pilings).

Table 3. Summary of Wetland Fill by Trail Segment.

Trail Segment	Temporary Impacts from Excavation or Temporary Fill (acre)	Permanent Impacts from Fill (acre)
1	0	0
2	0	0
3	0.02	0.54
4	0.11	1.69

5/6 ²⁷	0.13	0.05
7	0.22	1.18
8	0.47	0.57
9 ²⁸	0.03	0.41
Cable Barrier	0	1.79 (0.07 assoc. w HBTN project)
Total	0.98	6.16

The wetlands to be impacted are classified primarily as palustrine emergent and estuarine emergent wetlands in the wetland delineation report completed for the project (Mapped wetlands are shown on **Exhibit 5**). These wetlands are associated with the drainage ditch that runs inboard of the railroad, between the railroad and the highway, for most the length of segments 7-9. According to descriptions of the wetlands provided in the wetland delineation report, the palustrine emergent wetlands are dominated by tall fescue (*Festuca californica*) [FAC], Pacific rush (*Juncus effusus* subsp. *pacificus*) [FACW], spreading rush (*Juncus patens*) [FACW], and tufted hair grass (*Deschampsia cespitosa*) [FACW]. Two sections of Palustrine Emergent Scrub-Shrub Wetlands occur on the southwest side of the proposed trail, with Wax myrtle (*Morella californica*) [FACW] and coastal willow (*Salix hookeriana*) [FACW], and dense patches of nonnative Himalayan blackberry (*Rubus armeniacus*) [FAC] and non-native rose also occurred in these wetlands. The estuarine intertidal emergent wetlands are dominated by invasive dense-flowered cordgrass (*Spartina densiflora*).

In addition to the wetland fill impacts summarized above, the project also involves wetland impacts associated with the proposed wetland mitigation work on Tuluwat Island consisting of invasive *Spartina* eradication from existing estuarine salt marsh habitats. The Commission has long considered grading, excavating, and other ground-disturbing activities in coastal wetlands and estuaries to be a form of dredging, and such activities are commonly used to successfully eradicate the invasive grass and restore salt marsh areas.²⁹ As such, the *Spartina* eradication constitutes a form of dredging in wetlands requiring consistency with section 30233. However, *Spartina* eradication at the proposed mitigation site on Tuluwat Island was already approved by the Commission under CDPs 1-14-0249 (Humboldt Bay Regional *Spartina* Eradication Program approved June 12, 2015)³⁰ and 1-18-1078 (Caltrans Eureka-Arcata Highway 101 Corridor Improvement Project approved August 7, 2019). Thus, no further evaluation of those wetland impacts or their consistency with section 30233 of the Coastal Act is

²⁷ Segments 5 and 6 include 392 square feet of impacts associated with the segment bridges.

²⁸ Segment 9 includes 305 square feet of impacts associated with the Brainard Slough Bridge and 436 square feet of impacts associated with RSP.

²⁹ Practiced *Spartina* eradication methods in the region include mowing, grinding, tilling, excavating, discing, crushing, flaming, covering, and herbicide use. E.g., see the following CDPs previously approved by the Commission: [1-06-036](#), [1-08-011](#), [1-08-012](#), [1-08-020](#), [1-09-020](#), [1-09-030](#), and [1-10-032](#).

³⁰ The staff report for approval with conditions of CDP 1-14-1249 is accessible from the Commission's website: <https://documents.coastal.ca.gov/reports/2015/6/f12a-6-2015.pdf>.

provided here except for an evaluation of whether the proposed mitigation for wetland impacts associated with the trail project is adequate, which is discussed below.

Section 30233 limits the approval of the diking, filling, and/or dredging of open coastal waters, wetlands, and estuaries to only seven enumerated uses and requires that the allowable diking, filling, and dredging can only be approved when found to be the least environmentally damaging feasible alternative and with feasible mitigation measures provided to minimize adverse environmental effects.

Allowable Uses

The first test set forth above is that any proposed filling, diking, or dredging in wetlands must be for an allowable purpose as specified under section 30233 of the Coastal Act. The relevant category of use listed under section 30233(a) that relates to the proposed trail project is subcategory (7), “nature study...or similar resource dependent activities.” The relevant category of use that relates to some of the wetland diking, dredging, and filling associated with proposed activities at Brainard Slough is restoration purposes. Each are discussed separately below.

Use of Fill for Nature Study Trail Use

The Commission has considered the development of new recreational trail segments through wetlands and other environmentally sensitive resource areas to be a form of “nature study... or similar resource dependent activities” in cases where design efforts have been made to minimize such intrusions to the smallest feasible area or least impacting routes, and where the trail segment functions as a nature trail.³¹ By providing venues for incidental exploration of the physical and biological world, trails in natural settings generally are recognized as one of the best ways to ensure continued public support for protecting environmentally significant natural areas. This perspective is at the core of the many public outreach and grant-funding efforts undertaken by natural resource conservation-oriented public agencies and other organizations, from the Coastal Conservancy to many of the numerous land trusts involved in public access acquisition and development. Regardless of their age, people in general are more likely to develop a stewardship ethic toward the natural environment if they are educated about the importance of the overall ecosystem, especially if provided the opportunity to experience the physical, mental, and spiritual benefits of these areas first-hand. Providing for the development of trails into the outer fringes of marshes and wetlands can be an ideal setting for such activities, as they offer a safe, convenient, and unique perspective of the rich and diverse biological resources associated with watercourses, estuaries, and the natural coastline.

³¹ For example, see findings for LCP Amendment Nos. STB-MAJ-3-02 (Toro Canyon Planning Area) and HUM-MAJ-1-03 (Riparian Corridor Trails); and CDP Nos. 3-11-074 (City of Santa Cruz, Arana Gulch Master Plan), 1-11-037 (City of Eureka, Elk River Access Area/Hiksar'i Trail Project), 1-15-2054 (City of Eureka, Coastal Trail Project), and 1-16-0122 (City of Arcata, Humboldt Bay Trail).

The areas where the proposed trail will impact wetlands, including the areas where the overlook and bridges are located, all have expansive views of Humboldt Bay and scenic estuarine areas and further the nature study use of the trail. The proposed viewing area and interpretive signage along the levee trail will encourage an understanding and appreciation of the environment and the socio-cultural history of the area. As evidenced by similar nature-study trail segments of the CCT to the north and south (Humboldt Bay Trail North and Eureka Waterfront Trail), the nature study opportunities include up-close views of local marine fauna and estuarine flora, midrange views of Humboldt Bay, long-range views of the surrounding forested ridgeline, and interpretive signs that include information regarding local habitats and resource issues – all of which are experienced by thousands of users annually from a diversity of user types and backgrounds (pedestrians, bicyclists, joggers, bird-watchers, children, students, teachers, nature photographers, persons of limited mobility, etc.).³²

To ensure that the nature study trail is constructed as proposed in a manner that is (1) integral to the appreciation and comprehension of biophysical elements that comprise the wetlands, and (2) as discussed further below, designed to minimize intrusions into wetlands to the smallest feasible area and least impacting routes, the Commission attaches Special Conditions 7 and 9. **Special Condition 7** requires submittal of final plans prior to permit issuance that substantially conform with the project description and draft construction plans included in the permit application. **Special Condition 9** requires submittal of final design plans for all signage and trail amenities, including viewing platforms, benches, interpretive panels, and other amenities, that (among other requirements) include interpretive signage related to the natural resources of the project area visible from the trail. Therefore, the Commission finds that the proposed project as conditioned is allowable as a nature-study use consistent section 30233(a)(7).

Use of Dredging for Brainard Slough Restoration Purpose

In addition to installing a bridge to cross Brainard Slough for the nature study trail use described above, proposed activities at the Brainard Slough crossing also involve subcategory (6) restoration purposes. The County plans to restore the failed railroad crossing at Brainard Slough by removing (excavating) rock, railroad debris (timber ties and supports), and two 48-inch collapsed and rusted corrugated metal culverts. The Brainard Slough outlet currently flows under Highway 101 and enters the bay through the failed railroad crossing. The slough is tidally influenced and connects to Rocky Gulch to provide important overwintering habitat for federally listed fish species including coho salmon. Installation of the new bridge over Brainard Slough for the nature study trail use presents an opportunity to simultaneously restore channel habitat by removing failed debris that will benefit water quality, fish, and other aquatic life, including the removal of creosote-treated wood piles, broken pieces of corrugated metal and other debris from failed railroad infrastructure that has been littering the channel for several years since its failure. Upon removal of the failed debris and restoration of the

³² For a video of the Humboldt Bay Trail and the user experience on connecting constructed segments, see: <https://www.youtube.com/watch?v=xA9OqpeOhmo>.

slough channel coupled with construction of the nature study trail bridge over the slough, the County will place approximately 66 linear feet of rock armoring around the existing railroad berm (within the historical footprint) and approximately 575 square feet of rock around the new bridge abutments in the slough area (beyond the historical footprint of the railroad prism).

This finding that the proposed work within Brainard Slough constitutes “restoration purposes” is based, in part, on the assumption that the proposed work will be successful in restoring the historic habitats and processes as proposed and increasing habitat values. Should the project be unsuccessful, or result in long-term degradation of the habitats, the proposed diking, filling, and dredging would not be for “restoration purposes.” Thus, to assure the success of the restoration project, Special Condition 8 requires the applicant to provide a post-construction report within six months of completion of construction documenting (through photographs and written descriptions) the debris removal and confirming successful restoration of the slough channel.

Thus, the Commission finds this aspect of the proposed development within coastal wetlands/waters constitutes a restoration use that will restore historic tidal slough habitat and benefit salmonids and other aquatic species consistent with the allowable use provisions of section 30233(a)(6).

Alternatives

To be consistent with section 30233, the Commission must ensure that the proposed project has no less environmentally damaging feasible alternative. Coastal Act Section 30108 defines “feasible” as ...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors. In this case, alternatives to the aspects of the project involving diking, dredging, and filling of coastal wetlands and waters include (a) the no-project alternative (not constructing the nature study trail through wetlands; not restoring Brainard Slough), (b) alternative routes, (c) alternative trail design and alignment, and (d) alternatives to fill for certain project elements, such as the cable barrier safety fence. Alternatives to installing rock armoring for railroad berm repair and maintenance purposes (discussed in the above finding), which encroaches into coastal wetlands in some areas, is discussed in Finding K (Hazards) below.

No project alternative

The no project alternative means that no trail would be constructed along 4.25 miles of the Humboldt Bay shoreline and the CCT between Arcata and Eureka would continue to involve the use of the shoulders of Highway 101, Highway 255, and local County roads posing public access and recreational safety issues and providing little opportunity for up-close nature viewing of the bay and the Eureka Slough unit of the Humboldt Bay National Wildlife Refuge immediately west of Highway 101 in the project area. Although bicycle access is allowed along the shoulder of Highway 101, pedestrians are prohibited. The already completed Eureka and Arcata sections of the Coastal Trail would continue to be disconnected, limiting the potential for appreciation and stewardship of the scenic and natural resources of this segment of the Humboldt Bay coastline and limiting the lateral through access of trail users at either ends of the

existing trail segments. The state goal of completing the CCT would not be fulfilled for this area.³³ Under the no project alternative, the Brainard Slough channel would not be restored and railroad debris including treated wood ties, corrugated metal culverts, and displaced rock would remain in the slough and continue to deteriorate water quality and challenge fish passage. Accordingly, the Commission finds that the no project alternative is not a feasible less environmentally damaging alternative to the proposed development as conditioned.

Alternative trail route

The proposed HBTS project will complete a 13-mile-long stretch of the CCT and is the shortest and least environmentally damaging route that connects existing segments of the CCT to the north (Humboldt Bay Trail North) and south (Eureka Waterfront Trail). There are three potential routes that connect the cities of Arcata and Eureka. In addition to the proposed project, alternative routes considered include (1) a potential route along State Route 255 that follows the west side of Humboldt Bay and crosses the bay to Eureka from the west, and (2) a potential route along local roads (including, primarily, Old Arcata Road and Myrtle Avenue, which connect the eastern ends of the two cities along the inland boundary of the coastal zone east of Highway 101. Both alternative routes are largely surrounded by wetlands (primarily farmed wetlands/diked former tidelands and riparian habitat areas) and would necessitate the crossing of several creeks and tidal sloughs (including Mad River Slough and Humboldt Bay in the case of the Highway 255 route and Jacoby Creek, Freshwater Creek, Ryan Slough, and other waterbodies in the case of the Old Arcata Road/Myrtle Ave. route). The proposed route was ultimately chosen as the least environmentally damaging feasible alternative.³⁴ In addition, the Old Arcata Road/Myrtle Ave. alternative would not facilitate the location of resource-dependent nature study amenities in close proximity to the shoreline. As a coastal trail meant to provide access to and along the shoreline and nature study opportunities, proximity to the bay and associated wetlands is integral to fulfilling the purpose of the project. As previously discussed, connecting CCT segments that extend within (Humboldt Bay Trail North) or adjacent to (Eureka Waterfront Trail) the Highway 101 corridor have already been constructed, and alternatives for connecting these two

³³ The CCT is recognized both statewide and nationally. California Governor Gray Davis and the White House Millennium Council officially recognized the trail in 1999 and it is now designated as California's Millennium Legacy Trail. The California Legislature has recognized it as a priority statewide trail system and required a status report: Completing the California Coastal Trail prepared in 2003: <https://www.coastal.ca.gov/access/coastal-trail-report.pdf>. In 2021, the Commission and Conservancy, in collaboration with Caltrans and California State Parks, jointly published the California Coastal Trail map, which depicts existing segments of CCT.

³⁴ A number of feasibility studies have been conducted over the past two decades exploring potential alternative routes and alignments for a bicycle/pedestrian/Coastal Trail connection between Eureka and Arcata (Humboldt County Bicycle Facilities Planning Project, 1997; Humboldt Bay Trail Feasibility Study, 2001; Humboldt Bay Trail Feasibility Study: Arcata-Eureka, 2007; Humboldt County Coastal Trail Implementation Strategy, 2011).

existing segments with a trail connection that runs along the east side of Highway 101 would require construction of a pedestrian overpass and a new crossing over Eureka Slough. Therefore, the Commission finds that an alternative trail route would not be a less environmentally damaging feasible alternative to the proposed development as conditioned.

Alternative trail design and alignment

The trail has been aligned to minimize wetland fill to the maximum extent feasible given a number of alignment constraints, including minimum required distances from the adjacent railroad and private properties. The trail has been designed as a rail-with-trail project for consistency with state and federal railroad design requirements for trails adjacent to rails that are active in status. In areas with abundant salt marsh (e.g., segment 3), the side-slope of the widened railroad/trail prism will be reduced from 3:1 to 2:1 and the setback distance is reduced from 8.5 to 2.5 feet, resulting in approximately 0.58 acres less wetland fill than if side-slopes and setback distances were maintained as per other segments that don't cross extensive salt marsh plains. The bridges that will connect the trail to the existing CRC Levee were chosen over an embankment option with culverts to minimize fill, and the bridge over Brainard Slough will be a single-span bridge to avoid the use of additional piles. Aligning the trail route around the outer (bayward) perimeter of the CRC property (along an existing levee) avoids wetland fill for trail construction in front of the CRC property (parallel to the highway to match segments 7-9).

The County considered but rejected the alternative of moving portions of the trail to the west side of the railroad corridor and placing the trail on a boardwalk similar to the Eureka Waterfront Trail for several reasons. First, the County determined that a boardwalk design for would cost between four and six times the current budget and is economically infeasible. Second, the boardwalk alternative would necessitate the inclusion of safety railings on either side of the boardwalk, which would significantly impact views of the bay from both the trail and existing public vantage points along the highway. Furthermore, the boardwalk alternative would require additional pile driving, which poses risks to listed fish species in the bay (e.g., tidewater goby).

Another alternative considered by the County that would reduce wetland fill associated with segment 3 would be to place the trail directly on the railroad prism in this location similar to the design for segments 1 and 2, which use flangeway fillers to allow for the cooperative use of both the rail and trail on the existing railroad infrastructure. While this cooperative use is appropriate for a relatively short stretch of trail (less than 1,000 feet), the use of flangeway fillers is not recommended for long stretches of trail. The presence of multiple joints between asphalt, steel, and rubber within the travel lane for an approximately 1,500-foot-long stretch of trail (the length of segment 3) increases slippage risks for trail users and potential injury associated with direct proximity to the bay shoreline (e.g., wave overwash). Finally, the trail on rail alternative would conflict with the rail agreement between NCRA and THA for the active use of the rail for recreational speeder use that currently runs past segment 4 and into the southern

stretch of the Eucalyptus stand and which is proposed in the future along segments 7, 8, and 9.

Therefore, the Commission finds that there are no alternative trail design alignments that would be a less environmentally damaging feasible alternative than the proposed trail design and alignment as conditioned.

Alternatives for fill associated with cable barrier fence

Another project element involving wetland fill for which alternatives must be considered is the proposed cable barrier fencing between Highway 101 and the trail, which accounts for approximately 1.72 acres of wetland fill in a narrow linear alignment along segments 4, 8-9 and the portion of the existing Humboldt Bay Trail North CCT within the Eureka-Arcata Highway 101 corridor. The proposed cable barrier consists of steel wire ropes mounted on steel posts secured in concrete foundations with a two-foot-wide strip of concrete weed mat on either side for a total foundation width of four feet of paving. This safety barrier is a necessary component of the trail project along the high-speed, heavily trafficked highway corridor to protect trail users (there has been documented evidence of errant vehicles departing the highway roadway onto the area where the proposed trail would be located).³⁵ The concrete “weed mat” is a required Caltrans safety standard to facilitate mowing on either side of the barrier by maintenance workers. Vegetation growing into or around the cables and posts can impair their function and create a safety hazard. Alternatives to the four-foot-wide concrete mat that would minimize wetland fill include narrower mats or permeable weed mat, or not installing weed mat and using herbicides to control vegetation. The County originally considered installing six feet of concrete weed mat (three feet on either side of the barrier) before determining it was feasible to reduce the width by two feet as a less environmentally damaging alternative (thereby avoiding filling an additional ~0.43-acre of wetlands). A weed mat narrower than four feet is not feasible because of increased risks of striking the cable and posts with mowing decks. The use of herbicides directly adjacent to the bay and trail users on a regular basis for maintenance purposes was deemed not feasible for environmental and public health reasons. Therefore, the Commission finds that the four-foot-wide cable barrier fence is the least environmentally damaging alternative for trail safety and maintenance.

The Commission concludes that as conditioned, the proposed project is the least environmentally damaging feasible alternative and consistent with the alternatives test of section 30233(a).

Feasible Mitigation Measures

In addition to requiring that diking, dredging, and filling in coastal wetlands only be permitted if found to be an allowable use and the least environmentally damaging feasible alternative, section 30233 further requires that feasible mitigation measures be

³⁵ According to Humboldt County DPW and based on photographs from January 13, 2022 showing vehicle tracks from Highway 101 onto HBTN.

provided to minimize adverse environmental effects. The potential significant adverse impacts of the project include a loss of palustrine and estuarine wetland habitat, impacts to special-status salt marsh plants species, impacts to northern red-legged frogs (*Rana aurora*), impacts to fish and other aquatic species, and impacts to water quality and the marine environment. The potential impacts and their mitigation are discussed below. The potential project impacts and mitigation measures are discussed below.

Wetland Mitigation

As discussed, while impacts have been designed to be as minimal as possible, the proposed project still will result in permanent impacts to approximately 3 acres of estuarine wetlands and approximately 3.14 acres of palustrine wetlands,³⁶ or a little more than 6 acres of total permanent wetland impacts. Wetland impacts are proposed to be mitigated both onsite through the reestablishment of estuarine and palustrine drainage ditch wetlands, and offsite at two locations. In total, as discussed below, 1 acre of wetlands will be restored on site through the reestablishment of the drainage ditch on the inboard side of the trail between segments 3 and 9, approximately 25 acres of wetlands will be restored on Tuluwat Island in Humboldt Bay through the removal of invasive *Spartina*,³⁷ and 5.72 acres of wetlands will be enhanced at a 70-acre agricultural property west of Arcata (as explained below, the mitigation work on Tuluwat Island and the 70-acre agricultural property west of Arcata are part of larger mitigation projects that also involve mitigation for the Caltrans Eureka-Arcata Highway 101 improvement project and the City of Arcata Humboldt Bay Trail North project).

Reestablishment of Onsite Drainage Ditch Wetlands. Trail construction will result in the filling of approximately 0.98-acre of existing wetlands associated with the drainage ditch that runs inboard of the railroad, between the railroad and the highway. Constructing the trail along the railroad corridor will result in filling the existing drainage ditch wetlands and reestablishing an equivalent area of new drainage ditch wetlands adjacent to the trail. The County proposes to construct the new wetlands onsite, reseed the area with a mix of regionally appropriate native wetland plant species, and monitor the onsite mitigation wetlands for successful plant reestablishment. **Special Condition 6** requires the County to reestablish the drainage ditch as proposed, monitor the reestablished onsite wetlands to ensure successful wetland hydrology and plant reestablishment within one year following impacts. The condition requires submittal of as-built plans and monitoring reports to the Executive Director, and if it is reported that the new ditch wetlands do not have a similar native vegetation density and cover to the surrounding wetlands, Special Condition 6 requires the County to submit a revised or supplemental restoration program to achieve the objective.

³⁶ Including what the County describes as “one-parameter wetlands” that consist of willow dripline areas and areas dominated by *Deschampsia* and/or *Juncus*.

³⁷ Caltrans will be restoring approximately 179 acres of salt marsh habitat on Tuluwat Island through the removal of invasive *Spartina*, approximately 25 acres of which will be credited towards wetland mitigation for the Humboldt Bay Trail South project.

Tuluwat Island Mitigation. In addition to reestablishing approximately 1 acre of wetlands onsite and in-kind, the County also proposes to offset the approximately 6 acres of wetland impacts associated with the project by providing compensatory mitigation at a 4-to-1 (wetlands restored-to-wetlands impacted) ratio off-site in the form of substantial restoration of salt marsh habitat through the removal of invasive Spartina densiflora (dense-flowered cordgrass). Spartina removal work will be conducted under separate CDP authorization - CDP 1-14-0249,³⁸ which authorizes the Humboldt Bay Harbor, Recreation, and Conservation District to coordinate and implement the Humboldt Bay Regional Spartina Eradication Plan in cooperation with other agencies and cooperating landowners in the Humboldt Bay region. Proposed mitigation activities will occur under a cooperative agreement between the Harbor District and Caltrans that was developed in support of the Caltrans Eureka-Arcata Highway 101 Improvement Project (CDP 1-18-1078 approved on August 7, 2019). Pursuant to the mitigation program proposed by Caltrans and approved by the Commission under the highway improvement project application, 179 acres of salt marsh habitat will be restored (through cordgrass removal) on Tuluwat Island (Indian Island) in Humboldt Bay. The mitigation site is owned by the Wiyot Tribe, who fully supports the restoration/mitigation project.³⁹ As specified in the executed cooperative agreement, which went into effect on March 4, 2021, the 179 acres of Spartina removal from Tuluwat Island is planned to provide mitigation for three projects: the Caltrans Eureka-Arcata Highway 101 Improvement Project (10.25 acres of wetland impacts), the City of Arcata Humboldt Bay Trail North Project (2.26 acres of wetland impacts), and the proposed County of Humboldt Bay Trail South Project (6.2 acres of wetland impacts). This mitigation program is intended to eradicate Spartina from the island and eliminate a major source of Spartina seed from the bay.⁴⁰ The removal of Spartina will restore native saltmarsh vegetation to the area, including habitat for multiple species of rare plants (e.g., Humboldt Bay owl's-clover, Point Reyes' bird's beak, and western sand spurrey).⁴¹

In its approval of CDP 1-18-1078, the Commission found that the removal of invasive Spartina from Tuluwat Island would provide appropriate mitigation to compensate for impacts of the highway improvement project on wetlands in the highway corridor, because (1) it will lead to the removal of an invasive species that has displaced and prevented the reemergence of native saltmarsh habitat in a contiguous area, and (2) the

³⁸ CDP 1-14-0249 was approved by the Commission on June 12, 2015 and authorizes Spartina removal activities for 10 years. The adopted findings are accessible from the Commission's website: <https://documents.coastal.ca.gov/reports/2015/6/f12a-6-2015.pdf>.

³⁹ The Wiyot Tribe and Caltrans entered into a Right of Entry and Access Agreement for the restoration/mitigation work on Tuluwat Island on January 22, 2021.

⁴⁰ There are approximately 1,400 acres of existing infested salt marsh habitat areas in the region targeted for invasive Spartina removal under the regional eradication plan.

⁴¹ The success of native salt marsh vegetation and rare plants after the removal of invasive Spartina from Humboldt Bay marshes has been demonstrated by (among other entities) the U.S. Fish and Wildlife Service, who has successfully restored several hundreds of acres of salt marsh habitat on the Humboldt Bay National Wildlife Refuge through Spartina eradication, including marsh areas immediately adjacent to the proposed trail route.

plan includes long-term monitoring, maintenance, and funding provisions to ensure the success of the removal and restoration plan to prevent the spread of Spartina in the restoration area, enable the restoration of native salt marsh habitat, and reduce the spread of Spartina in the bay over time. Spartina profoundly alters estuarine habitats by increasing sedimentation, replacing native plant species, and disrupting habitats for fish and wildlife species. Where Spartina is abundant, the native estuarine habitat essentially disappears and where Spartina is present, it predictably increases over time. The impact of Spartina is so profound and complete that the removal of the plant goes beyond the typical removal of non-native species through weeding or site enhancement. Unless Spartina is removed, the native habitat will be lost. In past permitting actions the Commission has found that if properly monitored and maintained, Spartina removal substantially restores wetlands resulting in the return of native salt marsh habitat.⁴²

Special Condition 5-A-3 of CDP 1-18-1078 required submittal of a final approved Spartina Removal Plan for Tuluwat Island that potentially would provide mitigation not only for the Caltrans highway improvement project but also for the Humboldt Bay Trail Projects (emphasis added):

The plan shall provide a minimum of 41 acres of mitigation credit to mitigate for 10.25 acres of permanent wetland impacts of the [Caltrans highway improvement] project at a 4:1 mitigation ratio, including mitigation credit for any on-site wetland mitigation within the Highway 101 Corridor pursuant to Special Condition 11. Any additional mitigation credits created may be considered by the Coastal Commission for use in mitigating wetland impacts for the Arcata Bay Trail North project and the Humboldt Bay Trail South project. Mitigation credits for the Bay Trail projects shall only be awarded pending separate approvals by the Coastal Commission of (1) a CDP for Humboldt County Bay Trail South and (2) a material amendment to the Arcata Bay Trail North CDP (CDP 1-16-0122), with the Commission finding that Spartina eradication provides feasible mitigation for wetland impacts resulting from the trail project(s). Whether or not such CDP approvals are granted to the County and/or to the City, the Permittee (Caltrans) acknowledges its responsibility to implement the approved Final Revised Spartina Removal Plan, including all required acreages of Spartina eradication required under the plan, and no mitigation credits may be used to mitigate any development other than the development authorized by this CDP and the Bay Trail Permits identified herein.

In this case the Commission again finds that the removal of invasive Spartina from Tuluwat Island is appropriate mitigation to compensate for wetland impacts associated the trail project, because (as previously found by the Commission): (1) such mitigation activities will lead to the removal of an environmentally damaging invasive species that

⁴² Previous permits where the Commission has approved Spartina removal as mitigation include, but are not limited to: CDPs 1-16-0122 (City of Arcata HBTN), 9-16-0033 (Coast Seafoods Onshore Shellfish Hatchery), 1-17-0926 (Elk River Estuary Enhancement and Coastal Trail Extension Project), and 1-18-1078 (Caltrans Eureka-Arcata Highway 101 Corridor Improvement Project)

has displaced and prevented the reemergence of native estuarine marsh habitat in a large, contiguous area near the project site (which is four times larger than the size of the wetland impact area at the project site), (2) the proposed plan includes long-term monitoring, maintenance, and funding provisions to prevent the reinfestation of *Spartina* in the restoration/mitigation area thereby enabling the long-term preservation of restored salt marsh habitat; and (3) the habitat to be restored is similar in type (estuarine intertidal) and location (Humboldt Bay) to the type and location of wetland habitat impacted by the project (~3 acres of estuarine intertidal wetlands in Humboldt Bay will be impacted).

Consistent with the mitigation credit approach approved by the Commission under CDP 1-18-1078, the Commission finds that the amount of mitigation credit given for *Spartina* removal should be proportional to its abundance at the mitigation site, since dense infestations have more serious ecological consequences than infestations with low cover (e.g., 1 acre of mitigation credit should be given for removing *Spartina* from 10 acres of saltmarsh where it is present at 10% cover or by removing *Spartina* from 1.1 acres where it is present at 90% cover). As existing *Spartina* cover estimates have been mapped based on density categories rather than specific densities (categories include high - 60-100% cover, medium -26-60% cover, and low - 1-25% cover of *Spartina*), taking the mid-point of each cover class leads to an appropriate mitigation credit award of 1 acre of credit for successful removal of 1.24 acres of high-cover *Spartina* areas, 2.33 acres for medium-cover areas, and 7.69 acres for low-cover areas (these estimates of mitigation credit are likely conservative, since *Spartina* density has generally increased since the cover density maps were published by the U.S. Fish and Wildlife Service in 2010). Using the sliding scale of mitigation credit, the approved mitigation plan for the permanent eradication of 179 acres of *Spartina* and restoration of salt marsh habitat in treated areas on Tuluwat Island will provide the equivalent of 80.18 acres of mitigation available for the three projects. Approximately 40 acres of *Spartina* removal is required for the Caltrans highway improvement project (~10 acres of wetland impacts associated with the highway improvements were required to be mitigated at a 4:1 ratio). Applying this same mitigation credit approach to the proposed trail project, and applying the same 4:1 mitigation ratio, approximately 24.64 acres of *Spartina* removal on Tuluwat Island is proposed to be provided to mitigate for wetland fill impacts associated with the Humboldt Bay Trail South project.

As mentioned above, mitigation activities are proposed to occur under a cooperative agreement between the Harbor District and Caltrans that was developed in support of the Caltrans Eureka-Arcata Highway 101 Improvement Project (CDP 1-18-1078 approved on August 7, 2019) and which was executed on March 4, 2021. *Spartina* removal work under this agreement is being carried out pursuant to and consistent with *Spartina* removal activities authorized under CDP 1-14-0249 (approved on June 12, 2015 for a 10-year authorization period that runs through June 12, 2025),⁴³ which

⁴³ Pursuant to Special Condition 5-B-14 of CDP 1-18-1078, if the *Spartina* removal activities of the approved final revised *Spartina* Removal Plan are not completed before the end of the authorization

authorized the Harbor District to coordinate and implement the Humboldt Bay Regional Spartina Eradication Plan in cooperation with other agencies and cooperating landowners. The CDP authorized the regional plan to be implemented over multiple years across the Humboldt Bay region within approximately 1,400 acres of tidal marsh habitats in Humboldt Bay, the Eel River estuary, and the Mad River estuary, including the Tuluwat Island area proposed to be used for mitigation in this case. CDP 1-14-0249 requires submittal of site-specific Spartina removal plans prior to commencement of Spartina removal in any given area. A site-specific Spartina removal plan has been prepared for proposed work on Tuluwat Island and involves two years of primary treatment followed by a five-year monitoring and maintenance period. Regular monitoring reports will be submitted, and interim and final success criteria will be targeted (e.g., less than 5% ground cover of Spartina is targeted to remain after primary/initial removal, for five years following primary removal, and during the long-term maintenance period). To ensure that the areas of Spartina removal are permanently protected as saltmarsh habitat, and thus, properly offset wetland impacts associated with the project to count as mitigation, the Wiyot Tribe has agreed to protect restored sites/mitigation areas from future development. In an agreement between the Wiyot Tribe and Caltrans signed January 22, 2021, the Tribe agreed to protect in perpetuity the 179 acres of Spartina removal/restored salt marsh habitat from all future development, with allowances for the ongoing removal of Spartina and other non-native invasive species, maintenance of native vegetation, and habitat restoration activities.

To ensure that the proposed offsite wetland mitigation plan is implemented as proposed, the Commission attaches **Special Condition 5** requiring the County to submit a final signed MOU between the County and Caltrans prior to permit issuance ensuring that Spartina removal, monitoring, and reporting will be carried out consistent with the requirements of the above-referenced permits and will result in the successful restoration of at least 24.64 acres of salt marsh habitat as mitigation for wetland impacts associated with the proposed project. Although this restoration project is in its final design phase prior to implementation, because of the scale of the Tuluwat Island restoration project and the potential for delay in implementation, there is a concern that Caltrans may delay the implementation of the County's portion of the mitigation. The currently proposed mitigation package accounts for a certain amount of temporal loss between the time of wetland fill impacts associated with trail construction and the time of wetland establishment at the mitigation site. To prevent unmitigated additional temporal loss, Special Condition 5 specifies that the applicant ultimately is responsible for ensuring that Caltrans successfully completes the primary treatment work within three (3) years of permit approval (by April 7, 2025). If the mitigation work is not completed within three (3) years of permit approval, the permittee shall submit a revised or supplemental mitigation program to compensate for the additional temporal loss of habitat associated with the delay in implementing the wetland mitigation plan. The

period for Spartina removal activities authorized under CDP 1-14-0249, Caltrans is responsible for obtaining an amendment to CDP 1-18-1078 to authorize the remaining Spartina removal activities.

revised mitigation program shall be processed as an amendment to this coastal development permit.

Samoa Parcel Mitigation. Finally, additional mitigation for the project's proposed wetland impacts, as required by permits issued by the U.S. Army Corps of Engineers and the North Coast Regional Water Quality Control Board, has already begun to be implemented on a Caltrans-owned property referred to as the "Samoa Parcel" west of the City of Arcata (adjacent to State Highway 255 and between V Street and Pacheco Lane, APNs 506-021-05 & -06). This wetland restoration/enhancement project, permitted as a wetland enhancement project by the Commission on February 14, 2020 under CDP 1-19-0813,⁴⁴ involves the restoration and enhancement of 70 acres of freshwater, riparian, and brackish wetlands, a portion of which will count as partial mitigation required by the Corps and the Regional Water Board for Caltrans' Eureka-Arcata Highway 101 corridor improvement project and for the Bay Trail projects (both Humboldt Bay Trail North and Humboldt Bay Trail South). The restoration/enhancement project was initially implemented in 2020, and monitoring is currently underway. The Corps and the Regional Water Board determined that the restoration and enhancement of 5.72 acres of palustrine and brackish wetlands on the Samoa Parcel would provide appropriate mitigation for wetland impacts associated with the proposed Humboldt Bay Trail South project (the additional acreage restored and preserved on the property will count as mitigation for the other two projects).

Special Condition 2 of CDP 1-19-0813 requires Caltrans to implement the wetland restoration consistent with the final approved Wetland Restoration Plan approved for the project, including, but not limited to, submittal of annual monitoring reports to the Executive Director for ten years. If the final monitoring report indicates that the Wetland Restoration Plan has been unsuccessful, in part or in whole, based on the approved goals, objectives, and success standards in the approved final plan, Caltrans is required to submit a revised or supplemental plan to compensate for those portions of the original plan that did not meet the approved goals, objectives, and performance standards.

The Commission finds that this wetland enhancement project provides additional wetland enhancement credits beyond the onsite and offsite wetland restoration and mitigation activities described above. The Commission finds that the wetland enhancement work that is being implemented as approved by the Commission for this purpose and which is on a trajectory toward success is appropriate mitigation to compensate for wetland impacts associated the trail project, because: (1) such wetland enhancement activities will restore freshwater marsh, tidal channel, brackish marsh, and riparian habitat in a large, contiguous area near the project site (which is many times larger than the size of the wetland impact area at the project site), (2) the approved plan includes long-term (10 years of) monitoring, maintenance, and funding provisions to prevent ensure the success of the restoration/mitigation area; and (3) the habitat to be

⁴⁴ For a link to the findings for approval of CDP 1-19-0813, see the Commission's website agenda archives: <https://documents.coastal.ca.gov/reports/2020/2/F9a/F9a-2-2020-report.pdf>.

restored is similar in type (palustrine and brackish marsh) and location (adjacent to Humboldt Bay) to the type and location of wetland habitat impacted by the project (~3.14 acres of palustrine emergent wetlands in Humboldt Bay will be impacted).

Thus, the Commission finds that the project as conditioned provides feasible mitigation measures for wetland impacts as required by section 30233 of the Coastal Act.

Mitigation Measures for Rare Salt Marsh Plants

A series of seasonally appropriate botanical surveys were completed in support of the project application, and three species of rare wetland plants were identified in the project area: Humboldt Bay owl's-clover (Castilleja ambigua var. humboldtiensis), Point Reyes bird's beak (Chloropyron maritimum ssp. palustre), and Western sand-spurrey (Spergularia canadensis var. occidentalis). Humboldt Bay owl's-clover and Point Reyes bird's-beak were found in estuarine areas near Eureka Slough and at the south end of the CRC property. Point Reyes bird's-beak was also observed in small patches along the railroad prism. Western sand-spurrey was observed in a few locations north of the Eureka Slough bridge. Direct impacts to sensitive plant species are expected to occur and could impact as many as 41 individuals of Point Reyes bird's-beak, three individuals of Humboldt Bay's owl-clover, and two individuals of Western sand spurrey.

The 2018 Initial Study and Mitigated Negative Declaration (MND) prepared for the project includes several avoidance, minimization, and protection measures for rare plants. The MND includes measures (BIO-1) stating that all efforts will be made to avoid special-status plants during trail construction. The County plans to conduct pre-construction surveys to identify any new impacts to special-status plant species within the planned area of disturbance and will flag plant individuals and patches for avoidance. Plants within the project footprint that cannot be avoided will be conserved through transplanting if feasible in appropriate habitat near areas where impacts will occur. BIO-1 has been adapted and incorporated into the CDP as **Special Condition 12**. With the addition of this condition, the Commission finds that the project as conditioned provides feasible mitigation measures to minimize the project's impacts to special status salt marsh plants consistent with section 30233 of the Coastal Act.

Mitigation Measures for Northern Red-Legged Frog

The northern red-legged frog is a state-listed species of special concern that breeds in seasonal freshwater ponds with emergent vegetation. According to correspondence with Environmental Scientists from CDFW, it is unlikely that suitable breeding habitat exists in the project area, as the only potential habitat is the drainage ditch that likely too saline for freshwater-seeking frogs. However, northern red-legged frogs have been recorded in the Little Freshwater and Ryan Creek Drainages east of the project site. Northern red-legged frog egg masses were also found in 2011 in the Arcata Marsh, approximately three miles north of the Bay Trail South. Although it is unlikely that northern red-legged frogs will be found during construction activities, the County proposes to implement standard avoidance and minimization measures before and during project construction pursuant to BIO-4 in the adopted IS/MND (**Exhibit 8**). These proposed measures include conducting surveys for frogs (adults, subadults, tadpoles, or

egg masses) prior to any construction activities that occur during the breeding periods between July 1 and October 30, and if individuals are observed, consulting with CDFW on relocating frogs outside of the construction zone to nearby suitable habitat. These measures are required to be implemented by **Special Condition 12**. In addition, as discussed above, the freshwater wetland enhancement project that already has begun to be implemented on the Samoa Parcel by Caltrans, which provides appropriate mitigation in part for wetland impacts associated with the Humboldt Bay Trail South project, will provide additional breeding habitat for Northern red-legged frog. This enhancement work, which is offsite but near the project site (along the north side of Humboldt Bay), will further mitigate for any loss of potential frog breeding habitat in the project area

Mitigation Measures for Special-Status Fish

The marine environment of Humboldt Bay supports numerous fish species, and a significant portion of the proposed trail facilities will be constructed within areas that provide potential habitat for special status species including federally threatened Southern Oregon and Northern California Coast ESU coho salmon (*Oncorhynchus kisutch*), federally threatened California Coast Evolutionary Significant Unit (ESU) chinook salmon (*Oncorhynchus tshawytscha*), Northern California ESU steelhead (*Oncorhynchus mykiss*), federally endangered tidewater goby (*Eucyclogobius newberryi*), federally threatened green sturgeon (*Acipenser medirostris*), and state listed longfin smelt (*Spirinchus thalyichthys*).

The proposed project will require construction work within slough channels for bridge installation. A total of 36 cast-in-place steel shell piles 14-24 inches in diameter will be driven into the substrate approximately 50 feet deep at the south and north crossings to CRC levee and up to 70 feet deep for the new bridge over Brainard Slough. The CRC South bridge and Brainard Slough bridge will require two to three days of pile driving for seven piles each, while the CRC North bridge will require up to seven days for 22 piles. Piles will be driven with a vibratory driver and proofed for the last five feet with an impact hammer. Proofing with an impact hammer is required to verify adequate bearing and reduce risk of differential settlement.

Because pile driving activities will be carried out both above and within marine waters, the proposed bridge construction component of the project has the potential to result in adverse impacts to marine organisms. Specifically, the proposed pile driving would result in the generation of elevated levels of underwater sound in the waters surrounding the pier. Pile driving generates hydroacoustic pressure impulses and particle velocities that can cause effects on fish and marine mammals ranging from altered behavior, hearing loss, and tissue injuries, to immediate mortality. These underwater sound impacts can be measured by “Peak Sound Pressure Level (SPL),” the maximum value of an instantaneous sound pressure, such as that generated by a single strike on a pile by a pile driver, and “Cumulative Sound Exposure Level (SEL),” the summation of the sound energy associated with all pile strikes that occur over a given day.

In some pile driving situations, potential injury and mortality of fish are anticipated to occur from exposure to impact pile driving noise exceeding established thresholds for the onset of injury. In 2008, a Fisheries Hydroacoustic Working Group, composed of staff from federal and state agencies and supported by a panel of hydroacoustic and fisheries experts, generally agreed in principle to interim criteria to protect fish from pile driving activities. These criteria were a 206 peak dB for peak SPL and a Cumulative SEL limit of 187 dB, except in the case of fish weighing equal to or less than 2 grams, in which case the Cumulative SEL was set to a maximum of 183 dB. The peak SPL is seldom reached, so pile driving is generally constrained by the Cumulative SEL.

To analyze the hydroacoustic impacts on fish during pile installation for the three new bridges, the County completed a Biological Assessment/Essential Fish Habitat Assessment (BA/EFHA) (Stantec Inc., February 23, 2018). The BA/EFHA used NMFS' hydroacoustic calculator to analyze potential impacts to fishes from pile-driving activities and concluded that acoustic energy is not likely to rise to the cumulative SEL limit of 187 dB. The report found that, while a behavioral impact radius of 29.5 feet could occur from pile driving activities, this distance could be minimized by limiting pile driving to low tide cycles, when work areas are well outside of the water, and sound levels are attenuated through ground versus water. The CRC North Bridge will be installed during low tides where the wetted channel of the bay can be 1000 feet or more from work area. Similarly, the wetted channel of the bay is 20-30 feet away during low tide conditions at the Brainard Slough work area. To minimize the damaging effects of sound to fish during pile driving activities, the County developed mitigation measures included in the BA and in the project's Mitigation Monitoring and Reporting Plan (MMRP). The County's proposed measures include:

1. Restricting in-stream work to the period from July 1 through September 31 when juvenile salmonids are least likely to be present;
2. Scheduling all in-channel and in-bay work during low tide events when fish are less likely to be present;
3. Installing coffer dams or barrier nets prior to dewatering of in-channel or in-bay work areas and relocating any fish, following CDFW and NOAA protocols;
4. Implementing construction BMPs to minimize the input of sediment and increased turbidity; and
5. Installing piles with a vibratory driver to the maximum extent practicable, and only proofing with an impact hammer for the final five feet when required to verify load capacity.

Caltrans, on behalf of the County, consulted with the National Marine Fisheries Service (NMFS) on February 27, 2018, requesting concurrence with the finding that project activities are "not likely to adversely affect" listed fish species. Caltrans also submitted project documentation to the USFWS and received a determination that the project is covered under the 2011 programmatic Endangered Species Act (ESA) Section 7

consultation regarding routine maintenance, repair, and small project activities within Humboldt County. In a March 22, 2018 Concurrence Letter that responded to Caltrans' Biological Assessment, NMFS confirmed that a Biological Opinion was not necessary "given the low level of effects anticipated." NMFS's informal consultation concluded that "the proposed action may affect but is not likely to adversely affect SONCC coho salmon, CC Chinook salmon, NC steelhead, and Southern DPS green sturgeon or their designated critical habitats." NMFS's decision was based on (1) the limited area of potential habitat, (2) the low potential for listed species to be within the action area during the work window, (3) the small spatial scale of potential impacts, and (4) the conservation measures incorporated into the project to avoid and minimize impacts to critical habitats. The conservation measures proposed by the County, as listed above, are incorporated into the County's CEQA analysis as mitigation measures (BIO-2 and BIO-3) and have been incorporated into this CDP as **Special Condition 12**.

Mitigation Measures to Protect Water Quality

Project construction along the Humboldt Bay shoreline could also result in impacts to aquatic species related to water contamination as a result of sediment, contaminated soils, construction debris, or hazardous materials entering coastal waters. Vegetation clearing and grubbing and cut and fill slopes and stockpiles have the potential to increase suspended sediments and turbidity levels in adjacent coastal waters. Operation of heavy equipment, concrete pouring and curing, and asphalt paving near coastal waters could result in the leaking or spilling of oil, grease, and chemicals to receiving waters. **Special Condition 13** outlines BMPs proposed by the County (Condition 13A) and additional measures imposed by the Commission (Condition 13B) to protect water quality. Measures proposed by the County and required by Special Condition 13A include, but are not limited to, the following: (a) re-vegetating soils and slopes exposed due to project-related earthwork using native seed mix and/or a sterile quick grow species; (b) installing appropriate erosion and sediment control devices, such as silt fences, straw wattles, or catch basins below all construction activities at the edge of surface water features to intercept sediment before it reaches waterways; (c) storing equipment while not in use in upland areas at least 50 feet away from coastal waters; and (e) placing plastic materials under asphaltic concrete paving equipment while not in use to catch and/or contain drips and leaks. Special Condition 13B requires several additional water quality protection measures, including but not limited to: (a) fueling, maintenance, and washing construction equipment in confined upland areas more than 50 feet away from coastal waters; (b) maintaining heavy equipment in good condition free of leakage of coolant and petroleum products; (c) training equipment operators in procedures to be taken should accidental spills occur; (d) additional BMPs for the use of treated wood in trail facilities .

Special Condition 14 requires completion of a final Storm Water Pollution Prevention Plan (SWPPP) that incorporates proposed and additional BMPs to prevent the entry of polluted stormwater runoff into coastal waters and wetlands during construction and post-construction.

Therefore, the Commission finds that the proposed project, as conditioned, provides feasible mitigation measures to minimize adverse environmental effects consistent with section 30233(a), and the mitigation provisions of section 30233 have been met.

Conclusion

In conclusion, the Commission finds that the mitigation measures incorporated into the project and required by the special conditions discussed above (and additional mitigation measures to protect water quality, ESHA, and other coastal resources discussed below) will ensure that the proposed project, which is the least environmentally damaging feasible alternative and allowed for nature study and restoration purposes, will minimize adverse environmental effects on coastal waters and wetlands consistent with section 30233 of the Coastal Act.

H. Marine Resources and Water Quality

Section 30230 of the Coastal Act states (emphasis added):

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 of the Coastal Act states (emphasis added):

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with the surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30232 of the Coastal Act states:

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.

As cited above, Coastal Act sections 30230 and 30231 require, in part, that marine resources and coastal wetlands and waters be maintained, enhanced, and where feasible restored. These policies specifically call for the maintenance of the biological productivity and quality of marine resources, coastal waters, streams, wetlands, and

estuaries necessary to maintain optimum populations of all species of marine organisms and for the protection of human health.

The new trail will be a paved, impervious surface, which will slightly increase runoff and associated chemicals over the life of the project. Stormwater runoff from the trail will drain to open ditches, which will eventually flow into the creek and slough tributaries of Humboldt Bay. The paved trail and gravel shoulder will slope slightly toward the drainage ditches, but the slope face will be protected with an erosion control fabric/blanket and seeded with native seeds. Once the seeds sprout and the slope is vegetated, the compacted gravel of the trail's shoulder will stay in place. Since the trail will not be used by motor vehicles, asphalt wear will be tempered and contaminants such as fuels and oils associated with motor vehicles will not be generated. In addition, the drainage ditch adjacent to the trail will be successfully reestablished pursuant to Special Condition 6 and will provide biofiltration of stormwater runoff from impervious surfaces.

As discussed in Finding G above, construction along the Humboldt Bay shoreline could impact water quality as a result of sediments, contaminated soils, construction debris, or hazardous materials entering coastal waters. To address these impacts, Special Condition 13 discussed above outlines various BMPs required to be implemented during construction, including, but not limited to, (a) re-vegetating soils and slopes exposed due to project-related earthwork using native seed mix and/or a sterile quick grow species; (b) installing appropriate erosion and sediment control devices, such as silt fences, straw wattles, or catch basins below all construction activities at the edge of surface water features to intercept sediment before it reaches waterways; (c) storing equipment while not in use in upland areas at least 50 feet away from coastal waters; (e) placing plastic materials under asphaltic concrete paving equipment while not in use to catch and/or contain drips and leaks; (f) fueling, maintenance, and washing construction equipment in confined upland areas more than 50 feet away from coastal waters; (g) maintaining heavy equipment in good condition free of leakage of coolant and petroleum products; (h) training equipment operators in procedures to be taken should accidental spills occur; (i) additional BMPs for the use of treated wood in trail facilities. The County also plans to complete a final SWPPP, as discussed in the above findings, to manage runoff from the project site. Special Condition 14 requires submittal of a final SWPPP prior to commencement for the Executive Director's review and written approval.

Some project components including benches and bridge and overlook decking will be composed of pressure-treated wood. The use of pressure-treated wood near coastal waters and wetlands could lead to the leaching of contaminants into the marine environment. Special Condition 13(B)(i)(h) requires the implementation of additional measures and BMPs during construction where treated wood is utilized. These requirements include a ban on the use of creosote-treated wood and requirements for (i) cutting/drilling treated wood at least 100 feet away from coastal waters and wetlands, (ii) containing/collecting any sawdust, drill shavings, and wood scraps in order to prevent the discharge of treated wood to the marine environment, and (iii) storing

treated wood materials in a contained, covered area to minimize exposure to precipitation.

In addition, to ensure that constructed related debris, excess soils, and vegetation spoils generated by the proposed trail construction is properly disposed of in a manner that protects water quality, **Special Condition 16** requires submittal of a final debris stockpiling and disposal plan prior to commencement of construction. The plan requires that all temporary stockpiles of construction debris, excess sediments, vegetative spoils, and any other debris or waste associated with the authorized work shall be feasibly contained with appropriate BMPs to prevent any discharge of pollutants to surrounding coastal waters and wetlands. The plan also must identify authorized disposal site(s) where materials may be lawfully disposed of and a schedule for when materials will be removed from the construction site.

The project will require pile driving with both vibratory and impact hammers for bridge installation. In addition, for the north Brainard bridge, temporary sheet piles and washed coarse-grained aggregate fill (which is a measure used to minimize fine sediment and turbidity impacts) will be used to construct a temporary access road and landings for crane access to install the mid-structure piers. The temporary sheet piles will be installed approximately 30 feet bgs (vibrated in without impact proofing), and the aggregate fill will be encapsulated in geotextile fabric to separate native and fill soils. Water bladders may also be used to construct a coffer dam to isolate the work area from the bay and tidal waters. Isolating the work area with water bladders will allow for work within the bay to be expedited, as work would not be restricted to periods of low tides only.⁴⁵ The coffer dam will also reduce the likelihood of construction generated sediment from entering the bay and reduce the possibility of fish entrapment. Following the installation of the bridge, the temporary access road, including the sheet piles, aggregate fill and geotextiles, will be removed, and existing ground surface (bay mud) smoothed out to the extent practical. **Special Condition 8** requires submittal of final as-built plans to ensure that bridge installation was completed consistent with the requirements of this permit

As described further in Finding H above, pile driving generates hydroacoustic pressure impulses and particle velocities that can affect fish. Thus, to minimize potential impacts to fish from pile driving, the Commission attaches **Special Condition 11** limiting pile driving to dry summer months (July 1 – September 31) and requiring specific pile driving limitations. In addition, Special Condition 11 requires installation of coffer dams or barrier nets and fish protection measures prior to dewatering and restoration of staging and access areas.

A final water quality issue raised by the project relates to the potential for ground disturbance to mobilize residual contamination in soil associated with historic railroad

⁴⁵ While the installation and removal of the coffer dam and access road will occur during periods of minus ebb time consistent with Special Condition 11, the access road will remain in place throughout several tide cycles to allow for adequate time to install bridge piles.

and industrial use. Exposing residual contaminants could pose risks to the quality of coastal waters and to the health of construction workers if exposed during construction and not properly contained, handled, and disposed of.

A large part of the current alignment is located on the right-of-way, and railroad rights-of-way in other areas of California have been found to contain heavy metals, petroleum hydrocarbons, creosote, chlorinated compounds, pesticides, and polychlorinated biphenyls (PCBs) in the underlying soil and/or groundwater. In addition, the project area includes the CRC property and the Bracut Industrial Park, both of which historically operated as lumber mills. Lumber mills around Humboldt Bay used the wood preservative pentachlorophenol (“penta”) from the 1950s through the 1980s, which was inadvertently dispersed into the environment through the use of dip tanks for treating lumber and through the use of conical burners to burn treated wood waste. Both former mill locations were operating during the time period where penta, a source of dioxins and furans, would have been applied.

GHD completed an Initial Site Assessment (ISA) (2017), Sampling and Analysis Plan (2019), and Corridor Sampling Reports (2020 and 2021) for the project. The purpose of these reports was to analyze the history of specific sites along the bay and identify areas of potentially impacted soil and/or groundwater along the project alignment that may require special handling and disposal during construction or could pose a health exposure risk to construction workers. Because the ISA identified a number of Hazard Rank 2 and 3 sites⁴⁶, including sites of former conical burners where dioxin, furan, and heavy metal contamination may exist, GHD conducted field sampling activities to identify constituents of concern within the project area. Between April 1 and April 10, 2020, and June 8 and 9, 2021, staff from GHD and the County collected a total of 73 soil samples and one groundwater sample at 41 location points along the project alignment. Samples were collected from all trail segments except for the Eureka Slough Bridge Crossing (segment 2). Samples were collected using a hand auger or stainless-steel trowel and were transported to a state-certified laboratory for chemical analysis. Samples were tested for total petroleum hydrocarbons (“TPH”), metals, organochlorine pesticides, herbicides, semi-volatile organic compounds (“SVOCs”), and dioxins/furans. None of the soil samples reported detectable concentrations of organochlorine pesticides, herbicides, or SVOCs. The soil results for TPH were below applicable worker screening levels, however the Corridor Sampling Report recommended that construction workers still use appropriate personal protective equipment to mitigate any unnecessary exposure and that excavated soil from segments 4, 7, 8, and 9 is tested and profiled prior to offsite disposal. Arsenic and lead concentrations exceed California hazardous waste screening levels in segments 4 and 8. Seven samples were tested for dioxins with samples taken from the levee around the CRC property, Bracut Industrial Park, and along the railroad corridor. Although dioxin levels were below the EPA

⁴⁶ Hazard Rank 2 indicates that the site has the potential to affect the project, either because of the presence of contamination that may migrate into the project area or because the extent of contamination is unknown. Hazard Rank 3 indicates a site that is not known to be contaminated, but due to current or historical use could possibly have contamination that could affect the project.

construction worker screening levels, all but one of the samples found toxic equivalencies (TEQ) above a commonly used environmental screening level of 4.8 ppt.⁴⁷

Soil disturbance is planned for the entire length of the trail alignment, as either excavation or scarifying prior to compaction and placement of fill. The County originally planned to reuse excess excavated soil from higher elevation segments (like segment 5 along the CRC levee). Because the sampling events indicate that contaminated soils and hazardous materials are present in the project footprint, there is the potential that impacted soil could be encountered in areas of soil disturbance that would require containment, removal, and proper disposal. To address these hazards and to ensure the protection of human health and the environment, the Corridor Sampling Report includes recommendations for soil from segments 4, 7, 8, and 9 and states that excavated soil from these locations will need to be stockpiled and properly disposed of in accordance with applicable State and Federal guidelines. The report also recommends that site workers use appropriate PPE when handling soil from these locations.

After further consideration of the elevated dioxin levels found along the CRC property levee, the County has proposed not to reuse any excess soil from the higher-elevation levee sections. In order to comply with the recommendations of the Corridor Sampling Report and with applicable State and Federal guidelines, the County plans to prepare a final Construction Soil and Groundwater Management Plan that (a) demonstrates that all contaminated soil and groundwater encountered during construction shall be contained, handled, and properly disposed of in a manner that prevents discharge of contaminated soil and groundwater to the surrounding environment; (b) provides for field screening during construction activities, and sampling of any impacted soils and groundwater encountered with characterization for off-site disposal; and (c) includes proposed containment, handling, and disposal methods for special handling of impacted groundwater, impacted soil segregation, and disposal if necessary. To ensure that the measures proposed by the County adequately minimize the risk of mobilizing contaminants and to ensure adequate water quality protection consistent with sections 30230 and 30231, the Commission attaches **Special Condition 15** requiring, prior to commencement of construction, submittal of a final Construction Soil and Groundwater Management Plan for the review and approval of the Executive Director. The plan should include (among other things) (a) procedures for staging, stockpiling, managing, characterizing, and disposing of soil, and (b) measures to demonstrate that all contaminated soils encountered during construction, including soil impacted with arsenic and lead in segments 4, 7, and 8, and soils impacted with dioxins in segment 5, shall be contained, handled, and properly disposed of in a manner that prevents

⁴⁷ 4.8 ppt is listed as the environmental screening level in multiple resources published by the San Francisco Bay Regional Water Quality Control Board, including a 2019 "Environmental Screening Levels" table.

discharge of contaminated soil and groundwater to the surrounding environment and that excess soil shall not be reused on site as fill material.

Therefore, the Commission finds that the project as conditioned provides feasible mitigation measures to minimize the project's potential impacts to the biological productivity and quality of coastal waters and wetlands consistent with sections 30230, 30231, and 30232 of the Coastal Act.

I. Environmentally Sensitive Habitat Areas

Section 30240 of the Coastal Act states:

- 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.

Aside from the project's impacts and potential effects on wetlands, estuarine plant species, and marine resources discussed in the above Findings, the proposed trail alignment has the potential to impact other types of ESHA, including sensitive natural communities and sensitive species of nesting birds. However, as explained below, the proposed project will not be constructed within an environmentally sensitive natural community or potential nesting habitat for rare, threatened, and endangered species of birds. The project has been designed to avoid impacts to these types of ESHA and to protect against significant disruption of their habitat values.

As previously described, the proposed trail alignment will pass through the northern stretch of Eucalyptus and will require the removal of approximately 200 trees along a distance of approximately 2,500 feet. The tree stand includes a row of mature Eucalyptus trees growing within the embankment of Highway 101 and a row of younger trees growing within the railroad prism. The younger trees growing within the railroad prism directly conflict with the proposed trail alignment and will be removed in order to construct the trail. The row of mature trees growing within the highway embankment pose a safety risk to trail users, who would be situated within the failure zone of many tree limbs, some measuring up to twelve inches in diameter and weighing hundreds of pounds. The trail alignment avoids the southern stretch of Eucalyptus by going around the CRC property levee at segment 5. The Eucalyptus trees are not considered ESHA. The non-native Eucalyptus trees were originally planted in the 1920s to serve as a windbreak and beautification effort. Following a damaging frost in 1933, most trees were cut down and either replanted or new trees sprouted from the cut stumps. Additional trees were removed in 1953 to allow access to the Brainard mill site. The remaining trees are in an advanced state of physiological decline as a result of repeated severe pruning, limited rooting space, impervious soil cover (highway), saline water and soil,

low soil fertility, lack of organic soil cover (mulch) and regular significant winds. According to a certified arborist (Dryad, LLC, **Exhibit 7**), the trees exhibit structural weaknesses including decay at the base of the trunks, large dead limbs and weakened limb attachments, and many of the trees lack the foliage to survive. The weakened trees pose a risk to the public users of the proposed trail. According to the arborist who inspected the trees, “There is a high potential for both significant property damage and serious personal injury or death should whole trees or tree parts fail.” The arborist also concluded that there is no reasonable alternative method for mitigating risks through pruning, cabling and bracing, or partial removal. The report recommended that the entire stand be removed.

The County retained consulting firm GHD to perform vegetation mapping and biological assessments of the project area to determine whether ESHA is present within the proposed trail project footprint (GHD, November 2017). The report notes that Eucalyptus trees are native to Australia and have been naturalized in California but are not native to this area. Further, Eucalyptus trees are allelopathic, meaning they create chemicals that are harmful to native species and deter their growth and propagation, and are often removed as part of habitat restoration projects because they can outcompete and exclude native vegetation. Finally, the understory beneath the Eucalyptus trees is lacking in diversity and structure and provides little native wildlife habitat value. For these reasons, GHD concluded, and the Commission’s Ecologist confirmed, that the Eucalyptus trees do not have special rarity or special ecological value and do not meet the criteria for being considered an ESHA.

In order to determine whether the Eucalyptus trees provide habitat for bird species and would therefore be characterized as sensitive bird habitat (potential ESHA), the County contracted S.E. McAllister & Associates to perform a bird use monitoring report in June 2020 (**Exhibit 7**). Between October 28, 2019 and April 2, 2020, a qualified biologist staged several monitoring events to capture the late fall migration period when many raptors pass through the area, winter, and early spring when birds begin nesting. Surveys were conducted in the morning and evening and from multiple monitoring points. Throughout the surveys, most birds were observed either foraging or roosting. One pair of common ravens nested in the southern stand of Eucalyptus. The report concluded that the Eucalyptus trees provide poor quality habitat, largely due to the fact that the trees are deteriorating and lack the cover and complex branch structure preferred by birds. The report also noted that higher quality foraging, nesting, and roosting habitat is located in the surrounding wetlands, fields, forests, and bay areas. Thus, while the trees are a source of foraging and roosting habitat, they do not provide quality nesting habitat and are not considered ESHA.

Even though the Eucalyptus trees are not known to support nesting birds, there is the potential for sensitive species of nesting birds to begin nesting in the Eucalyptus trees at any time. The project area provides habitat for numerous bird species including waterfowl, shorebirds, birds of prey, and songbirds. For sensitive avian species potentially nesting in the project area, including special status raptors [northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), and short-eared owl (*Asio flammeus*)] and songbirds [Little willow flycatcher (*Empidonax traillii brewsteri*), Yellow-

breasted chat (Icteria virens), and California Yellow warbler (Setophaga Petechial brewsteri)], construction disturbance (e.g., site grading and vegetation removal) during the breeding season could result in loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.

To ensure protection of bird species in the project area, including special status raptors and migratory birds, **Special Condition 12** requires the County to implement MND Mitigation Measure BIO-5 which requires a qualified biologist to conduct pre-construction surveys for nesting birds no more than seven days prior to the commencement of work, unless the project will occur between March 15 and August 15, outside the avian breeding/nesting season. If any active nest is identified, the condition requires that the biologist, in consultation with CDFW, determine the extent of a construction-free buffer zone to be established around the nest, and construction must be delayed until after the young have fledged, as determined by additional surveys conducted by a qualified biologist.

With the addition of Special Condition 12, the Commission finds that the project as conditioned protects against any significant disruption of sensitive bird nesting habitat values consistent with section 30240 of the Coastal Act.

J. Visual Resources

Section 30251 of the Coastal Act states, in applicable part, as follows:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas...

Although not the standard of review, the County's LCP designates much of the project area visible from Highway 101 as a "Coastal View Area" (CVA) where (under LUP policy 3.40-B-4) "no development shall block coastal views to the detriment of the public." Specifically, the LCP requires that development in CVAs shall (among other requirements) not "block any part of the view to the coast or coastal waterways as viewed from public roads in a vehicle" and "exterior design, lighting and landscaping combine to render the overall appearance compatible with the natural setting as seen from the road."

The project area is directly along the Humboldt Bay shoreline in an area highly visible from public vantage points along Highway 101. As noted in the Visual Resources Impact Assessment prepared for the project (Caltrans 2018, **Exhibit 6**)

The proposed trail alignment begins in the northeast end of the Eureka and proceeds generally northeast along the NCRA corridor that parallels Highway 101 to the east and Humboldt Bay to the west. The flat elevation of the coastal

plain grants views of the bay throughout the entire trail alignment and adjacent Highway 101 corridor, with the exception of the extreme south end of the proposed trail, which passes into urban areas. The terrain to the west of the proposed project alignment includes open water, wetlands, mudflats, and designated wildlife areas. To the east is Highway 101, scattered industrial development, and agricultural lands. The proposed trail segment also would pass through two industrial areas located immediately adjacent to the bay. One... [billboard]... is located within the project area between the highway and railroad.

Elements of the proposed project that will be visible from public vantage points include the three bridges, the new railings proposed on the Eureka Slough Bridge, the new safety barriers, and the Eucalyptus tree removal. While the proposed project will create new viewing opportunities of Humboldt Bay and surrounding marshes, tidelands, and sloughs for trail users, the project raises visual resources issues that must be evaluated for conformance with section 30251, as discussed below.

Trail Elements

The proposed project includes a number of above-grade elements that will be visible from public vantage points. These include interpretive signage, viewing/overlook areas, fencing, cable barriers, and one new light at the Bracut driveway/trail intersection to enhance visibility at night. The County has not submitted final design plans for trail signage and amenities. As preliminarily described and depicted by the County, the height, bulk, location, and design of these structures are similar in size to those typically in use at other coastal access facilities in the area. The proposed new lighting will be designed to protect nighttime views and views of the night sky (using appropriate fixture types, cut off angles, shields, lamp arm extensions, and pole heights and directing light downward and away from natural areas). To ensure that public access amenities will not block or adversely affect scenic public vistas and be visually compatible with the character of the surrounding area, the Commission attaches **Special Condition 9**. Special Condition 9 requires submittal of final design plans for trail amenities including, but not limited to, interpretive signs and viewing platforms. The final plans must demonstrate how trail signage and amenities will be visually compatible with the character of surrounding areas.

Installation of three new bridges and modifications to the existing Eureka Slough Railroad Bridge will be visible to motorists traveling along the highway corridor and impact existing views to the Bay. The County considered aesthetics in its bridge and railing design, and to promote visual continuity along the Eureka and Arcata waterfront, the proposed new bridges will be consistent with nearby trail bridges in connecting segments of the CCT to the north and south. While the designs for the three new bridges are not finalized, 60% plans show that the new bridges will have concrete decking and vertical metal railings spaced apart so that trail users will be able to see through gaps. The County plans to use concrete decking on the new bridges instead of the metal decking used on the HBTN and EWT trails, which is expected to be quieter for trail users and will be compatible with the nature study use of the new trail. The County has provided preliminary conceptual plans for the new bridge railings on the Eureka

Slough Railroad Bridge showing they will consist of wood posts (spaced ~7 feet apart) with wood top rail and bottom sill and intermediate metal pickets and cables to replace existing four-foot-high vertical metal posts with horizontal cables. This design ensures railings will be as unobtrusive as possible and to maintain the views to the bay from Highway 101 and the existing EWT CCT.

For the various trail elements associated with the project, the visual resources impact assessment concludes in part:

The low profile low project features such as a guard rail and cable barriers, and directional signage would not substantially obstruct views of the bay as seen from inland areas. The three proposed new bridge structures including the Brainard Slough crossing and two crossings to the CRC levee (one at either end of the parcel) would affect the pattern elements (form, line, structure, texture, etc.) of the existing views, but the effect on visual resources and aesthetics would be less than significant. ... Consideration for construction materials, color palettes, plantings, and use of open safety barrier design would buffer the appearance of project features on the landscape and the effect on viewers, in particular, commuters on Highway 101 who would have the greatest familiarity with the pre-project conditions.

To ensure that the final bridge and railing design conforms with the preliminary designs to protect views and be visually compatible with the character of the surrounding area consistent with section 30251, Special Condition 7 requires the County to submit final plans for the proposed bridges and railings prior to commencement of construction.

In sum the Commission finds that the proposed trail elements will create additional viewing opportunities of Humboldt Bay and surrounding natural areas, will be constructed to be unobtrusive on the landscape, and will not adversely impact the panoramic scenic vistas of the bay visible from points adjacent to the trail such as along Highway 101. Therefore, the Commission finds that these proposed project elements as conditioned are consistent with section 30251.

Removal of Portion of Existing Eucalyptus Tree Stand

To protect the trail and the safety of trail users, the County proposes to remove approximately 42% of the total number of trees in the linear Eucalyptus tree stand lining a portion of the Eureka-Arcata Highway 101 corridor on the inland side of the proposed trail (Exhibit 4). This includes approximately 200 Eucalyptus trees with trunks 8 inches diameter or greater and up to approximately 60 feet tall in addition to smaller saplings and trees. Tree removal will occur across a linear distance of approximately 2,500 feet adjacent to trail segment 7. The remaining 58% of trees extending for a linear distance of approximately 3,400 feet located south of the tree removal area adjacent to trail segment 5 will remain (see **Exhibit 4**). The trees to remain are located between the CRC mill site and the highway [the proposed trail route in this area wraps around the outer (bayward) perimeter of the mill site so avoids being located adjacent to this portion of the Eucalyptus stand] and provide partial vegetative screening of industrial buildings and infrastructure on the mill site from the public vantage point of highway motorists.

The eucalyptus tree stand proposed for partial removal is a defining feature of this stretch of highway. The stand was planted approximately 100 years ago as a beautification effort and windbreak and contributes to the scenic character of the area and to the skyline as viewed from distant vantage points (e.g., the stand is visible from public vantage points across the bay to the north, west, and southwest). Although the stand is considered an important local landmark by some, it is not eligible for listing on the National Register of Historic Places or the California Register of Historic Resources.⁴⁸

The project will minimize the number of trees proposed for removal by not removing any trees that provide vegetative screening value for the industrial mill site. By removing that portion of the stand that currently partially blocks views of the bay available to motorists traveling the Eureka-Arcata Highway 101 corridor, the proposed tree removal will enhance the quality of views to and along Humboldt Bay available from public vantage points in the corridor. The remaining Eucalyptus trees not proposed for removal will continue to serve as a landmark and dominant skyline feature. Remaining trees also will continue to be complemented by the smaller row of trees and shrubs (Eucalyptus, Monterey pine, and others) along the east of the highway. Removal of the trees would change the view for highway users from a line of trees to unobstructed views of the coastal plain and bay, and buildings on the CRC property. Because the majority (58%) of Eucalyptus trees along the highway will remain, and removal of the northern 42% will open up views to the bay, removal of the Eucalyptus trees will protect views to and along the coast consistent with section 30251.

Safety Cable Barrier Fence

The cable rail barriers are proposed as a necessary safety feature to protect trail users from errant vehicles departing the roadway of Highway 101. The cable barrier will generally be located eight feet from the edge of highway pavement (18 feet from the edge of the travel lane), except near Bracut where the barrier will be closer to the edge of pavement due to constraints from the acceleration/deceleration lanes. The cable barrier includes a four-foot-wide paved concrete strip (weed mat). The weed mat is proposed in order to prevent vegetation from growing into, or around, the cables and posts, and to accommodate the use of maintenance vehicles for mowing the vegetated strips on either side of the weed mat (otherwise, maintenance workers would need to use hand-held equipment to maintain vegetation around the barrier). In most stretches of the median barrier area, the median is substantially wider than four feet and the appearance of the concrete base will be buffered by grass landscaping between the barrier, paved roadway, and trail. However, the acceleration and deceleration lanes near Bracut reduce the shoulder distance and the barrier would be located two to five feet from the edge of highway pavement and the weed mat would extend to the edge of the highway. Under Caltrans safety design standards, narrow strips of grass create

⁴⁸ According to a Historical Resources Evaluation Report completed for the project, the Eucalyptus tree stand is not eligible for the National Register of Historic Places or the California Register of Historic Resources. The State Historic Preservation Officer concurred with the determination.

unacceptable safety issues for maintenance workers who would be required to physically mow these sections with hand tools while being on or directly adjacent to the highway, and therefore exposed to traffic-related hazards for extended periods of time. Although the removal of the grass shoulder around Bracut will be noticeable to travelers who have frequently used this section of the corridor, the development will be compatible with the character of the surrounding area, as the development is in an urban setting that includes the Bracut Industrial Park to the west and commercial development and a Cabin/RV resort to the east, and substantial highway interchanges on both sides. As such, the cable rail barriers and guardrail updates protect coastal views to and along the coast and are visually compatible with the character of the highway, consistent with section 30251.

The Commission therefore finds the project as conditioned will protect views to and along the ocean and the surrounding scenic area, minimize the alteration of natural landforms, and will be visually compatible with the character of the surrounding area consistent with the directives of section 30251.

K. Coastal Hazards

Coastal Act section 30250 states in part:

- (a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.

Coastal Act section 30235 states, emphasis added:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply.⁴⁹

Coastal Act section 30253 states in part:

New development shall do all of the following:

⁴⁹ In reference to “coastal-dependent uses,” Coastal Act sec. 30101 defines “coastal-dependent development or use” as “any development or use which requires a site on, or adjacent to, the sea to be able to function at all.”

- (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...

Coastal Act section 30270 states:

The commission shall take into account the effects of sea level rise in coastal resources planning and management policies and activities in order to identify, assess, and, to the extent feasible, avoid and mitigate the adverse effects of sea level rise.

Policy Framework

As cited above, section 30253 of the Coastal Act states that new development must assure stability and structural integrity in a manner that does not require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. While the project site is not along a bluff or a cliff but rather directly along the bay shoreline, the Commission must consider appropriate shoreline setbacks and elevations for the proposed new trail development. Such setbacks/elevations should be based on an assessment of projected erosion and related hazards at the site for the life of the proposed development to help ensure that seawalls and other protective devices that could lead to adverse impacts would not be necessary in the future. Unlike the effects of shoreline protective structures on open sandy coasts, which affect sand supply and generally lead to a loss of beach area, the area around the project site is a shallow water estuary with extensive intertidal mudflats (exposed at low tides), coastal marshes, eelgrass beds, complex slough and channel systems, and adjacent brackish and freshwater marshes. In this environment, armoring and shoreline protection structures may reflect wave energy and restrict natural landward migration of the shoreline, and, in the Commission's experience, armoring one section of the coast often leads to increased armoring up- and down-coast, as sections of armoring reflect wave energy and can lead to increased erosion—and increased need for subsequent armoring—on adjacent land. Section 30270 makes clear that the Commission shall account for the effects of sea level rise when evaluating coastal hazards of a project. In addition, Coastal Act section 30250 requires that new development be located in areas where it will not have significant adverse effects on coastal resources, and the public access, habitat protection, visual resource protection standards of the Coastal Act also impose standards with which hard shoreline armoring often conflicts. Thus, shoreline protective devices, even in areas without bluffs and cliffs, generally are inconsistent with the Coastal Act due to their effects on natural shoreline processes and impacts on visual resources, public access, and other coastal resources.

Despite a project's inconsistency with section 30253 or other resource protection policies, section 30235 of the Coastal Act cited above allows for shoreline protection in

limited circumstances – i.e., (1) when it is required to serve coastal dependent uses or to protect existing structures in danger of erosion; (2) there is no other, less damaging feasible method to protect the use or structure; (3) it is designed to eliminate or mitigate adverse impacts on local shoreline sand supply; and (4) all other impacts of the protective device are avoided to the extent feasible, or if avoidance is infeasible, mitigated.

The coastal hazards analysis for this project is complicated by the unique constraints on the rail-with-trail project before the Commission as proposed by the County. The primary purpose of the project is to construct a portion of the coastal trail in the railroad right-of-way, whether or not the NCRA's pending request to "bank" the railroad line is approved by the federal Surface Transportation Board. The proposed project furthers dual goals to construct a portion of the coastal trail while also maintaining portions of the railroad in good condition for potential future use. In addition, the practical reality is that the railroad infrastructure will remain in its current location and configuration for the foreseeable future regardless of whether it is actively used for rail transit. Furthermore, it's important to note that the proposed rail-with-trail configuration of the project, which matches connecting rail-with-trail segments of the CCT to the north and south, involves certain key design constraints that relate to coastal hazards - namely that the trail cannot be located on top of the railroad.

Coastal Hazards

The project site is on the shoreline of Humboldt Bay in an area of high geologic and flood hazards, including the following coastal hazards:

Seismic and Faulting Hazards: Northwestern California is one of the most seismically active regions in the continental United States. The Gorda plate is being actively subducted beneath the North American plate north of Cape Mendocino, along the southern part of what is commonly referred to as the Cascadia Subduction Zone (CSZ). There are several active faults in the area capable of generating large-magnitude earthquakes, including megathrust earthquakes of magnitudes as much as 9.2 on the Richter scale along the CSZ. Potential impacts associated with these hazards include displacement of the ground surface along a fault during an earthquake (surface fault rupture), strong ground shaking, liquefaction, lateral spreading, and landslides.

Tsunami Hazards: The subject area is located within the mapped tsunami inundation area⁵⁰ and is at risk of tsunami inundation from waves generated from a variety of local and distant sources. Based on available inundation modeling, the area would not be inundated by smaller, more frequent tsunamis but would be inundated by more infrequent and extreme events, such as a tsunami generated

⁵⁰ Based on current maps published by the California Geological Survey:
<https://www.conservation.ca.gov/cgs/tsunami/maps/humboldt>.

during a CSZ earthquake.⁵¹ In the Humboldt Bay area, the time window between tsunami generation and local inundation could be on the order of a few minutes due to proximity to the CSZ, a local source for tsunami waves. In the case of a locally generated tsunami (originating from the CSZ source), the only warning residents and visitors in the area would receive would be a natural warning (strong, long-lasting shaking from an earthquake, which could last several minutes) occurring 10 to 15 minutes before inundation by the tsunami. As a result, there would be very little time for evacuation between the time the shaking stops and the associated tsunami waves inundate the area.

Flooding Hazards: According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Program flood insurance rate map for Humboldt County, the majority of the project area is within the mapped 100-year floodplain with a base flood elevation of 10 feet (NAVD88). These flood hazards may be exacerbated by expected future sea level rise (SLR). The Humboldt Bay region has the highest rate of SLR in the State due to active land subsidence. Based on its flood zone location and considering local relative SLR projections, the project area is vulnerable to an increased level of periodic inundation as a result of high tide and flood events. The property also may be subject to increased storm intensity associated with projected climate change and, as a result, may experience more frequent and intense flooding episodes. As such, an analysis of flood hazards under current SLR projections must be considered, as discussed in the below section.

Sea Level Rise Projections and Trail Design Life

The State of California has undertaken significant research to understand how much SLR to expect over this century and to anticipate the likely impacts of such SLR. In 2017, a working group of the Ocean Protection Council's (OPC) Science Advisory Team released *Rising Seas in California: An Update on Sea-Level Rise Science*. This report synthesized recent evolving research on SLR science, including a discussion of probabilistic SLR projections as well as the potential for rapid ice loss leading to extreme SLR. This science synthesis was integrated into the OPC's *State of California Sea-Level Rise Guidance 2018 Update (State SLR Guidance)*. This guidance document provides statewide recommendations for state agencies and other stakeholders to follow when analyzing SLR in association with projects. Notably, the guidance provides a set of regional projections recommended for use when assessing potential SLR vulnerabilities for a project. Taken together, the *Rising Seas* report and *State SLR Guidance* account for the current best available science on SLR for the State of California.⁵²

⁵¹ A CSZ event (magnitude 8.0 or greater) has an approximately ~270-year to 500-year average return period. Evidence suggests the last major CSZ quake occurred in January 1700 (~magnitude 9.0).

⁵² In addition, the Commission's adopted SLR Policy Guidance, as updated with science updates in November 2018, references the best available science throughout the document, including the 2018 OPC SLR Guidance.

The State SLR Guidance provides SLR projections for 12 tide gauges in the state and recommends using the projections for the gauge closest to the project site. In this case, the North Spit tide gauge at Humboldt Bay is the applicable gauge. The amount of SLR projected at the North Spit tide gauge for the year 2100 ranges from 4.1 feet (under the “low-risk aversion” scenario) to 7.6 feet (under the “medium-high risk aversion” scenario) to 10.9 feet (under the “extreme risk aversion” scenario).⁵³

Additional localized modeling has been performed for tidal levels and annual extreme high-water level probability estimates near the Arcata Marsh and Wildlife Sanctuary. The project alignment goes around Arcata Bay and is subject to tidal ranges similar to the Arcata Marsh. Localized modeling was performed by Northern Hydrology and Engineering (NHE) in 2015 using 2D model predictions and data from 2012 sea levels. These elevations result in higher mean monthly maximum water (MMMW) and mean annual maximum water (MAMW) levels, 8.4 feet and 9.4 feet (NAVD88) respectively, than tide levels at the North Spit tide gauge.

The proposed trail elevations range from approximately 10.5 to 12.0 feet, and the proposed bridge elevations range from 12.0 to 13.25 feet. These elevations are above the current MMMW and MAMW elevations. Therefore, under current conditions and still water levels, the trail and bridges are sited at high enough elevations (at least 2 to 3 feet higher) to be protected from average high daily, monthly, and King Tides. However, as evidenced by a severe 2005 storm event associated with a 9.5-foot King Tide, high wind, and heavy rain that resulted in flooding and closure of Highway 101, high water levels from high tides combined with storm surge allow wind waves to overtop the crest of lower lying portions of the railroad prism. In addition, under projected sea level rise scenarios, the proposed trail may be increasingly exposed to periodic inundation and wave overtopping as a result of high tide and storm events.

Environmental Science Associates (ESA) completed a Vulnerability and Adaptation Report for the project in June 2018.⁵⁴ The report included a detailed SLR analysis of the project area that combined existing vulnerability assessments with project-specific modeling, estimates of wave heights and wave runup during different scenarios, and

⁵³ The OPC projections are based on different scenarios related to future emissions and concentrations of greenhouse gases, aerosols, and other climate drivers. The projections for relative SLR on Humboldt Bay take into account the combined effects of regional eustatic SLR and vertical land motion (tectonic uplift and subsidence). As recommended by the OPC guidance, for the year 2100, the “low risk aversion” scenario (~17% chance of being exceeded) is derived from taking the upper range of the 66% probability range for “RCP-8.5,” which is the “Representative Concentration Pathway” that assumes there will be no significant efforts to reduce emissions globally. The “medium-high risk aversion” projection is derived from the upper range of the 0.5% probability range for RCP-8.5 (and it equates to a 1 in 200 chance, or a 0.5%, chance of being exceeded). The “extreme risk aversion” projection is based on presumed ice sheet loss in Greenland and the Antarctic (no associated probability at this time). Given the range of many uncertainties incorporated into the models, these projections are not precise but are intended to reflect a precautionary approach. While uncertainty will remain regarding exactly how much sea levels will rise and when, the direction of sea level change is clear.

⁵⁴ ESA’s research incorporated analyses from other relevant vulnerability assessments completed for the region, e.g., State Coastal Conservancy (2013) and Humboldt County (2018).

analyses of still water and total water levels (still water elevation plus the effects of wave setup and runup), which will be most extreme during King Tides and storm events (which may occur more frequently in the future under climate change scenarios). The ESA report developed a series of hazard scenarios to explore the anticipated range of potential outcomes associated with existing and future tidal water levels, fluvial flows, and modifications to the shoreline. In addition, the vulnerability assessment considered wave overtopping thresholds to determine when storm conditions would close or damage the trail. Incorporating the storm scenarios illustrates the vulnerability of this stretch of bay, portions of which are currently impacted by 2-year and 5-10-year storm scenarios. The assessment determined that with trail elevations of at least +10.5 feet NAVD88 and the additional protection provided by raising the railroad prism to +11.5 feet along segments 7 and 8, the trail design will limit, though not eliminate, periods when the trail would be closed to the public or damaged by wave overtopping. The proposed design elevations are listed below:

- Segment 3: The minimum trail elevation is 10.5 feet.
- Segment 4: The minimum trail elevation is 10.5 feet. The bridge connecting to the south side of the CRC property levee is designed at 12.0 feet.
- Segments 5 and 6: Where the levee faces south and southwest (and is more protected from wind waves), the minimum trail elevation is 10.5 feet. Where the levee faces west, northwest, and north and is more exposed to wind waves, the minimum trail elevation is 12.0 feet. The bridge connecting to the north side of the CRC property is at an elevation of 13.0 feet.
- Segments 7 and 8: The minimum trail elevation is 10.5 feet. However, in order to protect the trail, the railroad prism will be raised by 1.5 to 2 feet to a minimum elevation of 11.5 feet.
- Segment 9: The minimum trail elevation is 10.5 feet. The new bridge over Brainard Slough is designed at elevation 13.25 feet.

The ESA hazard scenarios are useful for (1) considering cause-and-effect linkages between hydrologic and geomorphic processes and physical changes to the landscape; (2) accounting for the compounding effect of wind set-up and wind waves; (3) identifying the specific locations where flooding is likely to be initiated (inundation pathways); and (4) estimating the total volume of floodwaters that would enter the inland areas during the storm event. However, because ESA's analysis uses the low-emissions scenario to calculate expected SLR, it assumes 2 feet of SLR by the year 2070 and 3 feet of SLR by the year 2100. The Commission's SLR guidance does not recommend using the low-emissions scenario, because global greenhouse gas emissions are currently tracking along higher emissions scenarios. Therefore, it is appropriate to consider a more precautionary timeline based on the Commission's SLR guidance, such as 2 feet by 2050-2060 and 3 feet between 2060 and 2080.

The amount of future flooding under projected SLR scenarios varies depending on several factors, including the starting total water elevation, whether the low, medium high-risk, or H++ scenario is used, and whether projections consider storm events. It is appropriate to look at both the low risk and medium-high risk scenarios for the trail project and consider a combination of the two. The low-risk scenario is intended for easily adaptable, low-risk development. The medium-high risk aversion scenario is used for projects with greater consequences and a lower ability to adapt. While unpaved sections of the coastal trail are considered low risk development, the proposed trail will be paved and will be more difficult to remove or relocate as needed. However, the trail could be easily closed to the public when conditions such as high King Tides combined with expected storm surges (as experienced in 2005) warrant it.

Incorporating different storm and SLR scenarios at different tidal datums coupled with minimum elevations of different trail segments and considering SLR projections projected for the North Spit tide gauge under the higher-emissions scenario as recommended by the State illustrates the vulnerability of the project area, portions of which are currently impacted by 2-year and 5-10-year storm events. Those portions of the trail with the lowest elevations (proposed at 10.5 feet) can be expected to be flooded on a near monthly basis (on average) by as early as 2050 (under the medium-high risk aversion scenario), and on a nearly daily basis by 2070. As sea level rises and storm events become more frequent and severe, overtopping events are likely to become more common. Overtopping events would result in ponding water and potentially sediment on portions of the trail as well as potentially more significant damage in some areas. During such events, the trail would not be readily usable until the tide drops and/or the storm abates. Other potential hazards to the trail from SLR and storms include wave spray, wave overtopping, trail overflow, and inundation. These forces could also deposit debris on the trail and erode the trail prism.

Measures to Address Vulnerabilities

The County has partially addressed the vulnerabilities of the project site through the incorporation of project design and monitoring measures. By raising the railroad prism/shoreline along trail segments 7 and 8 as proposed, the outermost edge of the shoreline bayward of the trail will be at an elevation of 11.5 feet. This will provide an additional level of protection for the 10.5-foot-high trail from storm events. The trail design also includes a durable asphalt surface, erosion control surface protections for the trail prism, drainage facilities, and other features to both resist damage from overtopping events, and to allow for cleaning and maintenance. In addition, the County plans to monitor the shoreline bayward of the trail through periodic inspections for damage. This will be especially important after storm events, when significant wave action and overtopping is most likely to occur and potentially cause erosion. Post-storm inspections, cleaning and maintenance will take place to maintain serviceability.

Furthermore, to address the significant geologic risks common to the general Humboldt Bay region, Crawford & Associates, Inc. (CAI) prepared a geotechnical report for the County's trail project dated in June 2019. Based on the site conditions and resulting hazards, the geotechnical report makes a number of recommendations on grading,

ground improvement, and foundation support necessary to minimize hazards that have been incorporated into the project design and preliminary construction plans. For example, specific recommendations for subgrade preparation are provided for areas where loose and soft bay muds may be encountered during construction and cannot be adequately compacted (e.g., expected in segments 3, 7, and 8). In addition, cast-in-steel-shell (CISS) pilings are recommended for the new bridges to provide adequate support during strong seismic ground-shaking and to resist damaging ground settlement associated with liquefaction. The concrete casing of the CISS pilings is designed to withstand the corrosive soil environment created by the shallow, brackish groundwater, and to preserve the function of the piles over time.

To confirm that the final plans prepared for the project incorporate all applicable site-specific recommendations of the geotechnical report to ensure that the project will be built to withstand seismic ground shaking and other seismic hazards, the Commission attaches **Special Condition 7**. This condition requires that prior to CDP issuance, the applicant shall submit final site and construction plans that substantially conform with the preliminary plans submitted with the application but which (among other requirements) include evidence that a licensed professional has reviewed and approved all final design, construction, and drainage plans and has certified that each of those plans is consistent with all applicable recommendations specified in the geotechnical report.

As previously noted, the entire trail alignment is in a tsunami hazard area that may be subject to tsunami inundation. Because the proposed project is a recreational facility that does not include habitable structures, residential units, or critical infrastructure, the risks to life and property are proportionately less than for more intensive development. Tsunami hazard warning signs already exist along the Eureka-Arcata Highway 101 Corridor, including along roads, parking areas, and other areas near the Arcata and Eureka trailheads that will connect to the subject trail. In addition, the County maintains a coastal tsunami early warning system that includes the use of tsunami sirens and other measures to warn residents and visitors of an impending tsunami.

Given that the applicant has chosen to implement the project despite flooding and geologic risks, the applicant must assume the risks. The Commission therefore attaches **Special Condition 19**. This condition requires the County to assume the risks of flooding and geologic hazards to the property and waive any claim of liability on the part of the Commission. Special Condition 19 notifies the applicant that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires the applicant to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand the hazards.

Shoreline Armoring

Because of the design constraints on the rail-with-trail project related to trail siting adjacent to the railroad, the proposed trail will eventually be threatened by wave overtopping and flooding and could require shoreline protection in the future. The proposed project also includes an immediate element of rock armoring repairs along

segments 4, 7, 8, and 9, which are intended to fix damages caused by a severe 2005 storm (and subsequent storms). The project thus raises the question whether it is appropriate to construct the Coastal Trail in an area vulnerable to coastal hazards and where it will rely on shoreline protection provided by the existing railroad infrastructure.

As previously discussed (see Table 2 in Finding F above), the proposed repairs to damaged portions of the existing railroad prism along the planned trail route involve placing new RSP on top of existing eroded partially armored areas of the railroad berm. Because the trail is inland of the railroad prism, and because the railroad prism is damaged and in disrepair in certain areas due to erosion from wave attack, the County will repair damaged sections of the railroad prism in segments 4, 7, 8, and 9 for a total repair length of approximately 6,600 feet within the 22,200-foot-long project area (this equates to repairs to approximately 30% of the project area). The proposed repair work will re-establish the footprint of the railroad prism within its historical footprint in areas where the rail prism is damaged, but the project will not enlarge or expand the rail prism bayward. Because the proposed repair work does not involve enlargement or expansion of the rail prism, this work constitutes repair and maintenance under the Coastal Act. RSP associated with repair and maintenance of the outer rail prism has been designed and engineered using appropriately sized rock to assure stability and minimize the potential for erosion during a large (approximately 50-year) wind wave event, while limiting the amount of RSP necessary to achieve this level of design.

Although shoreline protective devices such as rock armoring are usually not consistent with 30253 and other Coastal Act policies, the repair of the railroad prism can be approved in this case both as (1) repair and maintenance of an existing structure (railroad), and (2) permissible under section 30235 of the Coastal Act to protect an existing structure (railroad) and a coastal dependent use (CCT), provided that all other requirements of section 30235 are satisfied.

Existing Structure Threatened by Erosion

The existing railroad, which will also benefit from the proposed shoreline armoring repairs and be protected from coastal hazards by the repaired railroad prism, pre-dates the effective date of the Coastal Act and qualifies as an existing structure under section 30235.

Coastal Dependent CCT

The proposed Coastal Trail is a coastal-dependent use entitled to shoreline protection under section 30235. As part of the CCT network, the CCT is envisioned as a continuous interconnected public trail system along California's coast. The CCT by definition is intended to maximize access to ocean and scenic coastal vistas and should be located as close to the ocean as possible. The proposed trail is an infill CCT segment that will connect two existing CCT segments to the north and south (Exhibit 2). It is thus a coastal dependent use (as well as a nature-study use as discussed in Finding G above), as it requires a location adjacent to the sea to function for its intended public purpose. Thus, the proposed coastal dependent CCT nature-study trail segment is eligible for consideration of armoring under Coastal Act section 30235.

Alternatives

The proposed locations for repair and maintenance of the existing railroad prism are associated with vulnerable stretches of the bay where an absence of wave-attenuating salt marsh, combined with high winds and strong waves, has caused erosion and shoreline damage. The 1.25-mile section along the shoreline between the CRC property and Bracut (segments 7 and 8) is especially vulnerable to flooding for multiple reasons. This section of railroad and Highway 101 has the lowest elevations along the Eureka-Arcata transportation corridor, with the railroad elevation as low as 9.6 feet. In addition, wind wave energy within the bay is high during storm events, and wave-attenuating salt marsh adjacent to the railroad is largely absent. The railroad prism along segments 7 and 8 sustained significant flooding damage in December 2005 when storm surge combined with high tides resulted in the highest recorded water level in Humboldt Bay, concurrent with heavy winds and wind waves, resulting in overtopping of the railroad and closure of Highway 101 for several hours due to flooding. Portions of the RSP were damaged, and sections of railbed were lost to erosion. The proposed repair work associated with the rail-with-trail project can be considered repair and maintenance because, although sections of the railroad shoreline will be reconstructed and involve new rock fill, the rock will not extend beyond the historic RSP footprint, so the object of the repair work is not being enlarged.

The County analyzed several alternatives to using RSP for shoreline protection, including alternative “hard armoring” solutions, like a vertical sheet-pile wall or curb wall, and softer nature-based alternatives such as marsh sills, horizontal levees, and coarse sediment beaches. RSP was chosen over alternative hard armoring solutions, because it matches the existing material along the shoreline, can be incorporated into existing rock armoring to minimize new wetland fill, and has fewer environmental effects. The County also evaluated alternatives for the work proposed at Brainard Slough, including the use of softer natural materials like cobble, gravel, or large woody debris, rather than larger RSP. However, a softer alternative would require a gentler slope and ultimately greater amounts of wetland fill compared to the chosen project design.

Another alternative that the County considered is a “living shoreline” or “natural shoreline infrastructure” (NSI) alternative. The County is in the early planning phase for an NSI feasibility and design project along segments 7 and 8 of the project area, which would integrate with or replace the proposed RSP. Funded through grants from the National Fish and Wildlife Federation and the Ocean Protection Council, to date the County has performed site characterization and prepared preliminary design plans for a NSI project that spans a 1.25-mile-long stretch of shoreline between the CRC property and Bracut Industrial Park (segments 7 and 8 of the project). The County has considered a number of NSI designs, including horizontal salt marsh levees with and without armored toes, a breakwater reef, a barrier island breakwater with passive and active salt marsh creation, groins, and a coarse sediment shore. The County is currently working on 50% design plans for a hybrid alternative of salt marsh with coarse gravel shingle beach that will be modeled and used to further assess the constructability and longevity of this design. At this time, the feasibility of a NSI alternative has not been definitively established due to uncertainties around sediment supply dynamics. If, after

completion of the NSI design study (likely 2023), the County determines that a salt marsh/coarse beach alternative is feasible at this location and would provide comparable benefits to the existing and proposed RSP, the County may seek funding to implement the project, at which point the County would apply to the Commission for a CDP to implement the NSI project. The County has provided conceptual design plans for the NSI project that show the RSP treatments integrating with a future NSI project, with the rock incorporated into an expanded upland transition area involving a buried revetment design. The proposed RSP also is easily removed and could be removed or re-positioned as needed to be integrated into a future NSI project.

In addition, as discussed in Finding G above in relation to wetland fill impacts, alternative routes could also be considered that would not require shoreline protection. Alternative routes were found to be infeasible at this time due to wetland fill impacts, distance from nature study opportunities, and connection to existing CCT trail routes to the north and south. However, alternative routes for the CCT between Eureka and Arcata may be incorporated into a future transportation plan for the Highway 101 corridor for which Caltrans is currently leading the planning process. Caltrans is in the process of completing a Long-Term Sea Level Rise Comprehensive Adaptation and Implementation Plan (CAIP) as required by Special Condition 2 of the Eureka-Arcata Route 101 Corridor Improvement Project (CDP 1-18-1078). The SLR "CAIP" requires Caltrans to submit a plan to the Commission by 2025 that considers specific design elements and adaptation measures for the highway corridor, including whether the alternatives meet a series of established goals. One of the goals is to ensure that the preferred alternative maximizes and protects public access and recreation to and along the shoreline in a full multi-modal transportation network. The condition further requires Caltrans to coordinate with local governments and other relevant entities in the preparation of this plan. The County and Caltrans have also begun to coordinate on the future of the highway bridge over the Eureka Slough, which Caltrans is planning to replace or retrofit by 2029, and the preliminary designs include a separated pedestrian and bicycle lane for both northbound and southbound bridges. Furthermore, the County and the cities of Eureka and Arcata are working on LCP updates that include planning for SLR adaptation in the corridor and other vulnerable shoreline areas. The threat of SLR to the corridor will be further addressed during these, and potentially other, planning processes.

Therefore, the Commission finds that at this time, there is no other less damaging feasible method to protect the coastal trail than by repairing damaged portions of the existing railroad prism along the planned trail route as proposed and as conditioned as discussed below.

Sand Supply Impacts

Lastly, the project is not expected to have an adverse impact on local shoreline sand supply, because the site is characterized by tidal mudflat adjacent to the low-lying railroad with no sandy beach or existing coastal access.

Additional Measures Needed to Minimize Coastal Hazards Risks

The Commission finds that for now, the proposed siting and design of the trail, including the proposed rock repairs along the railroad shoreline, is appropriate. However, the Commission further finds that due to the fact that:

1. portions of the trail with the lowest elevations may be flooded on a near monthly basis by as early as 2050, and
2. there are current ongoing planning efforts among Caltrans, local governments (including the County), property owners, and other stakeholders for the Eureka-Arcata Highway 101 Corridor to adapt or retreat infrastructure and other development in the future, and
3. at this time there are no feasible alternatives to locating the proposed Coastal Trail in a hazardous area in partial reliance on shoreline armoring and where additional armoring may be required to protect the trail in the future as sea level rise increases,

Special Condition 18 is required to limit the term of authorization for the trail project. Through this condition, the Commission and the County can revisit the question of appropriate trail siting in the future and evaluate whether, with the benefit of regional planning efforts and further understanding of the predicted coastal hazards for the area, there are feasible alternatives for trail siting at that time that would further minimize coastal hazards risks and protect coastal resources. Special Condition 18 limits the term of authorization of the trail project until July 1, 2046, which is when the County's lease with the NCRA or its successor agency expires (although the lease may be extended through agreement by both parties) and also is the approximate projected time frame for when portions of the trail with the lowest elevations may be flooded on a near monthly basis. Special Condition 18 also limits the term of permit authorization in other ways, including:

- until the County or any government agency with legal jurisdiction has determined that the authorized development is currently and permanently unsafe for use due to damage from coastal hazards and that there are no feasible measures that could make the development suitable for use without the use of shoreline protective devices; or
- if removal is required pursuant to LCP policies for sea level rise adaptation planning; or
- if the development requires new and/or augmented shoreline protective devices that conflict with relevant LCP or Coastal Act policies.

The special condition allows the Executive Director to extend authorization up to 5 years for good cause and any further extensions to the authorization period would require approval by the Commission pursuant to an amendment to this CDP.

Conclusion

Based on the above discussions, the Commission concludes that the proposed trail project, as conditioned, minimizes hazard risks, assures stability and structural integrity, and will not have significant adverse effects on coastal resources consistent with the Coastal Act's hazards policies.

L. Protection of Archaeological Resources

Coastal Act section 30244 states as follows:

Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The project area lies within the traditional territory of the Wiyot Tribe. At the time that Euro-Americans first made contact in this region, the Wiyot lived almost exclusively in villages along the protected shores of Humboldt Bay and near the mouths of the Eel and Mad Rivers. Three federally recognized Tribes in the region – the Wiyot Tribe, the Blue Lake Rancheria, and the Bear River Band of the Rohnerville Rancheria – include citizens of Wiyot ancestry that are culturally affiliated with the greater Humboldt Bay region Wiyot ethnographic area as mapped by the Tribes.

In addition to referring information about the project to the Tribal Historic Preservation Officers (THPOs) of the three Wiyot area Tribes, Commission staff also referred the project to the other tribal contacts recommended for consultation by the Native American Heritage Commission (NAHC) and other tribal representatives with known interest in the project area region, including the Yurok Tribe, the Big Lagoon Rancheria, the Hoopa Valley Tribe, the Karuk Tribe, and the Cher-Ae Heights Community of the Trinidad Rancheria.

A cultural resources investigation report was completed for the project area in May 2018 by Roscoe and Associates. The investigation included a record search at the Northwest Information Center, a review of archaeological/historical reports and published literature pertinent to the project area, a 2017 archaeological field survey of the "area of potential effects" (project area and related equipment staging areas and other construction related areas), and recommendations for avoidance of sensitive archaeological sites with the potential to be uncovered in the project area. No artifacts, features, sites, or other archaeological cultural resources were encountered during the field survey, even though a Wiyot village site was recorded in 1918 within the area of potential effects. However, the landform on which the previously recorded shell mound had been recorded was destroyed in the mid-20th century for use as fill in local construction projects, and no evidence of the site has been reported since its original documentation in 1918. The cultural resources report concludes that it is unlikely that archaeological materials would be discovered during construction of the project.

Through consultations between the applicant, archaeologist, tribal representatives and Commission staff, the Tribes recommended including a permit condition related to the Inadvertent Archaeological Discovery protocol during construction and requirements for

coordination with the three Wiyot area Tribes regarding language and content for interpretative signs to be installed along the trail related to Wiyot history and culture. These mitigation measures conditions have been included as Special Conditions 17 and 9 respectively. **Special Condition 17** protects cultural resources that may be inadvertently discovered during project construction. If such deposits are discovered, Special Condition 17 requires construction within 66 feet (the distance recommended by the Tribes and adopted by the County in the CEQA document for the project) of the discovery site to cease and not recommence until the significance of the find can be analyzed in consultation with the THPOs of the Wiyot Tribe and a Supplementary Archaeological Plan for protecting the resource is prepared, submitted, and approved by the Executive Director. **Special Condition 9** requires submittal of final design plans for all signage and trail amenities including, among other requirements, plans for interpretive signage with design and content related to Wiyot Tribe cultural history developed in consultation the Wiyot area THPOs.

The Wiyot area THPOs also suggested that excavation work for trail construction in segments 8 and 9 not penetrate or exceed the depth of existing fill so as not to disturb any potential Tribal Cultural Resources below fill levels. For any excavation that would penetrate below fill depths at the documented sensitive site (which is mapped and included in the cultural resources investigation), a tribal or archeological monitor should be present during ground disturbing activities. Therefore, Special Condition 17 also includes a requirement that a tribal or archaeological monitor be present during construction activities that may extend beyond the depth of existing fill material within mapped areas of the known cultural resources.

The Commission thus finds that the proposed project, as conditioned, is consistent with section 30244, as the development includes reasonable mitigation measures to address adverse impacts to archaeological resources.

M. Reimbursement of Costs and Fees

Coastal Act section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications. See also 14 C.C.R. § 13055(g). Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP application. Therefore, consistent with section 30620(c), the Commission imposes **Special Condition 20** requiring reimbursement of any costs and attorneys' fees the Commission incurs in connection with the defense of any action brought by a party other than the Applicants/Permittees challenging the approval or issuance of this permit.

N. California Environmental Quality Act (CEQA)

The Applicant served as the lead agency for the project for California Environmental Quality Act (CEQA) purposes. The County adopted a mitigated negative declaration for the project on July 31, 2018.

Section 13096 of the Commission's administrative regulations requires Commission approval of CDP applications to be supported by a finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirements of the CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment. The Commission's regulatory program for reviewing and granting CDPs has been certified by the Resources Secretary to be the functional equivalent of environmental review under CEQA. (14 CCR § 15251(c).)

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. No public comments regarding potential significant adverse environmental effects of the project were received by the Commission prior to preparation of the staff report. As discussed above, the project has been conditioned to be consistent with the policies of the Coastal Act. As specifically discussed in these above findings, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative, has no remaining significant environmental effects, either individual or cumulative, and complies with the applicable requirements of the Coastal Act to conform to CEQA.

APPENDIX A

SUBSTANTIVE FILE DOCUMENTS

Coastal Development Permits and Application Materials

Application File for Coastal Development Permit (CDP) No. 1-20-0560
Project Study Report (Humboldt County, March 2014)
Initial Engineering Study (GHD, August 2014)
Basis of Design Report for Trail Width (Humboldt County, March 2016)
Preliminary Environmental Study (Humboldt County, July 2017)
Vegetation Mapping/Environmentally Sensitive Habitat Areas Screening (GHD, November 2017a)
Initial Site Assessment (GHD, November 2017b)
Technical Memorandum: Botanical Survey (GHD, December 2017a)
Wetland Delineation (GHD, December 2017b)
Archaeological Survey Report (Roscoe and Associates, February 2018)
Biological Assessment (Caltrans, February 2018)
2018 Bridge Detailed Inspection Report: Eureka Slough Bridge (American Rail Engineers, February 2018)
Natural Environment Study (Caltrans, March 2018a)
Visual Resources Impact Assessment (GHD, March 2018b)
Location Hydraulic Study (GHD, March 2018a)
Summary Floodplain Encroachment Report (GHD, March 2018b)
Eureka Slough North Coast Railroad Authority Railroad Bridge Improvement Alternatives Study (Morrison Structures, April 2018)
Sea Level Rise Vulnerability and Adaptation Report (ESA, July 2018)
Technical Memorandum: HBTS Structural Design Criteria for Final Design (Draft) (Morrison Structures, August 2018)
Historic Property Survey Report (JRP Historical Consulting, April 2018)
Historical Resources Evaluation Report (JRP Historical Consulting, April 2018)
Limited Visual Tree Risk Assessment (Dryad, October 2018)
Geotechnical Report (Crawford and Associates, June 2019)
Bird Use Monitoring Report for Eucalyptus Trees along the Eureka-Arcata Highway 101 Corridor (Sean McAllister, June 2020)
Corridor Sampling Report (GHD, August 2020)

1-20-0560 (Humboldt County DPW)

Background Documents Related to Rail-Trail Policies

Trail Projects on the NWP Line Rights-of-Way; Design, Construction, Safety, Operations, and Maintenance Guidelines (NCRA, May 2009)

Assessment of the North Coast Railroad Authority and Viability of a Great Redwood Trail (Report to the Legislature, 2020)

Feasibility Study Update and Assessment Report (Stone Consulting, 2019)

California Senate Bill (SB) 1029 (North Coast Railroad Authority Closure and Transition to Trails Act, Ch. 934, Stats. 2018)

SB 69 (Great Redwood Trail Act, Ch. 423, Stats. 2021)

Background Documents Related to Wetland Fill Mitigation

Caltrans. (2015, December). Humboldt Bay Area Mitigation Concept Design Report.

H.T. Humboldt Bay Regional Spartina Eradication Plan. Prepared for the California State Coastal Conservancy. Arcata. (H.T. Harvey & Assoc. November 1012)

Invasive Spartina densiflora Brongn. Reduces Primary Productivity in a Northern California Salt Marsh. M. S. Thesis, Humboldt State University, Arcata, CA, 65 pp. (Lagarde, L.A. 2012)

A Comparison of Terrestrial Invertebrate Communities in Spartina-Invaded and Restored Humboldt Bay Salt Marshes. M. S. Thesis, Humboldt State University, Arcata, CA. (Mitchell, M.L. 2012)

Staff Report for CDP 1-14-0249 (Humboldt Bay Harbor, Recreation, and Conservation District).

Staff Report for CDP 1-18-1078 (Caltrans Eureka-Arcata Highway 101 Corridor Improvement Project)

Background Documents Related to Sea Level Rise

Humboldt Bay: Sea level rise, hydrodynamic modeling, and inundation vulnerability mapping – Final report. Prepared for the State Coastal Conservancy and Coastal Ecosystems Institute of Northern California. (Northern Hydrology & Engineering, April 2015)

Commission updated SLR Guidance 2018

City of Arcata Sea Level Rise Risk Assessment (Northern Hydrology & Engineering, March 2018)

LCPs

Humboldt County certified LCP

City of Eureka certified LCP

City of Arcata certified LCP