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Staff:	M. Kraemer-A
Staff Report:	11/30/18
Hearing Date:	12/13/18

STAFF REPORT: REGULAR CALENDAR

Application No.:	**1-17-0926**
Applicant:	**City of Eureka**
Location:	Near the mouth of the Elk River at Humboldt Bay, west of Highway 101, between Pound Road and the southern end of Tooby Road, in Eureka, Humboldt County.
Project Description:	Elk River Estuary Intertidal Wetlands Enhancement Project involving tide gate modifications, habitat restoration, installation of a new non-motorized boating access point, construction of a one-mile-long extension of the California Coastal Trail, and installation of new interpretive signage and nature-study viewing platforms across approximately 114 acres of existing agricultural and marsh lands.
Staff Recommendation:	Approval with Special Conditions

SUMMARY OF STAFF RECOMMENDATION

The proposed project involves the restoration and enhancement of approximately 114 acres of tidal and riparian habitats near the mouth of the Elk River in south Eureka within areas that were mostly diked off from tidal action in the early 20th century. The primary identified goal of the

project is to enhance the Elk River estuary by enhancing the tidal channel network, intertidal wetlands and riparian habitat to a healthy, self-sustaining state. Such restoration will increase the quantity and quality of available salmonid habitat in the Elk River estuary to benefit the watershed as a whole. The project also includes new and enhanced public access and recreational amenities, including the development of a one-mile-long extension of the California Coastal Trail, a trailhead parking area off Tooby Road, and a non-motorized boat access ramp on a restored Elk River estuary channel. The project would result in the conversion of approximately 89 acres of existing diked farmland (grazing land) to non-agricultural uses (primarily to restored salt marsh habitat).

The primary Coastal Act issues raised by the project include the need to ensure that the project comprises permissible diking, dredging and filling of coastal wetlands and waters, permissible conversion of non-prime agricultural land on the edge of the urban-rural boundary, and implementation of maximum public access and recreational opportunities.

Staff believes that the proposed fill associated with the development of the new recreational trail segments and non-motorized boating access ramp is for "nature study… or similar resource dependent activities" allowable under section 30233 of the Coastal Act, because the proposed design minimizes fill intrusions to the smallest feasible area and least impacting routes, and the trail segments and boat access ramp would function as public coastal nature trail access areas affording unique nature-viewing opportunities within the restored Elk River estuarine marsh. In addition, staff believes that the proposed dredging and filling across approximately 90 acres of existing wetlands is allowable under section 30233 for "restoration purposes," because the project would restore historic tidelands, historic juvenile salmonid rearing habitat, historic riparian habitat, and historic connectivity between fringe tidal channels at the transition between tidal and non-tidal lands. The restored tidal marsh, riparian, tidal channels, and eelgrass habitats will ultimately be of much greater ecological value than the existing habitats and the overall restoration project will provide a beneficial solution to the existing turbidity problems in the lower Elk River that currently result in part from an excess of sediment being confined to an artificially narrowed channel.

Although the project would result in the conversion of approximately 89 acres of existing non-prime farmland (currently used for livestock grazing), staff believes that the conversion of grazing lands to the proposed habitat restoration and nature study/recreational trail uses comprises a permissible conversion of agricultural land consistent with the criteria of section 30241 of the Coastal Act, because the project site is on the periphery of an urban area, adjacent to the LCP-certified urban limit lines both north and south of the property.

Staff is recommending approval of the project with several special conditions requiring implementation of the project as proposed, including, but not limited to, conditions to protect water quality and sensitive species. Staff also recommends conditions to ensure that the trail functions as a coordinated and integrated continuous public access system along the Eureka waterfront, as well as conditions to ensure that the Applicant has the legal ability to undertake development on property owned by others and comply with all conditions of approval. Staff believes that the proposed project, as conditioned, is consistent with all applicable Chapter 3 policies of the Coastal Act.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

Motion:

*I move that the Commission **approve** coastal development permit 1-17-0926 pursuant to the staff recommendation.*

Staff recommends a **YES** vote on the foregoing motion. 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 a coastal development permit 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 and development shall not commence 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. **Evidence of Legal Ability of Applicant to Undertake Development on Property Owned by Others and Comply with Conditions of Approval**
   A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-17-0926, the Applicant shall submit, for the review and approval of the Executive Director, evidence that clearly demonstrates that the North Coast Railroad Authority or the Northwestern Pacific Railroad Company, as the legal owner(s) of APNs 302-181-030 and 305-141-002: (1) has formally agreed in writing that the Applicant may undertake development on each of their respective properties pursuant to CDP 1-17-0926, as conditioned by the Commission herein; and (2) has entered into a license agreement for public trail use of the railroad right-of-way through the subject properties as authorized by CDP 1-17-0926, as conditioned by the Commission herein**.** Such license agreement shall include provisions that specifically address the portion of the project involving shared use of the railroad bridge over the Elk River Estuary.
   B. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-17-0926, the Applicant shall submit, for the review and approval of the Executive Director, evidence that clearly demonstrates that Hoff USA Inc. et al., as the legal owner(s) of APN 302-181-039, has formally agreed in writing that the Applicant may undertake development on its property as authorized by CDP 1-17-0926 and as conditioned by the Commission herein.
   C. No changes to the approved development may occur unless and until the Applicant/ Permittee obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

2. **State Lands Commission Review.** PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-17-0926, 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.

3. ***Spartina densiflora* Removal Requirements**
   A. The permittee shall carry out *Spartina densiflora* eradication activities in compliance with the special conditions of Coastal Development Permit 1-14-0249, including the requirement to submit a site-specific *Spartina* Removal Plan to the Executive

Director for review and approval prior to commencement of *Spartina* removal activities.

B. The fill material placed in Area 1 for the temporary diking of a 100-foot by 100-foot *Spartina* removal area to test the efficacy of the flooding treatment method for *Spartina* eradication shall be removed following completion of the pilot project, and the area shall be reconnected with surrounding salt marsh and fully restored to appropriate salt marsh elevations and monitored for restoration success consistent with Special Condition 4.

C. WITHIN SIX MONTHS OF COMPLETION OF THE *SPARTINA* REMOVAL PILOT PROJECT, the Applicant shall provide a written report to the Executive Director documenting the timing, methods and results of the flood treatment pilot project and confirming removal of the temporary dikes and restoration of the area as required by subsection (B) of this condition.

4. **Habitat Restoration Monitoring and Reporting Plan (MRP) Implementation**

A. The Applicant shall implement the habitat restoration project in accordance with the proposed "Elk River Estuary and Tidal Wetland Enhancement Project Monitoring and Reporting Plan" (MRP) dated June 2018 prepared by Greenway, and the following objectives shall be achieved by the end of the fifth monitoring year following completion of project construction as proposed by the MRP:

(i) There shall be 12 acres of restored riparian habitat dominated by native riparian plants;

(ii) There shall be 79 acres of salt marsh habitat dominated by native tidal marsh plants;

(iii) There shall be is 0.7-acre of freshwater wetlands dominated by native wetland plant species;

(iv) There shall be 12.9 acres of restored intertidal channels; and

(v) There shall be 9 acres of suitable eelgrass habitat between -4 ft. minimum to +2 ft. maximum (NAVD88)

B. The Applicant shall submit annual monitoring reports to the Executive Director by January 31st following each monitoring year. If the final monitoring report indicates that the habitat restoration project has been unsuccessful, in part or in whole, based on the approved goals, objectives, and success standards set forth in the approved final MRP, the Applicant shall 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 revised or supplemental plan shall be processed as an amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

C. 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.

5. **Final Plans for Habitat Restoration and Coastal Trail Construction**

A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-17-0926, the Applicant shall submit final site and construction plans for the review and written approval of the Executive Director for the development of the proposed habitat restoration components and coastal trail elements that conform with the project description and preliminary plans submitted with the CDP application, and which also are consistent with all special conditions of CDP 1-17-0926.

(i) The plans shall include the following:

a) Plan, profile, and cross-sectional architectural drawings for all segments of the trail and access amenities including elevated trails, viewing platforms, boating access, parking areas, and fencing;

b) Signage plans and schedule consistent with Special Condition 6; and

c) Planting plans and schedule consistent with Special Condition 7.

(ii) The plans shall evidence, at a minimum, implementation of all the following:

a) Trail width shall not exceed 8 feet with two-foot-wide unpaved shoulders in wetland areas;

b) Elevated trail and viewing platforms shall be elevated above restored tidal marsh habitat areas as proposed and shall be constructed of light-permeable materials to allow light access beneath the elevated trail to minimize impacts to marsh vegetation; and

c) All recommendations for site preparation, compaction, and grading included in the geotechnical memorandum completed for the trail extension component prepared by LACO Associates dated July 12, 2018.

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.

6. **Final Plans for Trail Signage and Parking Lot Fencing**

A. PRIOR TO COMMENCEMENT OF CONSTRUCTION OF SIGNAGE AND TRAIL AMENITIES AUTHORIZED BY COASTAL DEVELOPMENT PERMIT 1-17-0926, the Applicant shall submit for the review and written approval of the Executive Director, design plans for all proposed signage and fencing that are consistent with the project description and with all special conditions of CDP 1-17-0926:

(i) The plans shall demonstrate that:

a) Nature-study signage, including a minimum of two signs in each area, shall be erected along trail segments both in Area 1 and in Area 2;

b) Signage and fencing will be visually compatible with surrounding areas with respect to height and bulk, including signs that are no larger than those currently installed on the adjacent Hikshari' Trail, and do not significantly obstruct views from public vantage points; and

c) Signage and fencing will conform in architectural style, construction materials, surface treatments, and physical appearance with other similar public improvements along the Eureka waterfront.

(ii) The plan shall contain at a minimum:

a) Site plan locations of all signage, fencing, and other related improvements;

b) A description of sign content demonstrating that the signage will include information related both to nature study/area resources as well as public safety from natural hazards of the site, including tsunami wave runup; and

c) A schedule for the installation of the signs, fencing, and other related improvements.

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.

7. **Revegetation Requirements**

A. Areas of ground disturbance, including temporary staging areas, shall be fully restored and planted as proposed in the fall months immediately following completion of construction and shall be monitored for restoration success consistent with Special Condition 4;

B. Only native and/or non-invasive plant species shall be planted. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or by the State of California shall be planted or allowed to naturalize or persist in landscaped areas. No plant species listed as a "noxious weed" by the State of California or the U.S. Federal Government shall be planted;

C. All landscaped areas on the project site shall be maintained in a litter-free, weed-free, and healthy growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials; and

D. Rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone, Brodifacoum, or Diphacinone, shall not be used on the subject property.

8. **Construction Responsibilities**. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Applicant shall submit, for the review and written approval of Executive Director, a final Construction-Phase Pollution Prevention Plan that demonstrates that all construction, including, but not limited to, clearing, grading, staging, storage of equipment and materials, and other activities that involve ground disturbance, complies, at a minimum, with the following requirements:

A. Earth-moving construction activities (e.g., grading, dredging, placement of fill material) shall only occur during the dry season (June 1 – October 31), during periods of dry weather and during periods when the area is not inundated by tidal waters;

B. During construction, erosion and the discharge of sediment off-site or to coastal waters shall be minimized using appropriate Best Management Practices (BMPs), including, but not limited to, the following:

(i) Land disturbance during construction (e.g., clearing, grading, and cut-and-fill) shall be minimized, and grading activities shall be phased, to avoid increased erosion and sedimentation.

(ii) Erosion control BMPs (such as mulch, soil binders, geotextile blankets or mats, or temporary seeding) shall be installed as needed to prevent soil from being transported by water or wind. Temporary BMPs shall be implemented to stabilize soil on graded or disturbed areas as soon as feasible during construction, where there is a potential for soil erosion to lead to discharge of sediment off-site or to coastal waters.

(iii) Sediment control BMPs (such as silt fences, fiber rolls, sediment basins, inlet protection, sand bag barriers, or straw bale barriers) shall be installed as needed to trap and remove eroded sediment from runoff, to prevent sedimentation of coastal waters.

(iv) Tracking control BMPs (such as a stabilized construction entrance/exit, and street sweeping) shall be installed or implemented as needed to prevent tracking sediment off-site by vehicles leaving the construction area.

(v) Runoff control BMPs (such as a concrete washout facility, dewatering tank, or dedicated vehicle wash area) shall be implemented during construction to retain, infiltrate, or treat stormwater and non-stormwater runoff.

(vi) All temporary BMPs shall be removed from wetlands and waters upon completion of construction when no longer needed for sediment or erosion control.

(vii) Grading shall be prohibited during the rainy season, from November 1 through May 31.

C. The discharge of other pollutants resulting from construction activities (such as chemicals, vehicle fluids, petroleum products, asphalt and cement compounds, debris, and trash) into runoff or coastal waters shall be minimized using appropriate BMPs, including:

(i) Materials management and waste management BMPs (such as stockpile management, spill prevention, and good housekeeping practices) shall be installed or implemented as needed to minimize pollutant discharge and polluted runoff resulting from staging, storage, and disposal of construction chemicals and materials. BMPs shall include, at a minimum:

a) Covering stockpiled construction materials, soil, and other excavated materials to prevent contact with rain, and protecting all stockpiles from stormwater runoff using temporary perimeter barriers.

b) Cleaning up all leaks, drips, and spills immediately; having a written plan for the clean-up of spills and leaks; and maintaining an inventory of products and chemicals used on site.

c) Proper disposal of all wastes; providing trash receptacles on site; and covering open trash receptacles during wet weather.

d) Prompt removal of all construction debris from the restoration areas.

e) Detaining, infiltrating, or treating runoff, if needed, prior to conveyance off-site during construction.

(ii) Fueling, maintenance, and washing of construction equipment and vehicles shall be conducted off site if feasible. Any fueling and maintenance of mobile equipment conducted on site shall take place at a designated fueling areas within designated staging areas only, and located at least 150 feet from coastal waters, drainage courses, and storm drain inlets, if feasible (unless those inlets are blocked to protect against fuel spills). The fueling and maintenance area 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 (such as cranes) may be fueled and maintained in other areas of the site provided that procedures are implemented to fully contain any potential spills.

D. The damage or removal of non-invasive vegetation (including trees, native vegetation, and root structures) during construction shall be minimized.

E. Soil compaction due to construction activities shall be minimized, to retain the natural stormwater infiltration capacity of the soil.

F. The use of temporary erosion and sediment control products (such as fiber rolls, erosion control blankets, mulch control netting, and silt fences) that incorporate plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers) shall be avoided, to minimize the potential for wildlife entanglement and plastic debris pollution.

G. Construction taking place in, over, or adjacent to coastal waters and habitat shall protect the coastal waters and habitat by implementing additional BMPs, including, but not limited to, the following:

(i) Construction activity shall not be conducted below the mean high tide line, unless tidal waters have receded, and the area is part of the authorized work area.

(ii) All work shall take place during daylight hours, and lighting of the beach and ocean area is prohibited.

(iii) Tarps or other devices shall be used to capture debris, dust, oil, grease, rust, dirt, fine particles, and spills to protect the quality of coastal waters.

(iv) All erosion and sediment controls shall be in place prior to the commencement of construction, as well as at the end of each workday. At a minimum, if grading is taking place, sediment control BMPs shall be installed at the perimeter of the construction site to prevent construction-related sediment and debris from entering the bay, waterways, natural drainage swales, and the storm drain system, or being deposited on the beach.

(v) If preservative-treated wood is used, appropriate BMPs shall be implemented that meet industry standards for the selection, storage, and construction practices for use of preservative-treated wood in aquatic environments; at a minimum, those standards identified by the Western Wood Preservers Institute, et al. in *Treated Wood in Aquatic Environments: A Specification and Environmental Guide to Selecting, Installing and Managing Wood Preservation Systems in Aquatic and Wetland Environments* (2012) or current revision thereof (https://preservedwood.org/portals/0/documents/TW_Aquatic_Guide.pdf.). The preservative-treated wood shall be certified by a third-party inspection program,

as indicated by the presence of a BMP Quality Mark or Certificate of Compliance, to have been produced in accordance with industry BMP standards designed to minimize adverse impacts in aquatic environments.

H. Appropriate protocols shall be implemented to manage all construction-phase BMPs (including installation and removal, ongoing operation, inspection, maintenance, and training), to protect coastal water quality.

I. The Construction and Pollution Prevention Plan shall include a construction site map and a narrative description addressing, at a minimum, the following required components:

(i) A map delineating the construction site, construction phasing boundaries, and the location of all temporary construction-phase BMPs (such as silt fences, inlet protection, and sediment basins).

(ii) A description of the BMPs that will be implemented to minimize land disturbance activities, minimize the project footprint, minimize soil compaction, and minimize damage or removal of non-invasive vegetation. Include a construction phasing schedule, if applicable to the project, with a description and timeline of significant land disturbance activities.

(iii) A description of the BMPs that will be implemented to minimize erosion and sedimentation, control runoff and minimize the discharge of other pollutants resulting from construction activities. Include calculations that demonstrate proper sizing of BMPs.

(iv) A description and schedule for the management of all construction-phase BMPs (including installation and removal, ongoing operation, inspection, maintenance, and training). Identify any temporary BMPs that will be converted to permanent post-development BMPs.

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.

9. **Fish Protection Measures**. The Applicant shall undertake development in compliance with the following proposed fish protection measures:

A. Prior to commencement of dewatering activities and prior to commencement of any instream work in Area 1, a qualified fisheries biologist shall, in consultation with CDFW, NMFS, and FWS, seine fish outside of the work area consistent with agency consultations completed for the project;

B. Dewatering activities in Area 1 shall only occur between July 1 and October 15 of each year during construction; and

C. Pumps used to dewater work areas shall utilize appropriately sized mesh screens to prevent fish entrainment.

10. **Protection of Bird Nesting Habitat.** The Applicant shall undertake development in compliance with the following proposed bird nesting habitat protection measures:

A. Clearing of vegetation that may provide nesting habitat for rare avian species shall be avoided during the nesting season (mid-March to mid-August) to the maximum extent feasible;

B. If it is not feasible to remove vegetation that may provide potential nesting habitat outside the avian nesting season, a survey for nesting birds in and adjacent to the project construction area shall be conducted by a qualified biologist according to current California Department of Fish and Wildlife (CDFW) protocols no more than seven days prior to the commencement of construction activities. If any active nest is identified during preconstruction surveys, the biologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest, and construction in the buffer zone shall be delayed until after the young have fledged, as determined by additional surveys conducted by a qualified biologist. The construction-free buffer zone shall be a minimum of 250 feet for nesting raptors and a minimum of 50 feet for other sensitive bird species; and

C. Prior to the commencement of authorized work each year during the avian nesting season, the permittee shall submit, for the review and approval of the Executive Director, the survey required in Part B above, including a map that locates any nesting habitat identified by the survey and delineates the required construction-free buffer zone, and a narrative that describes proposed sensitive habitat avoidance measures.

11. **Protection of Northern Red-legged Frogs.** The Applicant shall undertake development in compliance with the following proposed frog protection measures:

A. No more than one week prior to commencement of ground disturbance within 50 feet of all suitable northern red-legged frog habitat, a qualified biologist shall perform a pre-construction survey for the northern red-legged frog and shall coordinate with the California Department of Fish and Wildlife (CDFW) staff to relocate any animals that occur within the work impact zone to nearby suitable habitats; and

B. If northern-red legged frog is observed in an active construction zone, the contractor shall immediately halt construction activities until a biologist, in consultation with CDFW, has moved the frog to a safe location in similar habitat outside of the construction zone.

12. **Protection of Western Pond Turtle.** The Applicant shall undertake development in compliance with the following proposed western pond turtle protection measures:

A. No more than two weeks prior to commencement of ground disturbance within 50 feet of all Western pond turtle habitat, a qualified biologist shall perform a pre-construction survey for the turtle and shall coordinate with the California Department of Fish and Wildlife (CDFW) staff to relocate any animals that occur within the work impact zone to nearby suitable habitats. Any located nests should be flagged for avoidance with a minimum 50-foot buffer until hatchlings have emerged.

B. In the event that a Western pond turtle is observed in an active construction zone, the contractor shall immediately halt construction activities until a biologist, in consultation with CDFW, has moved the turtle to a safe location in similar habitat outside of the construction zone.

13. **Protection of Special Status Plants**
    A. Construction shall avoid impacts to the mapped Humboldt Bay owl's-clover (*Castilleja affinis* ssp. *humboldtiensis*) population at the north end of Area 2 adjacent to the earthen levee along the Elk River, as identified in the botanical report prepared by McBain Associates (2016).
    B. Construction in the vicinity of special-status plant populations known to occur within the project area limits including, but not limited to, Humboldt Bay owl's-clover and Lyngbye's sedge (*Carex lyngbyei*), as identified in the botanical report prepared by McBain Associates (2016), shall be scheduled for times of the year occurring after special-status plants have dropped their seed to the maximum extent feasible to avoid impacts to plant blooming and seed dispersal.
    C. The Applicant shall achieve salt marsh restoration and monitor the restored salt marsh habitat areas consistent with Special Condition 4 to ensure that any rare plant habitat impacted by construction is adequately compensated for through successful achievement of the goals and objectives of the salt marsh habitat restoration.

14. **Use, Maintenance, Modification, and Abandonment of Trail**. The trail authorized by this coastal development permit shall comply with the following:
    A. The trail authorized by this coastal development permit shall comply with the following:
        (i) The trail shall be a Class I multi-use trail available for shared public use 24 hours a day daily;
        (ii) The permittee shall be responsible for maintenance of the multi-modal trail and motorized vehicles shall be permitted access by the City and its agents for construction, maintenance and emergency purposes;
        (iii) The City shall maintain continuously all trail improvements in good order and repair and shall allow no nuisances to exist or be maintained therein;
        (iv) No portion of the trail owned by the City of Eureka in fee or by grant of easement may be abandoned by the City 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
        (v) Any proposed changes, including any proposed change in the above-identified scope, manner or extent of use or any proposed relocation or abandonment of any portion of the multi-modal trail, shall require an amendment to CDP 1-17-0926 approved by the California Coastal Commission, unless the Executive Director determines that no amendment is legally required.
    B. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-17-0926, the applicant shall enter into a written agreement with the Commission, in a form and content acceptable to the Executive Director, acknowledging and agreeing to implementation of all of the above terms of this condition.

15. **Public Safety Plan for Shared Use of Bridge over Elk River Estuary**
    A. AT LEAST TWO WEEKS PRIOR TO ANY SHARED USE OF THE BRIDGE OVER THE ELK RIVER ESTUARY BY SPEEDER CAR, the Applicant shall

submit, for the review and approval of the Executive Director, a Public Safety Plan for trail users in the project area. The plan shall address: (1) safety considerations including posting signs along the trail segments at the approaches to the bridge crossing and arranging for flaggers to be present for the duration of the crossing event; (2) emergency response; (3) security measures; (4) design standards; and (5) reopening the railroad bridge to trail users as soon as possible after use of the bridge by speeder car is complete.

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.

16. **Agreement to Record a Deed Restriction if Coastal Trail Property Owned by the City of Eureka is to be Conveyed**

A. PRIOR TO ANY CONVEYANCE OF ANY COASTAL TRAIL PROPERTIES OWNED BY THE CITY OF EUREKA (APNs 302-181-002, 302-181-040; and 302-181-005), 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 14. 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.

B. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-17-0926, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, acknowledging and agreeing to implementation of all the above terms of this condition.

17. **Assumption of Risk, Waiver of Liability and Indemnity Agreement**. By acceptance of this permit, the Applicant acknowledges and agrees (i) that the site may be subject to hazards from flooding, erosion, and earth movement; (ii) to assume the risks to the applicant 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.

18. **Protection of Archeological Resources**. If an area of cultural deposits or human remains is discovered during the course of the project, all construction shall cease and shall not re-commence until a qualified cultural resource specialist, in consultation with the Tribal

Historic Preservation Officers of the Wiyot Tribe, the Bear River Band of Rohnerville Rancheria, and the Blue Lake Rancheria, analyzes the significance of the find and prepares a supplementary archaeological plan for the review and approval of the Executive Director, and either: (a) the Executive Director approves the Supplementary Archaeological Plan and determines that the Supplementary Archaeological Plan's recommended changes to the proposed development or mitigation measures are *de minimis* in nature and scope, or (b) the Executive Director reviews the Supplementary Archaeological Plan, determines that the changes proposed therein are not *de minimis*, and the permittee has thereafter obtained an amendment to CDP 1-17-0926.

19. **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.

20. **California Public Utilities Commission (CPUC) Approval**. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-17-0926, 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, 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.

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

The Elk River Estuary Intertidal Wetlands Enhancement Project involves the restoration and enhancement of approximately 114 acres of tidal and riparian habitats near the mouth of the Elk River in south Eureka within areas that were mostly diked off from tidal action in the early 20th century (Exhibits 1-2). The primary identified goal of the project is to enhance the Elk River estuary by enhancing the tidal channel network, intertidal wetlands and riparian habitat to a healthy, self-sustaining state. Such restoration will increase the quantity and quality of available salmonid habitat in the Elk River estuary to benefit the watershed as a whole. The project also includes new and enhanced public access and recreational amenities, including the development of a one-mile-long extension of the California Coastal Trail, a trailhead parking area off Tooby Road, and a non-motorized boat access ramp on the Elk River. The project will result in the

conversion of approximately 89 acres of existing diked farmland (grazing land) to non-agricultural uses (primarily to restored salt marsh habitat).

The project area spans both sides of the Elk River near its mouth at Humboldt Bay, and for project planning purposes is divided into two sub-areas: Area 1 includes 25 acres of mostly wetland habitats (salt marsh, brackish marsh and remnant tidal channels) on the north side of the river, and Area 2 includes 89 acres of agricultural land (year-round grazing land) south of the river. Project components for each area are listed below and described and depicted in detail in Exhibits 3-6.

Area 1 proposal (~25 acres north of the river):

- Replace, repair or remove several existing tide gates (two within dikes adjoining the Elk River to be removed and three others at the north end of Area 1 to be repaired or replaced) and their associated concrete headwalls and excavate portions of existing interior earthen dikes (200 cubic yards) to restore estuarine hydrologic connectivity and marine resources in Area 1 and increase the tidal prism in the Elk River estuary to reduce sediment deposition in the lower Elk River;
- Restore and expand approximately 3 acres of the network of intertidal channels, at appropriate depths for eelgrass colonization, by excavating 3,385 linear feet of existing and 2,304 linear feet of historic intertidal channels;
- Restore salt marsh plains and enhance salt marsh resiliency by placing approximately 18,000 cubic yards of excavated channel spoils across approximately 19 acres of the restoration area to achieve target elevations optimal for restoration of salt marsh and tidal hummocks;
- Restore aquatic habitat diversity and cover for fish and wildlife by placing imported large woody debris in the area;
- Construct a 12- to 14-foot-wide Class 1 non-motorized ADA-compliant extension of the City's Waterfront Coastal Trail from the north end of the site for 1,000 feet across the area and parallel to the existing railroad for nature study public access use (the trail is proposed to be 10 feet wide paved plus 2-foot-wide non-paved shoulders, except where the trail crosses wetlands, in which case it will be limited to a paved width of 8 feet plus 2-foot-wide non-paved shoulders);
- Construct a 250-foot-long by 3-foot-wide elevated trail and viewing platform (10-foot by 10-foot) with 4.5-foot-high ADA-compliant railings and interpretive signage to extend over the marsh plain (1- to 7 feet above the marsh) for nature study public access use;
- Develop a new non-motorized boat access ramp (approximately 65 feet long by 15 feet wide) at the north end of the site, at Pound Road extending into the restored widened and deepened channel, using 20 cubic yards of 4-inch crushed foundation rock, 10 cubic yards of Class 2 aggregate base, and 15 cubic yards of poured concrete;
- Test a new salt marsh restoration method involving the removal/eradication of invasive *Spartina densiflora* (dense-flowered cordgrass) by constructing a temporary earthen berm within a 100-foot by 100-foot salt marsh area and pumping salt water into the area to subject the *Spartina* to prolonged inundation for at least three months. Following

completion of the pilot project, the temporary berm would be removed, and the area would be reconnected to surrounding salt marsh[1] and

- Restore (plant) approximately 4 acres of riparian habitat around the restored Elk River estuary.

A temporary construction staging area in Area 1 would be created off Pound Road in the northwestern corner of Area 1. The temporary staging area would be approximately 100 feet by 100 feet in size and would include a refueling and lubrication area, a job site trailer, a generator, and portable toilet. The fueling area would be limited to a 20-foot by 20-foot area within the staging area underlain with an impermeable plastic membrane. Fuels and lubricants would be stored in 55-gallon drums on top of containment pallets, and the area would be fenced during construction. The staging area would be located primarily in uplands, but establishment of this staging area would result in temporary fill impacts to approximately 0.25-acre of existing wetland habitat. Upon completion of construction activities, the temporary staging area would be restored to riparian habitat.

Area 2 proposal (~89 acres south of the river):

- Breach (excavate) the existing earthen dike along the Elk River in several locations, remove an existing 12-inch dilapidated culvert, remove an existing ranch road that extends from Tooby Road to the railroad berm, fill in man-made drainage ditches and construct a new 16-foot-wide, ~3,360-foot-long tidal ridge (setback berm) to restore estuarine hydrologic connectivity and marine resources, including salt marsh habitat, in Area 2;
- Restore and expand approximately 12 acres of the network of intertidal channels at appropriate depths for eelgrass colonization, by excavating 4,200 linear feet of historic intertidal channels and creating several off-channel depressions to maximize fish habitat benefit;
- Restore salt marsh plains by placing approximately 125,000 cubic yards of excavated channel spoils across approximately 62 acres of the restoration area to achieve target elevations optimal for restoration of salt marsh and tidal hummocks;
- Restore aquatic habitat diversity and cover for fish and wildlife by placing imported large woody debris in the area;
- Construct a 12- to 14-foot-wide Class 1 non-motorized ADA-compliant extension of the City's Waterfront Coastal Trail from the north end of the site for approximately 1 mile across Area 2 and in part parallel to the existing railroad (the trail is proposed to be 10 feet wide paved plus 2-foot-wide non-paved shoulders, except where the trail crosses wetlands, in which case it will be limited to a paved width of 8 feet plus 2-ft.-wide non-paved shoulders) to the proposed new trailhead parking area off of Tooby Road;

[11] The Commission approved CDP 1-14-0249 on 6/12/15 authorizing the Humboldt Bay Regional Spartina Eradication Plan over multiple years using specified mechanical and chemical methods to eradicate invasive *Spartina densiflora* at a regional level. Approved methods include dredging (grinding, tilling, excavating, and disking), filling (covering), and chemical control (application of the herbicide imazapyr sprayed manually onto the leaves of target cordgrass plants). The subject property was included in the project area covered under CDP 1-14-0249. As the *Spartina* eradication at the subject site has been previously approved under CDP 1-14-0249, such analysis is not repeated here.

- Develop a small (2,500-square-foot) trailhead parking area within an existing upland area off of Tooby Road, to provide parking for approximately eight vehicles;
- Construct a 550-foot-long by 3-foot-wide elevated trail and viewing platform (10-ft. by 10-ft.) with 4.5-foot-high ADA-compliant railings and interpretive signage to extend over the marsh plain (1 to 7 feet above the marsh) for nature study public access use; and
- Restore (plant) approximately 8.5 acres of riparian habitat around the restored Elk River estuary.

A staging area for Area 2 would be created entirely in existing upland pasture adjacent to Tooby Road at the southeastern end of Area 2 in the area that is proposed to be later converted to a paved trailhead parking lot as described above. The temporary staging area would be approximately 100 feet by 25 feet in size and would include a refueling and lubrication area. The fueling area would be limited to a 20-foot by 20-foot area underlain with an impermeable plastic membrane. Fuels and lubricants would be stored in 55-gallon drums on top of containment pallets, and the area would be fenced during construction.

Connecting the two areas using the existing railroad bridge

Rather than proposing to construct a new trail bridge over the Elk River to connect the two proposed trail segments, the City proposes that trail users would share use of the existing, currently non-operational railroad bridge over the river immediately adjacent to the project area. The existing bridge is approximately 200 feet long and 14 feet wide,[2] and the City would improve it for trail usage by installing temporary, removable rubber matting (in sections called "gauge pads") directly on top of and between the existing rails (see Exhibit 6, pages 1 and 13-15).

Proposed land use and habitat changes

As summarized in Table 1 below, overall, the proposed project would result in an increase in various types of wetland habitats, including freshwater marsh, salt marsh, tidal channels suitable for eelgrass colonization, and riparian habitat. At the same time, there would be a corresponding decrease in agricultural pasturelands that currently are used year-round for livestock grazing. Overall, there would be no decrease in total area of coastal wetlands and open waters on the property after the project is complete, even though the project proposes to fill wetlands for the new nature study trail, the tidal ridge (setback berm) and boat ramp, because there are existing uplands on the property that would be converted to wetlands as part of the project. As summarized in Table 2 below, there are existing uplands on the property that would be converted to wetlands as part of the project through (a) the proposed removal of the tidegates and associated concrete headwall around the Elk River; and (b) the conversion of existing uplands to restored tidal wetlands via lowering/breaching of existing upland dikes, dredging a restored tidal channel through existing uplands in Area 2, and eliminating an existing upland ranch road in Area 2. Exhibit 7 depicts existing and proposed vegetation types in the project area, and Exhibit 8 includes photos of existing vegetation and features in Area 2.

[2] Measurements from Google Earth.

Table 1. Existing and projected acreages of habitats, agricultural lands, roads and trails for the Elk River Estuary Intertidal Wetlands Enhancement Project.

	Existing Acreage	Proposed Acreage	Net Change in Acreage
Area 1 (~25 acres of open space/natural resources lands)			
Eelgrass (on mudflats within tidal channels)	0	1.3	+ 1.3
Open Waters (Existing Tidal Channels)	0.8	0.5	- 0.3
Freshwater Marsh	0	0.7	+ 0.7
Brackish Marsh	1.3	0	-1.3
Salt Marsh	17.1	17.8	+ 0.7
Riparian	0	4.1	+ 4.1
Uplands[3]	5.8	0	- 5.8
Road/Trail	0	0.6	+ 0.6
Area 2 (~89 acres of mostly agricultural lands)			
Eelgrass (on mudflats within tidal channels)	0	8.4	+ 8.4
Open Waters[4]	0.4	2.5	+ 2.1
Freshwater (Vegetated Drainage Ditches)	0.7	0.7	- 0.7
Agricultural Wetlands (Pastureland)	68.9	0	- 68.9
Agricultural Uplands (Pastureland)	13.8	0	- 13.8
Salt Marsh	3.7	60	+ 56.3
Riparian	0.2	8.7	+ 8.5
Road/Trail	1.2	8.7	+ 7.5

Table 2. Summary of wetland impacts and wetland creation (both areas combined) for the Elk River Estuary Intertidal Wetlands Enhancement Project.

(All acreages are approximate)	Pre-Project Acreage	Post-Project Acreage	Net Difference
Total Wetlands & Open Waters/Eelgrass Habitat	**+ 93.1**	**+ 104.6**	**+ 11.5**
Total Wetlands	+ 91.7	+ 79.1	- 12.6
Freshwater Marsh	0.7	0.7	0
Brackish Marsh	70.2	0	- 70.2
Salt Marsh	20.8	78.4	+ 57.6
Total Open Waters & Eelgrass Habitat	+ 1.2	+ 12.7	+ 11.5
Total Riparian Habitat	+ 0.2	+ 12.8	+ 12.4
Total Uplands (non-ESHA habitat areas plus roads/berms/trails)	**+ 20.8**	**+ 9.3**	**- 11.5**
No Net Change in Wetlands/Waters	**113.9**	**113.9**	**0**

[3] Uplands in Area 1 include tops of existing earthen dikes, areas of historic railroad grade, and grassy slopes. Most upland areas are dominated by coyote brush (*Baccharis pilularis*).

[4] In Area 2, "Open Waters" consists of a tidally influenced inboard ditch along the existing dike along Elk River at the north end of Area 2.

Proposed habitat monitoring and reporting

The Applicant has prepared a Monitoring and Reporting Plan (MRP) for the project (Greenway June 2018) that identifies project goals, objectives, success standards, and monitoring and reporting methods and schedule (Exhibit 9). The primary identified goal of the project is to enhance the Elk River estuary by enhancing the tidal channel network, intertidal wetlands and riparian habitat to a healthy, self-sustaining state. The identified objectives for accomplishing the primary goal include (1) expand intertidal wetlands and tidal channel areas, riparian habitat and freshwater wetlands; (2) increase the resiliency of the restored and enhanced salt marsh habitat and tidal channels in the area to sea-level rise by increasing hydrologic connectivity (through the removal of tide gates and dikes) and enabling sediment accretion through increased tidal inundation; (3) eradicate and prevent the colonization of invasive *Spartina*; (4) enhance and increase salmonid estuary habitat; and (5) create suitable habitat for eelgrass. The MRP identifies specific success criteria and proposed monitoring methods and metrics for each objective. Monitoring is proposed for a total of five years.

Proposed mitigation measures

Construction is planned to occur during the dry season, between July 1st and October 31st, in 2019 and 2020. Construction would involve the use of excavators, bulldozers, and dump trucks to excavate, move, and grade over 143,000 cubic yards of material in both areas. Dewatering of each area, using sump pumps, would occur to minimize construction impacts to water quality.

Several water quality mitigation measures adopted by the City in the environmental document prepared for the project are proposed as part of the project. These include, but are not limited to, the following: (1) restricting construction activities only to the dry season when the ground surface is dry and to reduce the chance of stormwater runoff occurring during construction and when Elk River freshwater inputs are at summer base-flow thresholds; (2) maintaining heavy equipment in good condition free of leakage of coolant and petroleum products; (3) developing a spill control and response plan and maintaining emergency spill clean-up kits on site and drip pans under stationary heavy equipment to minimize the potential for pollutants to degraded coastal waters and wetlands; (4) limiting refueling of construction equipment to designated staging areas at least 150 feet from coastal waters; (5) using sediment control measures around stockpiled materials; (6) applying erosion control measures to disturbed areas following completion of construction and prior to the onset of precipitation; (7) implementing various specific Best Management Practices (BMPs) from the California Storm Water Quality Association Storm Water BMP Handbook for runoff, sediment and erosion control; (8) installing fish screens with appropriately sized mesh on pump inlets used to dewater work area; and various other proposed minimization and avoidance measures.

B. ENVIRONMENTAL SETTING

Elk River Estuary existing habitats and rare species

The Elk River is the largest freshwater tributary to Humboldt Bay. The river originates in the coastal hills southeast of the City of Eureka and flows northwestward to the Bay near the city's southern boundary. The project area straddles the lower Elk River adjacent to Humboldt Bay (Elk River Slough), with Highway 101 bordering the site to the east and the railroad bordering

the property to the west. The existing non-operational railroad separates the project area from the bay and from Elk River Spit, which extends northwest from the project site. The project area extends from Pound Road in the north to the southern end of Tooby Road in the south.

Historically the entire site was part of the Elk River estuary, which included intertidal channels, mudflats, salt marsh, windblown sand deposits and riparian forest. Early in the last century, the railroad was constructed between the project area and Humboldt Bay. Additional dikes were constructed, and the site was drained to support agriculture.

Area 1 and Area 2 currently support different types of habitats. Area 1, which is behind dikes along the north side of the river, contains existing channels that are subject to a muted tide cycle due to leaky tide gates that extend through the dikes. The site is comprised mostly of salt marsh and brackish marsh, and freshwater runoff flows into the area from the north through three existing culverts with tide gates under Pound Road. The marsh habitat in this area largely is dominated by the invasive *Spartina densiflora*. Approximately 25% of Area 1 consists of upland coastal scrub and grassland habitats. The lack of sediment accretion in the marsh area, due to its disconnection from historic tidal flushing, reduces the ability of the marsh to naturally build up and keep up with projected sea level rise rates for the region, while at the same time excessive sediment confined to the narrowed river channel aggravates turbidity problems in the Elk River.

Area 2 is protected from tidal flooding by an earthen dike along the south side of the river and by the armored (with riprap) railroad berm west of the site. Unlike Area 1, there are no freshwater flows into the area from adjacent lands. Area 2 consists mostly of existing non-prime farmland dominated by nonnative grasses and currently used year-round for cattle grazing. Most of the pastureland has been delineated as wetland and includes saline-tolerant pasture species (the wetland pasture is characterized in the vegetation mapping report[5] as brackish marsh). There are about 15 acres of delineated uplands in Area 2, including coastal scrub and upland pasture.

Currently Area 2 is used for year-round livestock grazing, with approximately 50 cows and calves utilizing the site. Area 2 also was used from the 1980s to 2009 as a final stage of wastewater treatment (biosolids application). In addition, migratory Aleutian cackling geese (*Branta hutchinsii leucopareia*) also occasionally use the site. Grazed (short-grass) agricultural lands provide important roosting and foraging habitat for the geese during their late winter/spring migration between the Central Valley and Alaska. Tens of thousands of migratory geese flock to the agricultural pastures of Humboldt Bay and the Eel River estuary every year.

Several listed fish species are known to occur in the Elk River estuary and are expected to benefit from this estuarine habitat restoration project, including federally threatened Chinook salmon (*Oncorhynchus tshawytscha*), federally and state-endangered Coho salmon (*Oncorhynchus kisutch*), federally threatened Northern California steelhead (*Oncorhynchus mykiss irideus*), Coastal cutthroat trout (*Oncorhynchus clarkia clarkii*), a state species-of-concern, federally endangered Tidewater goby (*Eucyclogobius newberryi*), state-threatened Longfin smelt (*Spirinchus thaleichthys*), federally threatened Eulachon (*Thaleichthys pacificus*),

[5] McBain Associates, July 11, 2016.

federally threatened Green sturgeon (*Acipenser medirostris*), and Pacific lamprey (*Entosphenus tridentatus*), a state species-of-concern.[6]

In addition, several rare plant species have been documented within and adjacent to the project area. A relatively large occurrence (several hundred individuals) of Humboldt Bay owl's clover (*Castilleja ambigua* ssp. *humboldtiensis*) was located on the south bank of the Elk River in Area 2. Two other rare plant species, beach layia (*Layia carnosa*) and dark-eyed gilia (*Gilia millefoliata*), were found growing on the railroad grade adjacent to but outside of Area 2. Populations of both species are known to occur on the Elk River spit across the railroad grade northwest of Area 2.[7] The vegetation report (McBain Associates 2016) also documented potential habitat for several additional rare plant species with known occurrences in the Humboldt Bay region.

Surrounding land uses

The subject property is bounded by the railroad and Humboldt Bay to the west, by Highway 101 to the east, and by LCP-designated urban boundaries to the north and south. To the north, the north end of Area 1 abuts Pound Road and the City's urban/rural boundary as designated in the City's certified LCP. Vacant land planned and zoned for General Industrial uses and Natural Resources uses abuts the northern project boundary. In addition, Area 1 is adjacent to the southern terminus of the City's Hikshari' Trail, an approximately 2-mile-long segment of the California Coastal Trail that extends from Pound Road north to Truesdale Street (permitted by the Commission under CDP 1-11-037 in 2012). To the south, the urban boundary that the County has applied to the community of King Salmon under the County's certified Humboldt Bay Area Plan is directly adjacent to the south end of Area 2. King Salmon is an unincorporated community of approximately 150 residential parcels located approximately 2 miles south of Eureka. The Pacific Gas and Electric Company's Humboldt Bay Power Plant (now Humboldt Bay Generating Station) lies to the south of Area 2. To the east, east of Highway 101, is the California Department of Fish and Wildlife's Elk River Wildlife Area and the Elk River. Tooby Road also bounds the southeastern end of the project site. To the west, in addition to the railroad and Humboldt Bay, the City's Elk River Spit Wildlife Area extends northwestward from the project area.

Existing railroad corridor and its use as an informal trail

The railroad in Humboldt County, under the oversight of the North Coast Railroad Authority (NCRA), a state agency, has been out of operation and disconnected from out-of-county regions since approximately 1998 due to catastrophic landslides in the Eel River canyon of Mendocino County that destroyed significant segments of the rail line. Other segments of the railroad, including segments around Humboldt Bay and the segment adjacent to the western boundary of the project area, has been out of regular operation and has received little maintenance over the past few decades. Though it is unlikely that there ever will be renewed inter-regional rail operation between the County and other regions,[8] currently the Timber Heritage Association, a

[6] Trinity Associates, November 2017.

[7] California Rare Plant Ranks: *Castilleja ambigua* ssp. *humboldtiensis* - 1B.2; *Carex lyngbyei* - 2B.2; *Layia carnosa* - 1B.1; *Gilia millefoliata* - 1B.2.

[8] Senate Bill 1029 (McGuire), signed by the Governor on September 29, 2018, requires the Transportation Agency to conduct an assessment of the NCRA to provide information necessary to determine the most appropriate way to

volunteer-based nonprofit group, operates a speeder crew car on the rail line between Samoa and Manila on the northwestern side of Humboldt Bay, approximately 16 rail-miles from the subject site, which offers periodic rides to the public during the summer months.

The railroad segment adjacent to the project area, which is directly across from the entrance channel to Humboldt Bay and subject to strong wave action, has necessarily been repaired and maintained in the past couple of decades, including armored with riprap along the bayward side of the railroad berm. However, even with the riprap reinforcement, many places along the route are failing, and recent king tides and storm surges have washed away railroad ballast, forming delta-like deposits on the grazed pastureland in Area 2.

Along the west side of the project area, pedestrians informally use the existing non-operational railroad corridor that extends along most of the perimeter of Humboldt Bay for access between the south end of Eureka and the unincorporated urban community of King Salmon, which is approximately two miles south of Eureka.

C. STANDARD OF REVIEW

The proposed project is located within the Commission's retained jurisdiction. The City of Eureka has a certified local coastal program (LCP), but the site is within an area shown on State Lands Commission maps over which the state retains a public trust interest. Therefore, the standard of review that the Commission must apply to the development is the Chapter 3 policies of the Coastal Act.

D. APPLICANT'S LEGAL INTEREST IN THE SUBJECT PROPERTIES

The proposed project area includes all or portions of seven Assessor Parcel Numbers (APNs) under three ownerships: (1) the City owns the majority of the project area, including APNs 302-181-031, 308-181-002, 302-181-040, and 305-181-005; (2) the Northwestern Pacific Railroad Authority (NWPRA), under the oversight authority of the North Coast Railroad Authority (NCRA), a state agency, owns and maintains the railroad that spans the western edge of the project area boundary on APN 302-181-030 and a portion of APN 305-141-002; and (3) Hoff USA Inc. et al. owns APN 302-181-039, an approximately 1.25-acre strip of land that borders the Elk River within what's referred to as "Area 2" of the project area (Exhibit 3). Work proposed within the railroad right-of-way includes the proposed new coastal trail extension. Work proposed on the Hoff property includes removal of portions of existing dikes and existing culverts, excavation of new tidal channels, and placement of fill for salt marsh restoration.

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 co-applicants. In addition, section 30601.5 of the Coastal Act requires that the applicant demonstrate authority to comply with all conditions of approval prior to issuance of a CDP.

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dissolve the authority and dispense with its assets and liabilities, and to report on the assessment to the Legislature before July 1, 2020.

The City has provided evidence that the other affected property owners have both been notified of the proposed CDP application and invited to join as coapplicants. In addition, the City has signed an agreement with NCRA, dated March 9, 2018, to add the proposed trail extension to the City's Rail-With-Trail Corridor Management Plan (CMP) that the NCRA has approved for the existing Waterfront Trail that has been constructed within the rail right-of-way throughout much of the City. The agreement amends the CMP to include the use of the rail corridor on the subject lands for the proposed new coastal trail segment extending from the existing Hikshari' Trail at the north end of the subject property for a distance of approximately one mile across the subject site (i.e., extending from the north end of Project Area 1 to the south end of Project Area 2). In addition, the City has an existing license agreement with the NCRA for the existing Waterfront Trail authorizing access and use of NCRA's property within the City "to construct, install, maintain, reconstruct, remove, repair and manage a multi-modal public path, for shared use by, including but not limited to, bicyclists, pedestrians, wheelchairs, joggers, and other non-motorized uses..." However, the existing license does not yet include the subject property, including the portion of the trail that could involve shared use of the bridge over the Elk River Estuary.

The City expects to receive an updated license authorizing the proposed trail development within the NRCA right-of-way once final construction plans are complete and approved by the NCRA Board. To ensure that the City has the authority to comply with all conditions of approval of CDP 1-17-0926 on properties owned by the NCRA or the NWPRA (APNs 302-181-030 and 305-141-002), the Commission attaches Special Condition 1. Special Condition 1-A requires that the City, prior to permit issuance, provide: (a) written evidence that the railroad owner has agreed that the applicant may undertake development on its properties as authorized by CDP 1-17-0926 as conditioned; as well as (b) an updated license agreement with the NCRA for use the rail corridor as authorized by CDP 1-17-0926 as conditioned, including shared use of the existing rail bridge over the Elk River for trail use.

In addition, Special Condition 16 requires that prior to any conveyance of any coastal trail properties owned by the City on this subject property, the City must provide the Executive Director with documentation demonstrating that the permittee as landowner has executed and recorded against the property to be conveyed a deed restriction, that authorizes the Coastal Trail in the scope and manner set forth in Special Condition 14.

With respect to the Hoff property, the City is in the process of coordinating with the seven ownership interests of the property to execute a purchase agreement. The City has provided evidence that all seven property owners are willing to sell their ownership interest in the property to the City. The Commission attaches Special Condition 1-B requiring that the City, prior to permit issuance, show evidence that all ownership interests have agreed in writing that the applicant may undertake development on its properties pursuant to CDP 1-17-0926 as conditioned.

Finally, Special Condition 1-C acknowledges that no changes to the approved development may be incorporated into the project until the applicant/permittee obtains a Commission amendment

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

The Commission finds that as conditioned, the development is consistent with the requirements of section 30601.5 of the Coastal Act.

E. OTHER AGENCY APPROVALS

City of Eureka

The project requires a local discretionary approval, a conditional use permit, from the City. The City approved Use Permit #C-17-0009 for the proposed project on November 13, 2017.

Humboldt Bay Harbor, Recreation and Conservation District (HBHRCD)

The project requires a permit from the HBHRCD, which maintains regulatory oversight over the Humboldt Bay tidelands pursuant to a legislative grant from the State Lands Commission. The District approved permit #2017-03 for the proposed project on January 25, 2018.

California Department of Fish and Wildlife (CDFW)

The project requires permits from the Department under the state Fish and Game Code. The Department approved Lake and Streambed Alteration Agreement #1600-2018-0113-R1 for the proposed project on May 14, 2018. The Department also issued an Incidental Take Permit, dated June 28, 2018, pursuant to the California Endangered Special Act regarding "take" of coho salmon [Southern Oregon-Northern California Coast evolutionarily significant unit (SONCC Coho Salmon)], a state-listed "threatened" species. The ITP includes various provisions that the project must comply with in order to minimize the project's adverse effects on Coho.

North Coast Regional Water Quality Control Board (Regional Water Board)

The Regional Water Board has jurisdiction over the project under section 401 of the federal Clean Water Act and under the state's Porter-Cologne water quality control act. The Board approved water quality certification #WDID No. 1B171818WNHU for the proposed project on July 3, 2018.

U.S. Army Corps of Engineers (Corps)

The Corps has direct jurisdiction over the project pursuant to section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act. The Corps determined that the project qualifies for coverage under Nationwide Permit (NWP) 27 (Aquatic Habitat Restoration, Enhancement and Establishment Activities). The Corps issued its determination on July 18, 2018 (Corps file no. 2017-00462N), effective subject to approval by the Commission of a CDP or a federal consistency certification pursuant to the federal Coastal Zone Management Act.

U.S. Fish and Wildlife Service (FWS)

The Corps consulted with the FWS on the project due to its possible effects on Tidewater goby, a federally listed species under the Endangered Species Act. The FWS issued an informal consultation on January 29, 2018 (FWS file no. 2017-00462N), concurring with the Corps' determination that the project may affect, but is unlikely to adversely affect, tidewater goby and

its designated critical habitat. The FWS reached this conclusion in part due to conservation measures proposed by the Corps to minimize potential effects to goby and its designated critical habitat.

NOAA-Fisheries (NMFS)

The Corps consulted with NMFS on the project due to its possible effects on Chinook salmon, Coho salmon, and Northern California steelhead, all of which are federally listed under the Endangered Species Act. NMFS issued its formal consultation (Biological Opinion) on March 29, 2018 (NMFS file no. WCR-2018-8757). The BO determined that as proposed, the project was not likely to jeopardize the continued existence of the three species or destroy or adversely modify designated critical habitats for the species.

State Lands Commission (SLC)

The SLC has direct jurisdiction and authority over ungranted sovereign tidelands and submerged lands underlying the State's navigable waterways (ocean, bays, sloughs, lakes, and rivers) as well as over lands subject to the public trust. The project area includes lands that may be subject to the public trust. To ensure that the Applicant has the legal ability to undertake all aspects of the project on these public lands, the Commission attaches Special Condition 2. This condition requires that the project be reviewed and where necessary approved by the SLC.

California Public Utilities Commission (CPUC)

The proposed project entails the use of the coastal trail on top of an existing bridge crossing of the North Coast Railroad Authority's rail corridor. Pursuant to its delegated federal and state statutory authority, the CPUC must approve and license the trail's crossing of an established railroad corridor. The Commission attaches Special Condition 20 requiring the Applicant to submit evidence to the Executive Director that the Applicant has obtained the necessary authorizations from the CPUC for the new railroad crossing prior to use of the crossing. 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.

F. ALLOWABLE USES IN WETLANDS AND WATERS

Section 30230 of the Coastal Act states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where*

feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

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…

…

The project includes several components that involve diking, filling, and dredging of wetlands, as summarized below:

- Diking: Two project components involve diking of wetlands. The first is the construction of the 16-foot-wide, 3,361-foot-long tidal ridge (setback berm) in Area 2, which will result in approximately 2.6 acres of permanent wetland fill. The setback berm will contain the expanded tidal area from flooding adjoining areas. The second diking component of the

project involves the installation of a temporary berm that will later be removed. The project proposes to test a new salt marsh restoration method involving the removal/eradication of invasive *Spartina* by constructing a temporary earthen berm around a 100-foot by 100-foot area and pumping salt water into the area from behind the existing closed tide gate on the river to inundate the invasive cordgrass plants that dominate the test area for at least three months. Following completion of the pilot project, the temporary berm will be removed, and the area graded to target elevations for salt marsh plain. The other methods of *Spartina* eradication proposed in the project area already are authorized under CDP 1-14-0249, which the Commission approved on 6/12/15. These other methods include dredging (grinding, tilling, excavating, and disking), filling (covering), and chemical control (application of the herbicide imazapyr sprayed manually onto the leaves of target cordgrass plants). As the *Spartina* eradication at the subject site has been previously approved under CDP 1-14-0249, and as CDP 1-14-0249 analyzed the consistency of the proposed *Spartina* eradication with Section 30233, the analysis is not repeated here. The Commission attaches Special Condition 3 to the current CDP to ensure that the City carries out eradication activities in compliance with the special conditions of CDP 1-14-0249.

- Filling: 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*." Besides the diking of wetlands described above, other components of the project that involve fill in wetlands include: (a) construction of new coastal access nature study recreational amenities, including the approximately mile-long, 12- to 14-foot-wide coastal trail extension (approximately 5 acres of fill, though some of this fill will be atop existing uplands) and associated elevated trail/viewing platforms (a 250-foot-long, 3-foot-wide one in Area 1, and a 550-foot-long, 3-foot-wide one in Area 2, both with a 10-ft. x 10-ft. viewing platform, which will result in approximately 7 square feet of permanent wetland fill across the project area); (b) construction of a new 65-foot-long by 15-foot-wide non-motorized boating access ramp in Area 1, which will result in approximately 975 square feet of permanent wetland fill in Area 1; (c) placement of approximately 143,000 cubic yards fill (soil spoils from channel dredging in both areas) across approximately 90 acres of the total project area (both area 1 and area 2), within existing freshwater, salt marsh, and brackish wetlands, for salt marsh habitat restoration and enhancement; and (d) creation of a temporary construction staging area associated with the project, which will be sited in part in existing wetlands in Area 1 and involve temporary wetland fill impacts to approximately 0.25-acre.

- Dredging: The Commission has long considered grading, excavating, and other ground-disturbing activities in coastal wetlands and estuaries to be a form of dredging.[9] The project proposes to excavate 3,385 linear feet of existing and 2,304 linear feet of historic intertidal channels in Area 1 and 4,200 linear feet of historic intertidal channels in Area 2. The total dredging footprint (both areas) spans approximately 15 acres of existing coastal wetlands and waters.

Section 30233 of the Coastal Act limits the diking, dredging, and filling of coastal wetlands to seven specific, enumerated uses and also requires that any project which results in excavation,

[9] E.g., CDPs 1-06-036, 1-08-011, 1-08-012, 1-08-020, 1-09-020, 1-09-030, and 1-10-032.

dredge, or fill in coastal wetlands (a) be the least environmentally damaging feasible alternative, and (b) provide adequate mitigation to minimize adverse environmental effects. In addition, Coastal Act sections 30230, 3231, and 30233 together require that marine resources, the biological productivity and quality of coastal waters, and the functional capacity of estuaries be maintained and enhanced.

Allowable use

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 categories of use listed under section 30233(a) include (1) *nature study… or similar resource dependent activities* for the proposed trail project and the small stable boat launching access point for kayaks, canoes, and other small craft for periodic nature-study oriented boating outings; and (2) *restoration purposes* for the channel dredging, spoils placement on marsh plains, construction of the tidal ridge to contain the restoration area, *Spartina* eradication by flooding, and temporary staging areas. Each of the categories of use is discussed separately below.

1. Nature Study Uses

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" if designed to minimize such intrusions to the smallest feasible area or least impacting routes, and where the trail segment functions as a nature trail.[10] 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.

The areas where the proposed trail has wetland fill impacts, including the areas where the boardwalks and viewing platforms are located and the surface stabilization material along the restored slough bank for non-motorized recreational boating, all have expansive views of Humboldt Bay and the restored Elk River estuary and further the nature study uses. The placement of surface stabilization material for boating access will create a stable boat launching

[10] E.g., 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/Hikshari′ Trail Project), 1-15-2054 (City of Eureka, Coastal Trail Project), and 1-16-0122 (City of Arcata, Bay Trail North Project)

access point for kayaks, canoes, and other small craft for nature-study oriented boating outings. The opportunities afforded by these public access amenities include up-close views of local vegetation/habitats, views of Humboldt Bay, and proposed interpretive signs with information regarding local habitats and resource issues.

To ensure that the proposed fill is for a permissible nature study use, the Commission attaches Special Conditions 5 and 6. Special Condition 5 requires, in part, the submittal of final plans prior to permit issuance that include preliminary signage plans consistent with Special Condition 6. Special Condition 6 requires submittal of final design plans for all signage and other trail amenities prior to construction of such amenities that demonstrate in part that nature study signage, including a minimum of two signs in each area, shall be erected along trail segments both in Area 1 and Area 2. The signage plan must include a description of sign content demonstrating that the signage will include information related to nature study, such as information on local habitats and resource issues.

Therefore, the proposed trail and boating components of the project within coastal wetlands as conditioned constitute a form of "*nature study… or similar resource-dependent activities*," as they are: (a) integral to the appreciation and comprehension of biophysical elements that comprise wetland areas; and (b) dependent upon the presence of the natural area resource through which the trail passes/boating access ramp connects to provide a nature study experience. As such, the Commission finds that the proposed wetland fill for the trail and boating components of the proposed project is inherently for the purpose of nature study, a use consistent with section 30233(a) of the Coastal Act.

2. Restoration Purposes

The Commission has in many past actions considered dredging and filling in diked former tidelands/existing freshwater and brackish wetlands to be allowable for "restoration purposes" under Coastal Act section 30233(a)(6).[11] Neither the Coastal Act nor the Commission's administrative regulations contain a precise definition of "restoration." The dictionary defines "restoration" in terms of actions that result in returning an article "back to a former position or condition," especially to "an unimpaired or improved condition."[12] The particular restorative methods and outcomes vary depending upon the subject being restored. For example, the Society for Ecological Restoration defines "ecological restoration" as "the process of intentionally altering a site to establish a defined indigenous, historical ecosystem. The goal of the process is to emulate the structure, function, diversity, and dynamics of the specified ecosystem."[13] However, the term also applies to actions taken that result in the reestablishment of ecological processes, functions, and biotic/abiotic linkages and lead to a persistent, resilient system integrated within its landscape.[14]

Implicit in all these varying definitions and distinctions is the understanding that the restoration entails returning something to a prior state. Estuaries are extremely dynamic systems in which

[11] See e.g. CDPs 1-06-036, 1-08-011, 1-08-012, 1-08-020, 1-09-020, 1-09-030, and 1-10-032.

[12] Merriam-Webster's Online Dictionary, http://www.merriam-webster.com/dictionary/restoration.

[13] "Definitions," Society of Ecological Restoration News, Society for Ecological Restoration; Fall, 1994.

[14] Position Paper on the Definition of Wetland Restoration, Society of Wetland Scientists, August 6, 2000.

specific physical functions such as nutrient cycles, succession, water levels and flow patterns directly affect biological composition and productivity. Consequently "restoration," as contrasted with "enhancement," encompasses not only reestablishing certain prior conditions but also reestablishing the processes that create those conditions. In addition, most of the varying definitions of restoration imply that the reestablished conditions will persist to some degree, reflecting the homeostatic natural forces that formed and sustained the original conditions before being artificially altered or degraded. Moreover, finding that proposed diking, dredging and filling constitutes "restoration purposes" must be based, in part, on evidence that the proposed project will be successful in improving habitat values. Should the project be unsuccessful at increasing and/or enhancing habitat values, or worse, if the proposed diking, dredging and filling impacts of the project actually result in long term degradation of the habitat, the proposed project would not be for "restoration purposes." In sum, to ensure that a proposed restoration project achieves its stated habitat enhancement objectives, and therefore can be recognized as being for "restoration purposes," the project must demonstrate that: (1) it either entails a return to or re-establishment of former habitat conditions, or it entails actions taken that will result in the reestablishment of landscape-integrated ecological processes and/or abiotic/biotic linkages associated with estuarine habitats; and (2) there is a reasonable likelihood that the identified improvements in habitat value and diversity will result; and (3) once re-established, it has been designed to provide the desired habitat characteristics in a self-sustaining, persistent fashion independent of the need for repeated maintenance or manipulation to uphold the habitat function.

As noted above, the combination of several components of the proposed project involving the diking, dredging, and filling of coastal wetlands and waters will reestablish approximately the same configuration of tidal habitat that historically existed in the area (based on historic tide maps) prior to modification of the estuary by various historic land use practices, including constructing levees, ditching and straightening channels, and draining the land, to support agriculture. The restored tidal marsh, riparian, tidal channels, and eelgrass habitats will ultimately be of much greater ecological value than the existing habitats and the overall restoration project will provide a beneficial solution to the existing turbidity problems in the lower Elk River that currently result in part from an excess of sediment being confined to an artificially narrowed channel. The proposed project will dredge ~15 acres of existing wetlands and waters, at appropriate depths for eelgrass colonization, to restore estuarine hydrologic connectivity and marine resources and increase the tidal prism in the estuary to reduce sediment deposition in the lower Elk River, a critical watershed for several species of threatened salmonids. Furthermore, the proposed project will place fill in ~90 acres of wetlands in areas 1 and 2 to achieve target elevations optimal for restoration of salt marsh and tidal hummocks and the for construction of the new tidal ridge (setback levee) in Area 2. The proposed levee size and location is designed to restore over 70 acres of tidal estuarine habitat in Area 2 while providing for the protection (from tidal inundation) of existing utility infrastructure and Highway 101. The proposed fill on the marsh plain will be designed with optimal elevations to support high marsh vegetation (resulting in ~78 acres of restored and enhanced salt marsh in both areas) and topographic diversity (including tidal hummocks and depressions) to maximize habitat for a diversity of birds and fish species, including juvenile salmonids and tidewater goby. The project also includes the placement of imported large woody debris scattered throughout the restored estuary to restore aquatic habitat diversity and provide cover for fish and wildlife.

Finally, the proposed experimental removal of invasive *Spartina* by constructing a temporary earthen berm around a 100-foot by 100-foot area in Area 1 and inundating the invasive cordgrass plants that dominate the test area with salt water for at least three months, is intended to restore native tidal marsh habitat. As previously discussed, following completion of the experimental invasive *Spartina* removal project, the temporary berm will be removed, and the area will be graded to target elevations for salt marsh restoration. The invasive cordgrass is native to South America, and while it has long been established in the Humboldt Bay region (it was first introduced to the region in late 1800s via ship ballast), there is evidence that the species is continuing to spread, both by becoming denser in marshes where it already exists and by invading new habitats where it hasn't been previously found, such as higher-elevation salt marsh and lower-elevation mudflat habitats. In high elevation salt marshes, cordgrass invasions displace a great diversity of native plants and animals, including state-listed Humboldt Bay owl's clover (*Castilleja ambigua* ssp. *humboldtiensis*), Point Reyes bird's-beak (*Chloropyron maritimum* ssp. *palustre*), and other species. Its invasion into mudflats could lead to the displacement of eelgrass (*Zostera marina*) beds, which provide essential fish habitat for numerous aquatic species and valuable foraging habitat for resident and migratory populations of shorebirds and waterfowl. The U.S. Fish and Wildlife Service (FWS), in its cordgrass eradication efforts on federal lands in Humboldt Bay, has found that native plant recovery in restored marshes is successful within two years, often without the need for replanting. In addition, the rare Humboldt Bay owl's clover responded dramatically and positively to restoration on federal Refuge lands in the bay, with the population in the restored marshlands increasing from approximately 3,000 individuals pre-restoration to over 99,000 individuals five years post-restoration.

According to information from the FWS, the Humboldt Bay region supported an estimated 10,000 acres of tidal marsh (including salt marsh and brackish marsh habitats) prior to human development. Since the mid-1800s, most of what was likely to have been historic tidal marsh has been diked (largely for agriculture) or filled and has been reduced to a total area of around 900 acres, a reduction of at least 90 percent. The FWS has indicated that restoration of tidal marsh habitats around the Bay is a high priority, as tidal marsh restoration is important for the protection, enhancement, and restoration of native fish, wildlife, and plant communities, some of which are dependent on tidal marsh for their existence. In past permit actions on wetland restoration projects around Humboldt Bay, the Commission has acknowledged that, in general, restoring areas that have historically supported tidal marsh is preferable when the physical conditions of a site present such an opportunity. Thus, the proposed restoration of historic tidelands, historic juvenile salmonid rearing habitat, historic riparian habitat, and historic connectivity between fringe tidal channels at the transition between tidal and non-tidal lands entail actions taken in converted or degraded natural wetlands (agricultural wetlands/diked former tidelands) that will result in the reestablishment of landscape-integrated ecological processes associated with the wetland habitat that historically existed in the area. Therefore, the Commission finds that the proposed restoration is consistent with the definition of restoration and constitutes filling and dredging for restoration purposes consistent with section 30233(a)(6).

The Commission notes that historically, additional areas beyond/east of where the new tidal ridge (setback berm) is proposed to be constructed consisted of tideland habitats. However, restoring tidal influence to the entire historic tideland area beyond the proposed tidal ridge would

require the flooding of existing infrastructure owned by the Pacific Gas & Electric Company[15] and Highway 101. Therefore, while it is possible to restore 70+ acres of diked former tidelands to their historic estuarine function and tidal channel configuration as proposed, it is infeasible to restore any more than that (e.g., the area beyond (east of) the proposed setback berm) to its historic tidal influence.

As discussed above, this finding that the proposed project constitutes "restoration purposes" is based, in part, on the assumption that the proposed project will be successful in restoring the various historic habitats and processes as proposed and increasing habitat values. Specifically, the increased habitat values expected to result from the proposed restoration include increased habitat for (a) native salt marsh vegetation, (b) intertidal channel habitat suitable for eelgrass colonization, and (c) riparian habitat. The combination of restored habitats is expected to enhance and increase habitat for juvenile salmonids. Should the project be unsuccessful, or worse, if the proposed diking, filling, and dredging impacts of the project actually results in long-term degradation of the habitats, the proposed diking, filling, and dredging would not be for "restoration purposes."

As discussed above in the Project Description Finding (IV-A), the Applicant has prepared a Monitoring and Reporting Plan (MRP) for the project (Greenway June 2018) that identifies project goals, objectives, success standards, and monitoring and reporting methods an implementation schedule. The primary identified goal of the project is to enhance the Elk River estuary by enhancing the tidal channel network, intertidal wetlands and riparian habitat to a healthy, self-sustaining state. The identified objectives for accomplishing the primary goal include (1) expanding intertidal wetlands and tidal channel areas, riparian habitat and freshwater wetlands; (2) increasing the resiliency of the restored and enhanced salt marsh habitat and tidal channels in the area to sea-level rise by increasing hydrologic connectivity (through the removal of tide gates and dikes) and enabling sediment accretion through increased tidal inundation; (3) eradicating and preventing the colonization of invasive *Spartina*; (4) enhancing and increasing salmonid estuary habitat; and (5) creating suitable habitat for eelgrass. The MRP identifies specific success criteria and proposed monitoring methods and metrics for each objective. The success of the proposed habitat restoration objectives will be achieved when (in part): (a) there are 12 acres of restored riparian habitat dominated by native riparian plants; (b) there are 79 acres of salt marsh habitat dominated by native tidal marsh plants (within 5 years of project implementation); (c) there is 0.7-acre of freshwater wetlands dominated by native wetland plant species; and (d) there are 9 acres of suitable eelgrass habitat between -4 ft. minimum to +2 ft. maximum (NAVD88). Proposed monitoring methods include as-built topographic surveys to verify that target habitat elevations have been built as designed and target acreages have been achieved, drone surveys to estimate habitat acreages and dominant vegetation, rapid assessment surveys for wetlands (CRAM), and photo-point monitoring to measure plant growth and topography changes. Monitoring is proposed for a total of five years.

To ensure that the proposed dredging and diking project will achieve the objectives for which it is intended, the Commission attaches Special Condition 4. This special condition requires the applicant to implement the proposed MRP as proposed and achieve the identified objectives of

[15] PG&E infrastructure includes a 12kV electrical pole line near the eastern boundary of Area 2 that was first erected in 1961.

the Plan by the end of the fifth year of monitoring. The condition requires submittal of annual monitoring reports to the Executive Director by January 31st following each monitoring year. Furthermore, Special Condition 4 requires that the final revised MRP include provisions for remediation if the monitoring indicates the identified objectives have not been achieved to ensure that the goals and objectives of the restoration project are met.

Therefore, the Commission finds that the proposed fill, dredging and diking activities described above, as conditioned, are permissible under Section 30233(a)(6) for "restoration purposes" and implement the requirements of Section 30230 and 30231 that marine resources shall be maintained and enhanced.

Alternatives

For projects involving diking, dredging, and filling, the Commission must ensure that the proposed project has no less environmentally damaging feasible alternative consistent with Section 30233 of the Coastal Act. Coastal Act Section 30108 defines "feasible" as …c*apable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors.* All the various alternatives for all project elements are discussed in the below section.

1. No project alternative for the trail

The proposed trail project involves the construction of an approximately mile-long segment of the California Coastal Trail and associated elevated trail/viewing platforms, which will result in approximately 5 acres of permanent wetland fill across the project area for trail impacts. The no project alternative means that no coastal trail extension would be constructed along the Humboldt Bay shoreline. Under this alternative, the objective of the proposed project – to provide a grade-separate Class I, ADA-accessible, multi-use trail for nonmotorized transportation and nature study as part of the California Coastal Trail would not be met. Further, the opportunity to avoid informal use of the railroad right of way and channel people to a safer, formalized trail would be lost. Accordingly, the no project alternative is not a feasible less environmentally damaging alternative to the proposed development as conditioned.

2. Alternative trail routes and alternative trail alignments within the selected route

Several potential routes and alignments that have been evaluated as alternatives to the proposed trail alignment, which extends from Pound Road inland of and parallel to the railroad to the south end of Tooby Road.[16] As discussed in the Environmental Setting Finding IV-B, currently pedestrians are informally using as a de facto trail the existing non-operational railroad corridor that extends along the majority of the perimeter of Humboldt Bay, including the rail segment through the subject property. Pedestrians use the railroad corridor for access between the south end of Eureka and the unincorporated urban community of King Salmon, which includes over

[16] 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 along Humboldt Bay, including, but not limited to: Humboldt Bay Trails Feasibility Study, 2001 (and see also Page IV-21 for trail alternatives on the subject lands); Humboldt County Coastal Trail Implementation Strategy, 2011 (see alternative C7.01 on page 99); Humboldt County Regional Trails Master Plan, 2010; and Humboldt Regional Bicycle Plan, Update 2012.

150 developed parcels, and which is approximately two miles south of Eureka. Although the Timber Heritage Association, a volunteer-based nonprofit group, operates a speeder crew car on other parts of the rail line, no such use now occurs along this portion of the railroad corridor, so there currently are no potential conflicts between pedestrian use of the railroad and the active speeder crew car's use of the railroad.

An alternative to the proposed route alignment would be to construct the trail on top of the existing railroad rather than parallel to the railroad as proposed. This alternative would involve less wetland fill than the proposed alternative and would be slightly closer to the bay. However, the NCRA will not allow the City to construct the trail on the railroad tracks, except in limited locations, such as over the Elk River railroad bridge on the subject property. In 2009, after hearing broad community support for trails within the railroad right-of-way, the NCRA determined that it could support a "rails with trails" (RWT) design concept allowing joint use of the railroad corridor and a trail generally by constructing the trail *alongside* the railroad tracks and confining shared use of the track alignment to limited situations such as on the railroad bridge crossing of the Elk River. NCRA would not support the trail being constructed *on top of* the track alignment until such time as the railroad ever becomes operational. As specified in the City's existing Corridor Management Plan agreement with the NCRA, which includes the subject property, it is the NCRA's preference, where feasible, to use a trail design for RWT as opposed to placing the trail directly on top of the former rail line.

Another alternative route would be to realign the railroad eastward from its present location and construct the trail in the current railroad alignment. This alternative would be consistent with the State's goals for designing the remaining segments of the Coastal Trail, in that the trail would be "as close to the ocean as possible."[17] This alternative also was considered in the Humboldt County Coastal Trail Implementation Strategy (2011) due to the vulnerability of the railroad corridor in its present location to storm surf erosion and sand burial, with the rationale that maintenance issues more critical to the function of a railroad would be less of an issue for a trail. However, this alternative is cost-prohibitive, not approved by the NCRA, and would provide inferior public safety and trail reliability due to proximity of the bay and hazardous and erosive storm surf along this segment of the railroad.

A third alternative route would be to construct the trail on the seaward side of the existing railroad corridor. However, this alternative would result in a substantial impact to dune ESHA in Area 1 and significantly more fill in coastal waters in Area 2. In addition, as discussed above, this alternative also would provide inferior public safety and trail reliability due to proximity of the bay and hazardous and erosive storm surf.

Other trail alignments considered involved construction of a trail along Pound Road and then Highway 101 to King Salmon Avenue, or along the alignment where the proposed tidal berm will be located. These alternatives would not be consistent with design goals for the Coastal Trail, as they would put trail users further away from the ocean and closer to the Highway where the existing vehicle speed limit is 65 miles per hour. The alternative alignment adjacent to the highway also would involve significantly more wetland fill along the eastern sides of Area 1 and

[17] "Completing the California Coastal Trail" State Coastal Conservancy 2003, accessible at http://www.californiacoastaltrail.info/pdffiles/coastaltrail_1to21.pdf

Area 2, since Caltrans motor vehicle safety standards would mandate the construction of an additional 10- to 15-foot-wide "Clear Recovery Zone" unpaved shoulder of compacted engineered fill between the highway and tidal ridge (setback berm). While no Clear Recovery Zone fill would be required for the alternative involving a coastal trail alignment atop the tidal ridge (setback berm) alignment, this alternative would require construction of a new bridge over the restored estuary channel in Area 2 at its confluence with the mainstem of the lower Elk River. According to the City, the expense of building a new bridge is cost-prohibitive and would involve instream fill impacts associate with bridge supports.

The proposed route was identified by the County as a high-priority trail segment for implementation based on favorable rankings for scenic experience and quality of coastal views, connectivity with existing trail networks, minimal impacts to private property, minimal potential impacts to archaeological resources and environmental sensitive habitat areas, public safety, and alignment with California Coastal Trail goals.[18] The trail has been aligned to avoid wetland fill to the maximum extent feasible given a number of alignment constraints, including minimum required distances from adjacent railroad tracks and the need to avoid the existing sewer line that parallels the inland side of the railroad from King Salmon to Eureka across the subject site.

Therefore, the Commission finds use of an alternative trail route is not a feasible less environmentally damaging alternative to the proposed development as conditioned.

3. Narrower trail width

The proposed trail alternative is a 12- to 14-foot-wide Class 1 non-motorized ADA-compliant trail. The paved trail is proposed to be 10 feet wide with 2-foot-wide non-paved shoulders, except where the trail crosses wetlands, in which case the City has proposed to limit the paved width to 8 feet with 2-foot-wide non-paved shoulders. In total, the proposed new trail will result in permanent wetland fill impacts to 5 acres of coastal wetlands.

The proposed trail width is consistent with the widths of connecting coastal trail segments permitted by the Commission where the Coastal Trail intersects with wetlands and environmentally sensitive habitat areas, including the City's Hikshari' Trail (permitted under CDP 1-11-037 in 2012) and Waterfront Trail (permitted under CDP 1-15-2054 in 2016). A minimum paved width to 8 feet, with 2-foot shoulders (for a total width of 12 feet) is the established minimum width standard for a Class 1 path/bikeway facility as set forth by Caltrans [Chapter 1000, Section 1003.1(1) "Widths and Cross Slopes," *Highway Design Manual*, California Department of Transportation, December 30, 2015]. Although the Highway Design Manual sets a minimum paved width of 8 feet (with 2-foot shoulders) for a Class 1 trail, it sites a preferred width of 10 feet and makes clear that context is important in determining trail width. For instance, the manual states, "*Where heavy bicycle volumes are anticipated and/or significant pedestrian traffic is expected, the paved width of a two-way bike path should be greater than 10 feet, preferably 12 feet or more. Another important factor to consider in determining the appropriate width is that bicyclists will tend to ride side by side on bike paths, and bicyclists may need adequate passing clearance next to pedestrians and slower moving bicyclists*." The Caltrans' standards are based in part on the American Association of State Highway and

[18] See page K-19 of Appendix K of the Humboldt County Coastal Trail Implementation Strategy, 2011.

Transportation Officials (AASHTO) Guide to Bicycle Facilities (2012) which sets a 10-foot minimum paved width for a two-directional shared use path, but allows for a reduced paved width of 8 feet for a short distance due to a physical constraint such as an environmental feature, or where low bicycle traffic, limited pedestrian use, frequent passing/resting opportunities, and infrequent use by maintenance vehicles is expected. These Caltrans and AASHTO standards are applied by transportation professionals based on the specific context and user profile of a proposed trail to ensure a minimum level of safety and operational effectiveness.

Because of its location at the south end of the City, heavy bicycle use is not expected on this segment of the Coastal Trail. Thus an 8-foot-wide paved trail with 2-foot shoulders along the portions of the alignment involving wetland fill, and a 10 foot trail with two-foot shoulders along the portion of alignment that avoid wetland fill, will both meet a minimum level of safety and operational effectiveness based on Caltrans and ASSHTO standards as well as avoid the need for additional fill along the portions of the alignment impacting wetlands.

Therefore, the Commission finds that a10-foot asphalt trail with two-foot shoulders along the entire alignment is not a feasible less environmentally damaging alternative to the proposed development as conditioned.. The Commission attaches Special Condition 5 requiring the City to submit final construction plans for the trail that demonstrate that trail width will not exceed 12 feet (8 feet paved plus 2-foot shoulders) in wetland areas.

4. Alternatives to the elevated trails and viewing platforms

The proposed project includes the construction of elevated nature study trails in each area with 4.5-foot-high ADA-compliant railings and interpretive signage to extend over the marsh plain for nature study public access use. The elevated trail in Area 1 will be 250-feet-long and 3-feet-wide. The elevated trail in Area 2 will be 550-feet-long and 3-feet-wide. Both elevated trails will provide a 10-foot by 10-foot viewing platform. The elevated trails and viewing platforms will be constructed of aluminum, plastic, or treated lumber, but final materials have not yet been determined. The City has proposed a helical pile foundation for the elevated trails and viewing platforms, which will avoid the need to drive pile posts with resulting acoustic impacts on wildlife. The proposed elevated trails will afford unique nature-viewing opportunities within the restored Elk River estuarine marsh.

The City has submitted only preliminary design plans for the proposed elevated trails, and final alignments and materials have not yet been determined. The proposed trails and viewing platforms are proposed to be elevated above the restored marsh habitat by 1 to 7 feet (1 foot near the trail connection with the main trail and up to 7 feet at the end of the furthest trail extension out in the marsh), which will minimize direct impacts to restored marsh areas, since fill will be limited to only the support footings for the elevated trail segments. The elevated trail above the marsh will also allow some light to penetrate habitat beneath the trail, and shading impacts can further be minimized by using permeable material, such as decking with at least an inch of spacing between decking boards. Other types of materials and designs that could be used for this purpose, such as solid material placed closer to or directly on the marsh, would involve more wetland fill and would be more environmentally damaging. The Commission therefore attaches Special Condition 5 to require submittal of final plans prior to permit issuance demonstrating that

elevated trail and viewing platforms shall be installed as proposed to allow light access beneath the elevated trail and constructed of light-permeable materials to minimize impacts to marsh vegetation.

Another alternative to the proposed project is not installing elevated trails and viewing platforms for nature study. Under this alternative, the City would not fully meet its objective of educating the public about the property's natural resources as a means of ensuring continued public support for protecting environmentally significant natural areas. Without the proposed elevated trail development through the relatively small area of wetlands, the ability to conduct and pursue nature study, especially of the tidal channels and slough habitats, would continue to be limited. Therefore, an alternative without elevated trails is not a feasible less environmentally damaging alternative than the proposed project as conditioned.

Another alternative would be to construct shorter elevated trail segments than the proposed 250-foot-long segment in Area 1 and the proposed 550-foot-long segment in Area 2. Shorter segments would require fewer piers and posts, and therefore less wetland fill. However, the proposed elevated trails and viewing platforms are intended to allow visitors to experience the rich and diverse biological resources associated with the Elk River estuarine environment, including both tidal marsh and tidal channels, which are closer to the center of the property areas. In addition, extension of the elevated trails into the restored marsh areas will allow visitors to stand out of the path of travel along the main trail to more fully enjoy the nature study experience. In this case, the Commission finds that the proposed lengths of the elevated trails and viewing platforms both allow adequate utility for nature study while avoiding excessive additional wetland filling that could lead to more pronounced and significant levels of disruption and fragmentation of the habitat values of the area. Therefore, the use of shorter elevated trail segments is not a feasible less environmentally damaging alternative to the proposed development as conditioned.

5. Alternatives to the non-motorized boat ramp

The project includes the construction of a new 65-foot-long by 15-foot-wide non-motorized boating access ramp in Area 1, at the north end of the widened and deepened channel near the terminus of Pound Road. The boat ramp will be constructed on a foundation of 20 cubic yards of 4-inch crushed foundation rock, 10 cubic yards of Class 2 aggregate base, and 15 cubic yards of poured concrete below and within its footprint. The boat ramp will extend from above mean annual maximum tides to minus 1 foot below mean lower low tides. The ramp will include a 12-inch wall on one edge with a galvanized or aluminum pipe railing to hold onto. Construction of the non-motorized boat ramp will result in approximately 975 square feet of permanent wetland fill in Area 1.

An alternative to the proposed boat ramp is not constructing a boating access ramp. Under this alternative, there would be no improved boat launching access point to the Elk River estuary at an appropriate location as proposed. In addition, not providing the boat access ramp could exacerbate bank erosion and degradation of the restored habitat. Completion of the proposed intertidal channel restoration in Area 1 will reestablish a navigable channel connected to the lower Elk River that is very accessible to the public, and it is expected that the site will attract

some public use for launching small watercraft, even if no boat ramp is constructed. Without the proposed improvements, access to the newly restored slough channel for launching small boats would require difficult maneuvering down slippery slopes that would contribute to bank erosion and degradation of the restored habitat. Installing a small stabilized launch surface as proposed will protect the channel banks and associated wetland vegetation. Furthermore, this alternative would not meet the objective of providing nature study uses in the new navigable channel to be restored. Small, non-motorized boat access in this part of Eureka that lacks such facilities is important for facilitating nature study at this site, even though trails and viewing platforms will also be built. Therefore, the no project option is not a less environmentally damaging feasible alternative than the proposed project as conditioned.

Another alternative to the non-motorized boat ramp would be to install a motorized boat launch at the subject site. However, this alternative would require a larger ramp with more wetland fill. Given the design widths and depths proposed for channel restoration in this area, installation of a motorized boat ramp at this location is not a less environmentally damaging feasible alternative. Therefore, the use of alternative boating access configurations is not a feasible less environmentally damaging alternative to the proposed development as conditioned.

6. Alternatives to the proposed scale of restoration

As previously discussed, the restoration elements of the proposed project involve the placement of approximately 143,000 cubic yards fill (soil spoils from channel dredging in both areas) across approximately 90 acres of the total project area (both area 1 and area 2) for salt marsh habitat restoration and the excavation of ~15 acres of coastal wetlands and waters for estuarine channel and eelgrass habitat restoration (3,385 linear feet of existing and 2,304 linear feet of historic intertidal channels in Area 1 and 4,200 linear feet of historic intertidal channels in Area 2).

The “no project” alternative, that is not dredging and diking for the restoration elements of the proposed project, would maintain the status quo of the site and would not increase the quantity and quality of available salmonid habitat in the Elk River estuary, restore ~90 acres of tidal marsh habitat, and restore ~9 acres of eelgrass habitat through. Without the proposed project, the existing lower Elk River estuary system would continue to function as an impaired, hydrologically limited and dysfunctional system. Sediment accretion in the existing salt marsh areas on the site would continue to be limited, and marshes would continue to lack the potential to naturally build up to keep up with sea level rise. In addition, excessive sediment would continue to be confined to the artificially narrowed and leveed river channel, aggravating turbidity problems in the Elk River and degrading critical fish habitat. Without the proposed project, there would be no restoration of juvenile salmonid overwintering rearing habitat in the Elk River, which is critical for the recovery of Coho salmon in the region. Furthermore, there would be no restored salt marsh habitat for native salt marsh plants, and invasive *Spartina* would continue to dominate the existing limited marsh habitat in the area.

Several other design concepts were evaluated as alternatives to the proposed scale of the restoration project ranging from (a) the “minimal design concept” with a much smaller restoration footprint, (b) retention of existing agricultural land on a portion of the site, to (c)

more expansive designs involving the excavation of a second new tidal entrance in Area 2 that would further maximize tidal connectivity. Based on input from stakeholders, including resource agencies, the proposed scale and design of the restoration project was chosen to achieve the goals of restoring tidal connectivity and estuarine habitat benefits for native fish and salt marsh plants while balancing cut and fill volumes to avoid off-site trucking costs and greenhouse gas emissions. Moreover, the chosen design will not preclude the option of additional habitat restoration on the site in the future.

Therefore, expanding or reducing the scale of the proposed restoration project is not a feasible less environmentally damaging alternative to the proposed development as conditioned.

7. Alternative widths and configurations for the tidal ridge (setback berm)

To contain the restored tidal habitat in Area 2 and prevent the tidal flooding of Highway 101, the project will construct a 16-foot-wide, 3,360-foot-long tidal ridge (setback berm) west of and parallel to the utility poles and highway, which will result in approximately 2.6 acres of permanent wetland fill. The proposed width of the tidal berm is greater that the width of setback berms approved in other projects because of the need to provide safe access for PG&E utility maintenance trucks that will need to access the line of utility poles that are located immediately adjacent to the proposed setback berm. PG&E has confirmed that a 16-foot width is the minimum width of the trucks and required clearance space for workers to walk around the trucks. Further, due to freeway speeds, the need for lane closure, and Caltrans safety standards, PG&E cannot rely on accessing the poles from the highway for maintenance purposes, and therefore is reliant on pole access from the top of the setback berm.

An alternative to the proposed tidal ridge alignment is to build the ridge east of the utility poles and closer to the highway, which, if built at the same 16-foot width, would increase the size of the tidal restoration area in Area 2 by several acres. However, this alternative would result in significantly more wetland fill than the proposed project alternative, because Caltrans safety standards would require the creation of a minimum 20-foot-wide “Clear Recovery Zone,” including the placement of engineered fill at the same level of the highway adjacent to the highway shoulder in existing wetlands between the tidal ridge and the highway. The width of the tidal ridge (setback berm) could also be reduced by building the ridge further west of the utility poles so as not to affect the existing PG&E access to the utility poles. Although this alternative would reduce the width of the tidal ridge and the total amount of fill needed for the tidal ridge, positioning the tidal ridge further west would greatly reduce the overall size of the restoration area. The proposed tidal ridge width and alignment has been designed to maximize the size of the tidal restoration area while complying with utility easement and safety standards of PG&E and Caltrans.

Therefore, use of alternative tidal ridge widths or configurations is not a feasible less environmentally damaging alternative than the proposed project as conditioned.

8. Alternative staging areas and staging area size

The project proposes two temporary staging areas, one of which, in Area 1, will be located partially within existing coastal wetlands. The Area 1 temporary staging area would be approximately 100 feet by 100 feet in size and would include a refueling and lubrication area, a job site trailer, a generator, and portable toilet. The Area 1 temporary staging area will impact approximately 0.25-acre of wetlands. Upon completion of construction activities, the temporary staging area is proposed to be restored to riparian and wetland habitats.

This Area 1 staging area site was selected because it is the only possible staging site on the north side of the river in Area 1 that both is directly adjacent to an existing paved road (Pound Road) and primarily located in uplands rather than wetlands. The "no project alternative" is not feasible, as it is necessary to provide area for staging and access of construction material and equipment on the north side of the river for Area 1 rather than relying on just the staging area for Area 2, which is on uplands. While some temporary wetland impacts are unavoidable, the Area 1 staging area minimizes impacts to the greatest extent feasible. The Commission attaches Special Condition 4 to ensure that the temporary staging area is fully restored to riparian and wetland habitats as proposed and monitored for successful restoration.

As (1) the location of the Area 1 staging area in part within wetlands is necessary to provide area for the staging and access of construction materials and equipment for the trail and restoration project, and (2) the location of the staging area minimizes encroachment into wetlands, and (3) it is not feasible to provide a smaller than 100-foot by 100-foot staging area, the Commission finds that use of an alternative staging location or size is not a feasible less environmentally damaging alternative to the proposed development as conditioned.

9. Alternatives to diking for the experimental *Spartina* eradication pilot project

The project proposes to test the efficacy of eradicating *Spartina* using a flooding method involving the construction of a temporary earthen berm (diking) within a 100-foot by 100-foot salt marsh area and pumping salt water into the area to subject the *Spartina* to prolonged inundation for at least three months. Following completion of the pilot project, the temporary berm will be removed, and the area will be reconnected to surrounding salt marsh and restored and monitored as proposed under the MRP.

There are various alternative methods for *Spartina* removal, many of which also involve diking, dredging or filling wetlands (e.g., grinding, tilling, excavating, disking, covering), and several of which have already been permitted for *Spartina* removal under the Humboldt Bay Regional *Spartina* Eradication Plan (CDP 1-14-0249 approved by the Commission on 6/12/15). The proposed flood treatment method was not included as one of the approved methods for *Spartina* eradication under CDP 1-14-0249. The proposed fill to test this new method will be temporary and short-term, and it will advance understanding of preferred techniques for salt marsh restoration in the region. Also, by flooding a large area rather than grinding, tilling, excavating, disking, or covering the area, there may be less direct impact to the marsh substrate overall. The Commission attaches Special Condition 3-A to ensure that the City carries out eradication activities in compliance with the special conditions of CDP 1-14-0249. In addition, Special Condition 3-B requires the temporary fill material to be removed following completion of the pilot project and the area restored and monitored for restoration success as required under

Special Condition 4. Special Condition 3-C requires the City to submit a report to the Executive Director within six months following completion of the pilot project documenting the timing, methods and results of the pilot project and confirming removal of the temporary dikes.

Conclusion to Alternatives Analysis

For all the reasons discussed above, the Commission finds that proposed development, as conditioned to include the feasible mitigation measures discussed below, is the least environmentally damaging feasible alternative as required by section 30233(a).

Feasible Mitigation Measures

In addition to requiring that diking, dredging, and filling in coastal wetlands and waters 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 provided to minimize adverse environmental effects. In addition, the project must maintain and enhance the functional capacity of coastal wetlands and waters consistent with section 30233 and protect marine resources and the biological productivity and the quality of wetlands and waters consistent with the requirements of sections 30230 and 30231. The potential project impacts and mitigation measures are discussed below.

1. Feasible mitigation for wetland dredge and fill impacts

Excavation and grading as proposed to raise and lower surface elevations and to enhance and restore tidal channels will impact the existing wetland habitats, including brackish marsh, salt marsh, and existing channels that currently are subject to muted tidal conditions. In addition, the diking and other wetland fill to be placed for the Coastal Trail, other nature study trails and viewing platforms, boat access ramp, tidal ridge (setback berm), the temporary staging area in Area 1, and the temporary berm to test the efficacy of salt water inundation as a *Spartina* eradication technique will result in the direct filling of wetlands (approximately 7 acres in total). However, as shown above in Table 2, there will be no net change in total area of coastal wetlands and open waters on the property after the project is complete, even though the project proposes to fill wetlands for the project features mentioned above, because, as summarized in Table 2 above, there are existing uplands on the property that would be converted to wetlands as part of the project through (a) the proposed removal of the tidegates and associated concrete headwall around the Elk River; and (b) the conversion of existing uplands to restored tidal wetlands via lowering/breaching of existing upland dikes, (c) dredging a restored tidal channel through existing uplands in Area 2 and (d) eliminating an existing upland ranch road in Area 2. Temporal loss of wetland habitat values will occur during the time it takes for completion of the restoration project and the subsequent maturation of salt marsh, riparian, and eelgrass habitat. However, the restored tidal marsh, riparian, tidal channels, and eelgrass habitats will ultimately be of much greater ecological value than the existing habitats, more than off-setting the temporary loss associated with the diking, filling, and dredging included in the project. In addition, the overall restoration project will provide a beneficial solution to the existing turbidity problems in the lower Elk River that currently result in part from an excess of sediment being confined to an artificially narrowed channel. The hydrological dysfunction of the estuary to flush sediments through the system, has in turn reduced the accretion of sediment on the existing marshes in the area, thereby increasing the vulnerability of the remnant marshes to sea-level rise.

Furthermore, the City proposes to perform wetland enhancement on the site's existing marshes (~22 acres) through eradication of invasive *Spartina densiflora* (dense-flowered cordgrass). As discussed above, *Spartina* is an invasive wetland plant from South America that has infested an estimated 90% of salt marshes in Humboldt Bay and which out-competes native plants to form dense monocultures, thereby displacing a diverse native plant community that includes rare plants such as Humboldt Bay owl's-clover and Point Reyes Bird's beak. The City's proposed *Spartina* eradication in the project area has been previously approved under CDP 1-14-0249, a permit approved in 2015 authorizing the Humboldt Bay, Harbor, Recreation and Conservation District to implement, in cooperation with cooperating landowners, the Humboldt Bay Regional Spartina Eradication Plan within approximately 1,400 acres of tidal marsh habitats in Humboldt Bay, the Eel River estuary, and the Mad River estuary, including the subject property owned by the City.

Over the last ten years, *Spartina* has been removed from approximately 200 acres of Humboldt Bay's 1,030 acres of tidal marsh under previous *Spartina* eradication projects in the Humboldt Bay National Wildlife Refuge (ND-049-06, ND-017-10, ND-025-10, and ND-041-10) and on marshes owned by the City of Arcata (McDaniel Slough Wetland Enhancement Project, CDPs 1-06-036 and 1-06-036-A1). The City's current *Spartina* eradication proposal has a high-likelihood of success, given the City's proposal to utilize the same methods as used in previously successful eradication efforts in the Humboldt Bay area, except within the 100-foot by 100-foot portion of the marsh where the experimental salt water inundation eradication technique will be tested. In addition, the City is proposing eradication in a large, discrete, isolated area of salt marsh habitat, limiting the risk of immediate reinvasion from adjacent *Spartina* infestations.

The Commission attaches Special Condition 3 to the current CDP to ensure that the City carries out eradication activities outside of the 100-foot by 100-foot experimental *Spartina* eradication area in compliance with the special conditions of CDP 1-14-0249. As previously discussed, the Commission also attaches Special Condition 4, which requires the City to implement the restoration project as proposed and to monitor for successful achievement of the goals and objectives identified of the Monitoring and Reporting Plan, including the successful restoration of at least 79 acres of salt marsh habitat dominated by native tidal marsh plants within 5 years of project implementation. The special condition also requires remediation if the goals and objectives are not initially achieved.

Therefore, the Commission finds that the project as conditioned provides feasible mitigation measures to minimize the project's wetland fill impacts consistent with section 30233 of the Coastal Act.

2. Feasible mitigation measures to protect water quality and the marine environment

Project construction could result in impacts to water quality and aquatic species related to dewatering and water pollution from sediment mobilization, 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 and concrete pouring and curing near coastal waters could result in the leaking or spilling of oil, grease, and chemicals to receiving waters.

The City has proposed a number of Best Management Practices (BMPs) to be implemented during construction to protect water quality, control sediment and erosion, and prevent leaks and accidental spills, including, but not limited to: (1) restricting construction activities only to the dry season when the ground surface is dry and to reduce the chance of stormwater runoff occurring during construction and when Elk River freshwater inputs are at summer base-flow thresholds; (2) maintaining heavy equipment in good condition free of leakage of coolant and petroleum products; (3) developing a spill control and response plan and maintaining emergency spill clean-up kits on site and drip pans under stationary heavy equipment to minimize the potential for pollutants to degraded coastal waters and wetlands; (4) limiting refueling of construction equipment to designated staging areas at least 150 feet from coastal waters; (5) using sediment control measures around stockpiled materials; (6) applying erosion control measures to disturbed areas following completion of construction and prior to the onset of precipitation; and (7) implementing various specific BMPs from the California Storm Water Quality Association Storm Water BMP Handbook for runoff, sediment and erosion control. To ensure these and additional BMPs are implemented during project construction to protect water quality, the Commission attaches Special Condition 6 requiring adherence to various construction-related responsibilities so that no construction materials, debris, or waste shall be allowed to enter coastal waters or be placed where it may be washed by rainfall or runoff into coastal waters.

Some project components, including elevated trail and viewing platform decking, may 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. The Commission attaches Special Condition 8-G(v) to require the implementation of additional BMPs during construction if treated wood is utilized. These BMPs include those that meet industry standards for the selection, storage, and construction practices for use of preservative-treated wood in aquatic environments; at a minimum, those standards identified by the Western Wood Preservers Institute, et al. in *Treated Wood in Aquatic Environments: A Specification and Environmental Guide to Selecting, Installing and Managing Wood Preservation Systems in Aquatic and Wetland Environments.*[19]

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 the inboard ditch between the railroad berm and the trail or to the tidal ridge east of the trail that slopes down towards the restored marsh areas. The paved trail and gravel shoulder will slope slightly toward the drainage ditches, but the slope face will be protected with erosion control BMPs and reseeded with non-invasive species. 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.

[19] https://preservedwood.org/portals/0/documents/TW_Aquatic_Guide.pdf

3. Feasible mitigation measures to protect fish and other aquatic species

A significant portion of the proposed project will be constructed within and adjacent to coastal wetlands and waters associated with the Elk River and Humboldt Bay. As previously discussed, the project area waters provide potential habitat for Coho salmon, Chinook salmon, Steelhead, and Coastal cutthroat trout. Although the built project is expected to provide significant habitat benefits for salmonids and other sensitive fish species, construction activities will cause short-term impacts to the aquatic environment with the potential to harm or "take" listed federally and state listed fish.

The National Marine Fisheries Service (NMFS) issued a formal consultation (Biological Opinion) for the project on March 29, 2018. NMFS determined that as proposed, the project was not likely to jeopardize the continued existence of federally threatened Coho salmon, Chinook salmon, or Steelhead or destroy or adversely modify designated critical habitats for the species. In addition, CDFW issued an Incidental Take Permit, dated June 28, 2018, pursuant to the California Endangered Special Act regarding "take" of coho salmon, and the ITP states that the Department concurs with the determination of NMFS. Furthermore, the U.S. Fish and Wildlife Service (FWS) evaluated the project due to its possible effects on Tidewater goby and determined that the project may affect, but is unlikely to adversely affect, tidewater goby and its designated critical habitat. The NMFS, CDFW and FWS reached their conclusions in part due to mitigation measures proposed by the Applicant to minimize potential effects to sensitive fish species and their designated critical habitat. These include the various water quality protection BMPs discussed above as well as (1) implementing a fish avoidance plan prior to commencement of dewatering activities and prior to commencement of instream work that seine fish outside of the work area; (2) restricting dewatering activities to the July 1 to October 15 period only; and (3) utilizing appropriately sized mesh screens on dewatering pumps to prevent fish entrainment. These fish protection measures are included as project requirements under Special Condition 9.

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 30233 of the Coastal Act.

4. Feasible mitigation measures to protect nesting birds

According to the CEQA document prepared for the project, the project area provides habitat for numerous bird species including raptors, waterfowl, shorebirds, and songbirds. Several avian species potentially nest in the project area, and construction disturbance during the breeding season could result in loss of fertile eggs or nestlings or otherwise lead to nest abandonment.

The City proposes to avoid, if feasible, vegetation clearing activities during the nesting season, which generally is considered to extend from mid-March to mid-August. If it is not feasible to remove vegetation that may provide potential nesting habitat outside the avian nesting season, a qualified biologist would conduct preconstruction surveys of all ground disturbance areas to verify absence of nesting migratory birds in the project area within two weeks prior to vegetation

removal and the start of construction. If nesting migratory birds are found in the project construction area during the preconstruction surveys, the City proposes to avoid nest disturbance by applying an appropriate buffer area around the nest until the young birds have fledged. Proposed buffers are 250 feet for raptors and 50 to100 feet for rare bird species, to be determined after consultation with, and agreement by, CDFW.

To ensure protection of bird species in the project area, including special status raptors and migratory birds, the Commission attaches Special Condition 10, which requires that clearing of vegetation that may provide nesting habitat for rare avian species shall be avoided during the nesting season (mid-March to mid-August) to the maximum extent feasible. If it is not feasible to remove vegetation that may provide potential nesting habitat outside the avian nesting season, a qualified biologist must conduct pre-construction surveys for nesting birds no more than seven days prior to the commencement of any such clearing activity. 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.

5. Feasible mitigation measures to protect Northern red-legged frog

Northern red-legged frog (*Rana aurora*) is a state-listed species of special concern that breeds in freshwater wetlands, which are present but limited in the project area. The species is not salt tolerant, and the project will not expand or create additional breeding habitat for the frog. Outside of the breeding seasons, frogs migrate to riparian and upland habitats, relatively little of which currently exist in the project area.

Although construction is planned to occur during the latter part of the dry season, adult northern red-legged frogs could be present in the project area, such as in freshwater ditches, which are proposed to be filled for salt marsh restoration. To avoid impacts to adult northern red-legged frogs during project construction, the Commission attaches Special Condition 11 requiring a qualified biologist to perform a pre-construction survey for the northern red-legged frog no more than one week prior to commencement of ground disturbance within 50 feet of all suitable northern red-legged frog habitat. The condition also requires that construction in the vicinity cease if a northern red-legged frog is encountered, until a biologist, in consultation with CDFW, has moved the frog to a safe location outside of the construction zone.

6. Feasible mitigation measures to protect Western pond turtle

Western pond turtle (*Actinemys marmorata marmorata*) is another state-listed species of special concern that may be found in the project area. The species breeds in April or May and builds nests along streams and pond margins and in upland areas. Eggs are laid from approximately April through August, with hatchlings emerging 12 weeks later (July through November). Western pond turtles occupy a wide variety of habitats and can tolerate brackish and even tidewater.

Vegetation clearing, dewatering, and construction activities could impact pond turtles that may be present in the project area. The applicant proposes to have a qualified biologist conduct a turtle survey along tidal margins two weeks prior to commencement of ground disturbing activities (July and August). Any turtle nests found should be left undisturbed until hatchlings have emerged or have been relocated to suitable areas outside of the work area. Any adults found in the construction area would be similarly relocated. These turtle protection measures are included in Special Condition 12.

7. Feasible mitigation measures to protect special-status plants

As discussed above in Finding IV-B, a relatively large occurrence (several hundred individuals) of Humboldt Bay owl's clover (*Castilleja ambigua* ssp. *humboldtiensis*) was found growing on the south bank of the Elk River in Area 2. This species is a hemi-parasitic annual plant that, in addition to photosynthesizing, supplements its nutrient intake by parasitizing the live roots of adjacent salt marsh species. The vegetation and rare plant survey report (McBain Associates 2016) further documented potential habitat for several additional rare plant species with known occurrences in the Humboldt Bay region.

Excavation, fill placement, and the use of heavy equipment in areas where rare plants are located could impact rare plants. However, the project is expected to greatly expand suitable habitat for Humboldt Bay owl's-clover and various other rare plant species, including Lyngbye's sedge (*Carex lyngbyei*). The project area currently supports around 20 acres of salt marsh habitat (though mostly dominated by invasive *Spartina*, which degrades marsh habitat for native plants), and the project will restore an additional ~57 acres of salt marsh. Habitat restoration goals, as proposed in the MRP, include successful achievement of 79 acres of salt marsh habitat dominated by native tidal marsh plants. Because Special Condition 4 requires the Applicant to achieve salt marsh restoration and monitor the restored salt marsh habitat areas consistent with the goals and objectives of the MRP, the project as conditioned provides feasible mitigation measures to ensure that any rare plant habitat impacted by construction is adequately compensated for through successful achievement of the goals and objectives of the salt marsh habitat restoration project. In addition, the Commission attaches Special Condition 13-A to require that construction avoid impacts to the mapped Humboldt Bay owl's-clover population at the north end of Area 2 adjacent to the earthen levee along the Elk River, thereby preserving the population and its seedbank to promote recolonization of the restored tidal marsh area by the rare plant species. Furthermore, Special Condition 13-B requires construction in the vicinity of special-status plant populations known to occur within the project area limits to be scheduled for times of the year occurring after the owl's-clover plants have dropped their seed (i.e., after June) to the maximum extent feasible to avoid impacts to plant blooming and seed dispersal. Finally, Special Condition 13-C requires the Applicant to achieve salt marsh restoration and monitor the restored salt marsh habitat areas consistent with Special Condition 4 to ensure that any rare plant habitat impacted by construction is adequately compensated for through successful achievement of the goals and objectives of the salt marsh habitat restoration.

As conditioned in the manner discussed above, 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.

Maintenance and Enhancement of Biological Productivity and Functional Capacity

The fourth general limitation set by section 30233 and 30231 is that any proposed dredging or filling in coastal wetlands must maintain, enhance and where feasible restore the biological productivity and functional capacity of the habitat. Section 30233(c) states that the diking, filling, or dredging of wetlands shall maintain or enhance the functional capacity of the wetland. Sections 30230 and 30231 state that marine resources shall be maintained, enhanced, and where feasible, restored. Sections 30230 and 30231 also state that the biological productivity of coastal waters appropriate to maintain optimum populations of all species of marine organisms and protect human health shall be maintained and, where feasible, restored.

As discussed above, the conditions of the permit will ensure that the project will not have significant adverse impacts on the water quality of any of the coastal waters in the project area and will ensure that the project construction will not adversely affect the biological productivity and functional capacity coastal waters or wetlands. Furthermore, the restoration project's stated purpose is to maintain and enhance the biological productivity of coastal wetlands and waters, and conditions of the permit will ensure that the site is monitored for achievement of these goals, and any failure to achieve the goals is remediated. The proposed project will restore approximately 90 acres of tidal estuarine habitat. According to the FWS, over 90% of the historic salt marsh habitat in the Humboldt Bay region has been lost (converted by filling, diking, and reclamation activities), and tidal marsh restoration has been identified as a regional high priority due to its extraordinary benefit for native fish, wildlife, and plant communities. In addition, the project will restore and enhance nearly 10,000 linear feet (both areas combined) of tidal channels to restore the hydrologic function of the lower Elk River, expand and restore habitat for juvenile salmonids and other sensitive fish, and provided suitable habitat for eelgrass colonization. Scientific research has shown that salmonids utilize the estuary ecotone while adapting from freshwater to saltwater conditions, as the estuary provides a rich foraging environment that can provide a last opportunity for growth prior to ocean migration. The proposed newly created estuary in the lower reaches of the Elk River will provide additional rearing habitat Coho and other salmonids as well as many other marine resources.

Therefore, the Commission finds that the project, as conditioned, will maintain and enhance the functional capacity of the habitat, maintain and restore optimum populations of marine organisms and protect human health consistent with the requirements of sections 30233, 30230, and 30231 of the Coastal Act.

G. CONVERSION OF AGRICULTURAL LANDS

Coastal Act sections 30241 and 30242 require the protection of prime agricultural lands[20] and sets limits on the conversion of all agricultural lands to non-agricultural uses. Coastal Act section 30241 states:

[20] The Coastal Act defines "prime agricultural land" through incorporation-by-reference of paragraphs (1) through (4) of Section 51201(c) of the California Government Code. Prime agricultural land entails land with any of the follow characteristics: (1) a rating as class I or class II in the Natural Resource Conservation Service land use capability classifications; or (2) a rating 80 through 100 in the Storie Index Rating; or (3) the ability to support livestock used for the production of food and fiber with an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture; or (4) the ability to normally yield

> *The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:*
>
> *(a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.*
>
> *(b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.*
>
> *(c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.*[21]
>
> *(d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.*
>
> *(e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.*
>
> *(f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.*

Coastal Act Section 30242 states:

> *All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (l) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.*

Section 30241 applies to prime agricultural land and all agricultural lands on the periphery of an urban area. The project site is on the periphery of an urban area, as it is adjacent to the LCP certified urban limit lines both north and south of the property. Therefore, the Commission must review the proposed conversion of the agricultural land to open space and wetland habitat for consistency with the requirements of section 30241.

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in a commercial bearing period on an annual basis not less than two hundred dollars ($200) per acre of unprocessed agricultural plant production of fruit- or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years.

[21] The portion of referenced section 30250 applicable to this project type and location [sub-section (a)] requires that, "*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.*"

Currently, Area 2 is used for year-round cattle grazing, with approximately 50 cows and calves utilizing the site. In addition, as discussed in finding IV-B (Environmental Setting) above, migratory Aleutian cackling geese also occasionally use the grazed (short-grass) agricultural lands on the site. Although the project will eliminate grazed public pastureland in Area 2 that provides habitat for migratory geese, and such habitat loss could potentially push geese onto surrounding privately owned pasturelands thereby impacting the agricultural productivity of those surrounding private agricultural lands, significant areas of public lands with suitable goose habitat are located immediately to the east in the Elk River Valley and to the south in the Humboldt Bay National Wildlife Refuge. The availability of these public lands with suitable goose habitat will reduce potential use of adjacent agricultural lands by migratory geese and ensure continued agricultural use on those lands.

The Coastal Act sets forth policies that relate to the protection of prime agricultural lands and sets limits on the conversion of all agricultural lands to non-agricultural uses. Section 30241 also enumerates a series of measures to be undertaken to minimize conflicts between agricultural lands, both prime and non-prime, and urban uses.

Maintaining Maximized Production of Prime Agricultural Land

Based on information in the CEQA document prepared for the project as well as soil maps produced by the Natural Resources Conservation Service (NRCA), there is no prime agricultural land in the project area. The agricultural land on the property is mapped as Swainslough, 0-2 percent slope, a soil type typical of backswamps, depressions, low-floodplain steps, reclaimed salt marshes, and tidal marshes on alluvial plains near the Pacific Ocean in Humboldt and Del Norte Counties.[22] These soils formed in alluvium derived from mixed sources. The NRCS classifies this soil unit as a hydric soil with a water table within 4 inches of the surface and frequently ponded for long periods December through March. As a result, neither the land use capability classification nor Storie Index rating for this soil type meet the first or second criteria for the definition of prime agricultural soils.

Similarly, the land doesn't meet the third potential qualifying definition of prime agricultural land - the ability to support livestock used to produce food and fiber with an annual carrying capacity equivalent to at least one animal-unit per acre as defined by the United States Department of Agriculture. Based on information included in the CEQA document describing the 89-acres of farmland on the site supporting approximately 50 cows and calves, the site requires nearly 2 acres per animal-unit.

Finally, the agricultural land on the property does not qualify as prime based upon its potential for commercial fruit or nut crop production at specified minimal yields. Due to the maritime-influenced climate of the western Humboldt County, commercial nut production is precluded along the immediate coastal areas by the significant precipitation and limited number of warm, overcast-free days to allow for full seed maturation. In addition, due to the high bulk density of the soils underlying the project site and the relatively shallow water table, fruit and berry crops suitable for the North Coast's temperate setting are similarly restricted to areas further inland,

[22] https://soilseries.sc.egov.usda.gov/OSD_Docs/S/SWAINSLOUGH.html

primarily on uplifted marine terraces and areas with improved drainage and more friable soil characteristics. As a result, fruit and nut production on an economically successful commercial basis is not currently nor has ever been historically pursued in open coastal environs, such as the project area.

Therefore, the Commission finds that the subject site does not contain prime agricultural soils or livestock and/or crop productivity potential, and the first directive of section 30241 regarding maintaining the maximum amount of prime agricultural land in agricultural production is not applicable to the project site.

Minimizing Conflicts Between Agricultural and Urban Land Uses

The project proposes to convert approximately 89 acres of non-prime farmland to non-agricultural uses. The subject land is locally designed/zoned by the City for "Coastal Agricultural" uses, which include livestock raising, apiaries, field and truck crops, orchards and other similar uses. Section 30241 requires that conflicts between urban and agricultural land uses be minimized through various means, as summarized above. The Commission finds that for the reasons discussed below, the conversion of grazing lands to the proposed habitat restoration and nature study/recreational trail uses that will occur around the periphery of an urban area is a permissible conversion consistent with the above criteria of section 30241.

a) Establishing stable boundaries between urban and rural uses

The subject property is bounded by the railroad and Humboldt Bay to the west, by Highway 101 to the east, and by LCP-designated urban boundaries to the north and south. To the north, the north end of Area 1 abuts Pound Road and the City's urban/rural boundary as designated in the City's certified LCP. To the south, the urban boundary that the County has applied to the community of King Salmon under the County's certified Humboldt Bay Area Plan is directly adjacent to the south end of Area 2. King Salmon is an unincorporated community of approximately 150 residential parcels located approximately 2 miles south of Eureka. The Pacific Gas and Electric Company's Humboldt Bay Power Plant (now Humboldt Bay Generating Station) lies to the south of Area 2. To the west, in addition to the railroad and Humboldt Bay, the City's Elk River Spit Wildlife Area extends northwestward from the project area. To the east, east of Highway 101, is rural farmland, the Elk River, and the California Department of Fish and Wildlife's Elk River Wildlife Area.

Given the site's location between urban areas to the north and south and bound by Humboldt Bay to the west and Highway 101 to the east, the agricultural lands to be converted will be bound by land uses that separate it from other agricultural lands. Furthermore, the proposed conversion of agricultural lands would contribute to the creation of a two-mile wide virtually continuous east-west band of fish and wildlife refuge area spanning from the eastern side of the CDFW Elk River Wildlife Area across Highway 101 from the subject site to the City's Elk River Wildlife Area on the Elk River Spit that extends northwest of the subject site. Therefore, conversion of the site's existing agricultural lands through the development of the proposed restoration and enhancement project would serve to minimize conflicts between agricultural and urban land uses by establishing a stable boundary separating the urban and the remaining agricultural land uses on nearby lands, thereby providing a clearly defined buffer between potentially incompatible uses.

b) Limiting Conversions Around Urban Periphery to Complete Stable Boundaries

The proposed conversion of agricultural lands constitutes a conversion of agricultural land around the periphery of urban areas (to the north and south, as discussed above) where the viability of existing agricultural use is already severely limited by conflicts with urban uses, namely light, noise, and human activity, and stormwater runoff associated with the industrial and commercial areas to the east and south. In addition, the conversion of these grazing lands would complete a logical and viable neighborhood by joining the urban areas to the north and south and essentially linking the Elk River Wildlife Areas to the northwest (the City's) and east (CDFW's), expanding the current open space conservation lands along the southern City boundary. As discussed above, the proposed conversion of agricultural lands for the restoration project will contribute to the establishment of a stable limit on the encroachment of urban development into the unincorporated rural areas south of the City.

c) Limiting Conversions Around Urban Periphery to conversions that would be consistent with Section 30250

Coastal Act Section 30250 requires that new residential, commercial or industrial development be located within, contiguous to, or in close proximity to existing development. The purpose of the proposed project is restoration and does not include any development that would be subject to Coastal Act section 30250. Thus, the project is consistent with this provision.

d) Develop Lands Not Suitable for Agriculture First Before Converting Agricultural Lands

The proposed conversion of the 89 acres of grazing land around the periphery of an urban area will occur on land not particularly suited for agricultural use and whose development will avoid conversion of productive agricultural lands. A combination of (a) ongoing subsidence of the area; (b) the site's proximity to the bay and estuary and its high-water table and poor drainage that lead to saturated soils for several months each year; and (c) an unmaintained earthen dike separating the farmland from the Elk River estuary has led to saltwater intrusion into significant portions of the grazing lands. As discussed above, most of the pasturelands on the site were classified as "brackish marsh" in the vegetation report completed for the project. Thus, the site's relatively saline soil levels further limit the agricultural productivity of these lands. Accordingly, given the projected increase of saltwater intrusion expected for the site, ongoing regional subsidence, and predicted incremental rise in sea level, the suitability of the grazing lands for continued agricultural use is expected to continue to degrade in the coming years and possibly be completely extinguished by these forces.

e) Avoid Public Service Facility Expansion That Would Impair Viability of Agricultural Lands

The development does not involve an extension of utility lines or other public services on the site or to adjacent agricultural lands. Therefore, the proposed conversion of grazing lands will not result in the development of infrastructure that would be financed through assessments against the adjoining agricultural properties. Furthermore, the proposed conversion of grazing lands to

restored habitat and recreational trail use, as conditioned, will not result in emissions or discharges that would degrade air and water quality and thereby impact agricultural viability of the surrounding agricultural lands.

f) Avoid Diminishment in Productivity Associated with Divisions of Prime Agricultural Land

This land use conflict minimization measure is not applicable, as the proposed conversion of grazing lands would not involve prime agricultural lands.

Conclusion

For all of the reasons discussed above, the Commission finds that the proposed conversion of grazing lands is a permissible conversion of agricultural land consistent with section 30241 of the Coastal Act, as the proposed discontinuation of agricultural uses will not occur on prime agricultural land as defined by the Coastal Act, and will occur on agricultural lands that: (1) are located around the periphery of an urban area; (2) are declining in quality due to continuing subsidence and saltwater intrusion; (3) would establish a stable boundary separating urban and rural areas; and (4) would serve to minimize urban-rural land use conflicts.

H. PUBLIC ACCESS & RECREATION

Section 30210 of the Coastal Act requires that maximum public access shall be provided consistent with public safety needs and the need to protect natural resource areas from overuse. Section 30212 of the Coastal Act requires that access from the nearest public roadway to the shoreline be provided in new development projects, except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or where adequate access exists nearby. Section 30211 of the Coastal Act requires that development not interfere with the public's right to access gained by use or legislative authorization. Section 30214 of the Coastal Act provides that the public access policies of the Coastal Act shall be implemented in a manner that takes into account the capacity of the site and the fragility of natural resources in the area. Section 30221 of the Coastal Act require that oceanfront land suitable for recreational use shall be protected for recreational use and development unless already adequately provided for in the area. In applying Sections 30210, 30211, 30212, 30214, and 30221, 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 grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential access.

The City of Eureka proposes to construct, operate, and maintain an approximately one-mile-long Class I, ADA-accessible, non-motorized multiuse trail along Humboldt Bay that will serve as part of the California Coastal Trail. As designed to meet Caltrans Class I multi-use trail design standards (Caltrans Highway Design Manual, Chapter 1000) and Americans with Disabilities Act (ADA) design standards, the proposed trail will expand shoreline access for a variety of users including bicyclists, walkers, hikers, runners, skaters, wildlife viewers, nature educators, persons in wheelchairs, and other non-motorized outdoor users. The trail will expand the California Coastal Trail, promoting coastal access regionally and state-wide. The trail will also promote access to the Bay, the Elk River estuary, and surrounding marshlands for wildlife viewing and a variety of recreational and educational activities.

The proposed 1-mile-long trail extension, which terminates at the southern boundary of Eureka, will essentially complete the California Coastal Trail through the length of the City's waterfront, approximately six miles of which the City has constructed over the past six years. In addition, the City's trail system is being developed as part of a collaborative regional trail effort with the County, the City of Arcata, the Humboldt County Association of Governments, the State Coastal Conservancy, the NCRA, and other partners to develop a continuous coastal trail network along the eastern shoreline of Humboldt Bay for a total length of over 13 miles, the majority of which has been constructed in the past six years (under CDPs 1-11-037, 1-15-2054, and 1-16-0122). The County is currently in the design and permitting phase for Humboldt Bay Trail South, a 4-mile-long segment along the Highway 101 corridor between Arcata and Eureka that will connect the north end of Eureka's Waterfront Trail and the south end of Arcata's Humboldt Bay Trail.

The City will provide a coastal access parking area in an existing upland adjacent to Tooby Road at the south end of Area 2. The parking area will be paved and fenced and will support approximately eight vehicles. In addition, parking at the north end of Area 1 is available along Pound Road, which will be improved with a new non-motorized boat ramp and signage. The City has developed general concepts for signage associated with the project but has not yet developed final signage plans. Preliminary concepts include installing access welcome signs at Pound Road (north end of Area 1) and Tooby Road (south end of Area 2). As previously discussed, the Commission is requiring Special Condition 6 to require submittal of final design plans for all signage, fencing and other trail amenities prior to commencement of construction of such amenities.

As stated above, the trail will be developed as part of a City-wide coastal trail network and as part of the larger California Coastal Trail. The proposed trail segments are located within NCRA right-of-way, on NCRA and City-owned properties. 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 14. Special Condition 14 identifies the fundamental provisions of the scope of trail use. Special Condition 14 includes the following requirements: (a) the entire trail shall be a Class 1 multi-use trail available for shared public use 24 hours a day daily; (b) the permittee shall be responsible for maintenance of the multi-modal trail and motorized vehicles shall be permitted access by the City and its agents for construction, maintenance and emergency purposes; (c) the City shall maintain continuously all trail improvements in good order and repair, and shall allow no nuisances to exist or be maintained therein; (d) no portion of the trail owned by the City in fee or by grant of easement may be abandoned by the City 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 (e) any proposed changes, including any proposed change in the above-identified scope, manner or extent of use or any proposed relocation or abandonment of any portion of the multi-modal trail, shall require an amendment to CDP 1-17-0926 approved by the California Coastal Commission, unless the Executive Director determines that no amendment is legally required. 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.

As summarized above, sections 30210 and 30214 of the Coastal Act provide that the public access policies of the Coastal Act shall be implemented in a manner that protects public safety and takes into account the need to regulate the time, place, and manner of public access, depending on the facts and circumstances in each case. Given that the City is proposing to route the new coastal access trail on top of the existing railroad bridge over the Elk River rather than install a new trail bridge, there is a need to plan for the possibility that conflicts may arise between future train uses of the bridge and trail usage. As discussed in the Project Description Finding, the City proposes that trail users on the proposed new coastal trail extension along Area 1 and Area 2 would use of the existing, currently non-operational railroad bridge over the Elk River immediately adjacent to the project area. The existing bridge is approximately 200 feet long and 14 feet wide, and the City would improve it for trail usage by installing temporary, removable rubber matting (in sections called "gauge pads") directly on top of and between the existing rails (see Exhibit 6, pages 1 and 13-15). Also as discussed above, in the Environmental Setting Finding, although the railroad in Humboldt County has been non-operational for several decades, with little chance of renewed rail service in the foreseeable future, there is a speeder car train that runs periodically on a segment of rail line several miles north of the subject site. To protect the safety of trail users in the project area from potential conflicts that may arise between the speeder car train over the existing railroad bridge and trail users that will be using the railroad bridge as a segment of the Coastal Trail as proposed under this CDP application, the Commission attaches Special Condition 15. This condition requires submittal of a Public Safety Plan for the shared use of the railroad bridge over the Elk River Estuary at least two weeks prior to any necessary closure of the bridge to coastal trail users due to use of the rail bridge by the speeder car train or other rail service. The plan shall address: (1) safety considerations including provisions for posting signs along the trail segments at the approaches to the bridge crossing and arranging for flaggers to be present for the duration of the crossing event (2) emergency response; (3) security measures; (4) design standards; and (5) reopening the railroad bridge to trail users as soon as possible after train use of the bridge is complete.

Finally, Special Condition 16 requires that, prior to any conveyance of the properties owned by the City on which the trail is proposed, the permittee shall 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.

I. COASTAL HAZARDS

Section 30253 of the Coastal Act states, in applicable part, as follows:

> *New development shall do all of the following:*

> *(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> *(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

The proposed project is located along the margin of Humboldt Bay in an active seismic area that is subject to numerous seismic hazards, including strong ground motions, seismic settlement, soil liquefaction, and tsunamis. The proposed trail is also located in the mapped FEMA Zone A 100-year floodplain, and the proposed alignment will be located adjacent to tidally influenced waters, resulting in flooding risks that will only increase in frequency and extent with sea level rise.

Earthquake Shaking, Soil Settlement, and Liquefaction

Humboldt County is a very active tectonic region subject to frequent, and sometimes large, earthquakes due in part to the presence of numerous fault lines and its location near the intersection of the Pacific, Gorda, and North American plates.

To address seismic hazards, the CEQA document adopted for the project includes a mitigation measure requiring a California registered geotechnical engineer to conduct a design-level geotechnical study for the project that evaluates seismic hazards and provides recommendations to mitigate the effect of strong ground shaking; any unstable, liquefiable or expansive soils; or settlement in adherence with current California Building Code (CBC) standards for earthquake resistant construction. The study shall provide measures to repair, stabilize, or avoid unsuitable soils and shall include grading, drainage, paving, and foundation design recommendations. The mitigation measure requires that the project be constructed in conformance with the specific recommendations contained in the design-level geotechnical study, including recommendations for grading, ground improvement, and foundation support. The recommendations made in the geotechnical study shall be incorporated into the final plans and specifications and implemented during construction. LACO Associates completed the required study in a technical memorandum dated July 12, 2018 (Exhibit 10). Special Condition 5-A(ii)(c) requires submittal of final plans prior to permit issuance confirming that all recommendations for site preparation, compaction, and grading included in the geotechnical memorandum have been incorporated into the project.

Because the proposed project will comply with California Building Code and local building codes, which have been designed to allow structures to withstand strong seismic ground shaking, and because the project will comply with the site-specific recommendations of the project's geotechnical report, the development is designed to assure stability and structural integrity consistent with the requirements of section 30253(b).

Tsunami Inundation

Due to the known seismic activity in the Pacific Rim, there is the potential for a tsunami to occur that could impact Humboldt Bay. If the region were to suffer a major earthquake along the Cascadia Subduction Zone, a local tsunami could hit the Humboldt Bay shoreline within minutes. The entire trail alignment is in a tsunami evacuation area that may be subject to tsunami

inundation. As the proposed project is a recreational trail that does not include habitable structures, residential units, or critical facilities, the risks to life and property are proportionately less than for more intense development. Tsunami hazard warning signs already exist along Highway 101 around Humboldt Bay. In addition, the County maintains a coastal tsunami early warning system, including the use of tsunami sirens, to minimize risk inside the tsunami vulnerability and evacuation area where the trail will be located.

The City has proposed to install access welcome signs at Pound Road (north end of Area 1) and Tooby Road (south end of Area 2) with site information educating visitors about tsunami hazards and what actions to take in the event of seismic activity. Special Condition 6 requires submittal of final signage plans prior to commencement of construction of signage and trail amenities authorized by this permit, which demonstrate that sign content shall include information warning visitors about tsunami hazards at the site. Therefore, as conditioned, the project includes measures to minimize tsunami risks.

Floodplain and Drainage Affects

The proposed project is in a relatively low-lying waterfront area in the mapped 100-year floodplain. Although the project includes installation of one mile of an 8- to-10-foot-wide impervious asphalt surface, the trail is not expected to have a significant impact on flood capacity. Any water falling on the paved trail will flow downhill to percolate in surrounding areas, including the two-foot-wide gravel shoulders, the inboard ditch inland of the railroad berm, and along the living shoreline to be constructed between the trail and restored tidal marsh inland of the trail. In addition, the proposed trail, unpaved tidal ridge (setback berm), and elevated trails and viewing platforms will not redirect or impede flood flows, are not expected to be subject to significant damage as a result of inundation and are not essential facilities required to be operational in the event of a flood.

Tidal Inundation and Sea Level Rise

The proposed trail elevation will range from approximately 12 to 14 feet (NAVD 88), above the current mean monthly maximum water (MMMW) elevation on Humboldt Bay of 7.74 feet (NAVD 88, as measured at NOAA's North Spit Tide Gage) and the average annual king tide elevation of 8.8 feet (NAVD 88). Extreme tides (100-year events) and king tides and/or storm surges can reach up to two feet above the tidal baseline elevation. Thus, the trail will be constructed at an elevation that is several feet above extreme tides, king tides, and/or storm surge from current sea level elevations.

Humboldt Bay has the highest rate of sea-level rise in the State due to active land subsidence, with up to 1.0 feet of rise expected by 2030, 2.3 feet by 2050, and 7.6 feet by 2100.[23] Given local relative sea level rise projections, the proposed trail may be exposed to an increased level of periodic inundation as a result of high tide and flood events by 2050.

[23] These are the "medium-high" risk aversion projections given in the Commission's recently adopted Sea Level Rise Policy Guidance Science Update, Table G-2. The projections for relative sea level rise in Humboldt Bay take into account the combined effects of regional eustatic sea level rise and vertical land motion (tectonic uplift and subsidence).

The City currently has a 25-year license through 2040 from NCRA for use of the NCRA railroad right-of-way for the Waterfront Trail north of the subject site. As mentioned above, the City expects to receive an updated license for the proposed trail development within the NRCA right-of-way once final construction plans are complete and approved by the NCRA Board, and the term of the license is not expected to change. The California Coastal Commission's sea level rise policy guidance (2015) states that ancillary development and amenity structures may identify a relatively short expected life compared to residential and commercial structures, such as 25 years or less. Consistent with the sea level rise guidance, and given the 25 year license agreement with NCRA, in this case it is useful to analyze trail vulnerability through 2040. Because there is a significant range between best- and worst- case sea level rise projection scenarios, it is reasonable to assume that the "medium high" projection for year 2050 can be used to reflect the range of scenarios (best-worst case) for year 2040.

As described above, the proposed trail elevation will range from approximately 12 to 14 feet (NAVD 88). Based on the average projection of sea level rise for year 2050 (2.3 feet), the entire proposed trail will avoid flooding from mean annual maximum water elevations (up to 11.1 feet in elevation, which is 2.3 feet above current king tide levels) over the 25 year analysis period.

King tides occur less than ten calendar days per year and typically last less than a few hours each day. If sea level rises faster than projected, such as under the extreme "H++ Scenario of 3.1 feet by 2050, a portion of the trail may be inundated with water during these times. However, the trail will be designed to withstand occasional flooding, and because the project is not critical infrastructure and does not include any habitable structures, the approved development will minimize risks to life or property.

Beyond 2050, the trail will be increasingly vulnerable to flooding. The proposed trail segment is located within a corridor of infrastructure containing the trail, the railroad, U.S. Highway 101, sewer, and electrical lines, all of is vulnerable to sea level rise over the long-term. Along this corridor, the railroad track embankment acts as a levee between Humboldt Bay and the land to the east. This embankment is deteriorating and is highly vulnerable to breaching by erosion or by being overtopped by extreme tides, king tides, and/or storm surges. If this embankment were overtopped, it may result in permanent tidal inundation of the lands behind the railroad, including the trail and the highway. At this point, the City, Caltrans, and other implicated property owners will have to adapt or retreat their infrastructure. Potential adaptation measures include, among other options, adding additional fortification to the railroad berm or the Coastal Trail. As a coastal dependent use, shoreline protective devices can be considered for approval to protect the trail under section 30235 of the Coastal Act. Other potential adaptation measures include raising the elevations of the highway, providing more space for the exchange of moving waters, constructing a viaduct to accommodate both the highway and the trail, or relocating all of the infrastructure facilities to follow different routes. The City is embarking on an LCP update that includes planning for sea level rise adaptation in vulnerable areas. The threat of sea level rise to this area and other parts of the City will be further addressed during that process.

Since future modification, relocation, reconstruction, or abandonment of the trail are forms of development as defined by section 30106 of the Coastal Act that require CDP authorization, the City will need to obtain a CDP amendment or a new CDP prior to making such changes to the

trail. In the review of an application for future trail changes, the Commission will consider the flooding risk from sea level rise and other flood and geologic hazards in evaluating the consistency of the development with Section 30253 of the Coastal Act. To ensure that the Applicant and the NCRA are notified of the need to obtain additional CDP authorization for any changes to the trail, Special Condition 14 requires that any proposed relocation, abandonment, or modifications to the trail shall require a permit amendment.

Considering the aforementioned hazards, the Commission also attaches Special Condition 17, which requires the City to assume the risks of flooding and geologic hazards to the property and waive any claim of liability on the part of the Commission. Given that the applicant has chosen to implement the project despite flooding and geologic risks, the applicant must assume the risks. Special Condition 17 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. Therefore, the Commission finds that the proposed project, as conditioned, will minimize risk to life and property from hazards, consistent with section 30253(a) of the Coastal Act.

J. ARCHAEOLOGICAL RESOURCES

Section 30244 of the Coastal Act states:

> *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 Wiki division 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. Today, representatives of the Wiyot Tribe are the Table Bluff Reservation Wiyot Tribe, the Blue Lake Rancheria, and the Bear River Band of the Rohnerville Rancheria.

Upon initiation of planning for the proposed project, in 2016, the City engaged in formal consultation with the Tribal Historic Preservation Officers for the Wiyot Area tribes. No tribal cultural resources were identified for the project site by the THPOs through consultation. In addition, William Rich and Associates completed a cultural resources investigation for the project, including consultation with the Wiyot Tribes and field surveys. The investigation did not identify any archaeological resources. Furthermore, on November 26, 2018 Commission staff contacted the THPOs for the Wiyot area tribes requesting comments and recommendations on the project. The THPO for the Blue Lake Rancheria responded and identified no additional conditions or mitigation measures beyond the standard “inadvertent discovery” condition described below.

Due to an extensive history of flooding in the area, silt deposits, and changes to the mouth of the Elk River, it is possible that buried archaeological materials may exist in the project area and be unearthed during excavation activities. To ensure protection of any cultural resources that may

be discovered at the site during construction of the proposed project, the Commission attaches Special Condition 18. This special condition requires that if an area of cultural deposits is discovered during the course of the project, all construction must cease and a qualified cultural resource specialist, in conjunction with the Wiyot Tribe, the Bear River Band of Rohnerville Rancheria, and the Blue Lake Rancheria THPOs, must analyze the significance of the find. To recommence construction following discovery of cultural deposits, the permittee is required to submit a supplementary archaeological plan for the review and approval of the Executive Director, who determines whether the changes are de minimis in nature and scope, or whether an amendment to this permit is required.

Therefore, the Commission finds that the development, as conditioned, is consistent with Coastal Act section 30244, because as conditioned, the development includes reasonable mitigation measures to avoid adverse impacts to archaeological resources.

K. 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 19 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 Applicant/Permittee challenging the approval or issuance of this permit.

L. CALIFORNIA ENVIRONMENTAL QUALITY ACT

The City of Eureka served as the lead agency for the project for CEQA purposes. The City adopted a Mitigated Negative Declaration for the project on November 13, 2017.

Section 13906 of the Commission's administrative regulation requires Coastal 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 California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved 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 incorporates its findings on Coastal Act consistency at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed herein, the proposed project has been conditioned to be found consistent with the Chapter 3 policies of the Coastal Act. Mitigation measures that will minimize all adverse environmental impacts have been made requirements of project approval. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A
SUBSTANTIVE FILE DOCUMENTS

Application File for Coastal Development Permit No. 1-17-0926

Application File for Coastal Development Permit No. 1-16-0122 (Arcata Bay Trail)

Application File for Coastal Development Permit No. 1-15-2054 (Eureka Waterfront Trail)

Application File for Coastal Development Permit No. 1-14-0249 (Reginal Spartina Eradication)

Application File for Coastal Development Permit No. 1-11-037 (Eureka Hikshari' Trail)

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