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Staff:	A. Leavitt-SF
Staff Report:	10/31/24
Hearing Date:	11/14/24

STAFF REPORT: MATERIAL AMENDMENT

Application No.:	1-90-104-A5
Applicant:	City of Eureka Public Works Department
Location:	Palco Marsh, between Broadway Street (Highway 101) and Humboldt Bay, south of Del Norte Street, Eureka, Humboldt County
Approved Project:	Enhancement of 86 acres of fresh and saltwater marsh, and public access improvements
Proposed Amendment:	Implement portions of the City's larger Flood Reduction and Sea Level Rise Resiliency Project within and around Palco Marsh, including: (1) discharge redirected partially treated stormwater into the marsh; (2) upgrade existing stormwater infrastructure at north end of marsh and add a trash capture device; (3) enhance the tidal prism and estuarine habitats within the marsh by dredging new and deepening existing tidal channels and placing excavated sediments on the marsh plain; and (4) upgrade drainage infrastructure between the marsh and Humboldt Bay.
Staff Recommendation:	Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

The City of Eureka is requesting to modify CDP 1-90-104 to allow for implementation of portions of the City's larger "Eureka Flood Reduction and Sea Level Rise Resiliency Project" within and around a wetland habitat area on the shoreline of Humboldt Bay known as Palco Marsh, including: (1) discharge redirected partially treated stormwater into the marsh; (2) upgrade existing stormwater infrastructure at the north end of the marsh and add a trash capture device; (3) enhance the tidal prism and estuarine habitats within the marsh by dredging new and deepening existing tidal channels and placing excavated sediments on the marsh plain; and (4) upgrade drainage infrastructure between the marsh and Humboldt Bay.

The original permit was approved in June of 1990 and authorized restoration and enhancements to 86 acres of freshwater and tidal marsh and public access improvements in and around Palco Marsh. There have been several amendments to the original permit over the decades, which have resulted in additional enhancements to marsh habitat. Palco Marsh is surrounded by urban development on three sides and is separated from Humboldt Bay by a railroad right-of-way and levee but remains hydraulically connected to the bay through a drainage structure that limits the full tidal range within the marsh while allowing existing stormwater runoff from urban areas that enters Palco Marsh to be conveyed to Humboldt Bay.

The primary issue raised by this amendment application is potential degradation of the biological productivity and quality of coastal waters, wetlands, and marine resources as a result of the City's proposal to increase the volume of stormwater discharge that would flow into Palco Marsh from upland urban neighborhoods. Palco Marsh currently receives untreated runoff from commercial, industrial and residential areas totaling 395.7 acres, and the contributing runoff area to Palco Marsh post project would increase to 685 acres. At the same time, there will be a corresponding reduction in the amount of stormwater runoff discharging directly to Humboldt Bay at other locations in the Coastal Zone north of the project site (outside of the project area covered by this permit amendment).

The proposed restoration (through deepening and extending) of tidal channels within Palco Marsh will expand the tidal prism within the marsh system, thereby draining stormwater that flows into the marsh out of the marsh to Humboldt Bay more effectively compared with existing conditions. The expanded tidal prism will also be facilitated by the proposed replacement of a drainage structure between Humboldt Bay and Palco Marsh with a larger capacity structure that will lower the minimum water levels allowing the area to "flush" (drain) more effectively. Although the project will result in a larger volume of stormwater entering Palco Marsh, the modeling shows that the stormwater will be held in the marsh for a shorter duration than under current conditions and the basin will drain more effectively.

The City also proposes to protect water quality by treating the additional stormwater runoff that is proposed to be redirected to Palco Marsh under the project prior to its discharge into the marsh using "Hydrodynamic Separators" (HDS). This type of treatment device will be installed within the stormwater drainage system upstream from the marsh to capture and retain pollutants, including sediments, nitrate, phosphate, and

metals. The project also includes installation of a trash capture device within the replacement outfall into Palco Marsh.

To verify that the added volume of stormwater entering Palco Marsh will be effectively treated and will not result in an increase in polluted runoff discharge to the marsh, as part of their permit application the City submitted a Water Quality Monitoring Plan. Staff recommends Special Condition 16 to require finalization of the Water Quality Monitoring Plan and implementation of adaptive management measures to ensure that stormwater pollutant thresholds are not exceeded and water quality is maintained consistent with Sections 30230 and 30231 of the Coastal Act.

The wetland dredging and filling impacts associated with replacing existing drainage infrastructure are allowable as an incidental public service purpose and the channel dredging and beneficial fill placement in subsided areas of Palco Marsh are for a restoration purpose. To ensure that impacts associated with the stormwater infrastructure are fully mitigated and that the restoration elements of the project are successful and do not result in unintended adverse impacts, staff recommends Special Condition 15, which would require submittal of a final revised version of the Habitat Mitigation and Monitoring Plan submitted as part of the permit application with certain additions and modifications to add clarity and strengthen the monitoring requirements and success criteria.

As proposed, the development within Palco Marsh reduces existing flood hazards within the City expected to worsen with sea level rise and incorporates consideration of long-term management and sea level rise adaptation of Palco Marsh with adaptation pathways.

Staff therefore recommends approval of CDP amendment application number 1-90-104-A5, as conditioned. The motion to implement this recommendation can be found on page 5.

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LIST OF APPENDICES

LIST OF EXHIBITS

I. Motion and Resolution

Motion

> I move that the Commission **approve** the proposed amendment to Coastal Development Permit Amendment No. 1-90-104 pursuant to the staff recommendation.

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

Resolution

The Commission hereby **approves** Coastal Development Permit Amendment No. 1-90-104-A5 on grounds that the development as amended and subject to conditions 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. Changes to Conditions

NOTE: The Commission approved Coastal Development Permit (CDP) 1-90-104 on June 13, 1990 with seven (7) standard conditions and four (4) special conditions. There have been four amendments prior to the subject amendment. Unless specifically altered by this amendment, all standard and special conditions attached to CDP 1-90-104-A4, and reflected in Appendix B, remain in effect. Permit Amendment 1-90-104-A5 is granted subject to the following amended standard and special conditions shown below. Language to be added is shown in underlined format. Language to be removed is shown in strikethrough.

A. Standard Conditions:

2. **Expiration.** If development authorized by CDP 1-90-104-A5 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 amount of time. Application for extension of the permit amendment must be made prior to the expiration date.

B. Special Conditions:

6. Construction Responsibilities

The permittee shall comply with all proposed Best Management Practices and Avoidance and Mitigation Measures adopted by the Permittee under its CEQA process and proposed as part of the permit application for CDP 1-90-104-A5, attached here as Exhibit 4, except as supplemented or modified herein, including, but not limited to the following construction performance standards:

A. No construction materials, debris, or waste shall be placed or stored where it may be subject to entering waters of PALCO Marsh, Railroad Marsh, the lateral back-drains between the reclamation and railroad levees, or Humboldt Bay ~~or~~;

B. All construction debris, including fencing materials, gating, demolished drainage structures, and other hazardous materials and solid wastes shall be removed and disposed of in an upland location outside of the coastal zone or at an approved disposal facility; ~~and~~

C. All grading activities, including the placement of fill, dredging and diking of channels, and excavations and re-cover operations shall be conducted during the dry season period of June 1 through October 1. Additional coastal development permit authorization shall be obtained for any grading conducted during the period of October 1 through May 31~~.~~;

D. *Environmental Awareness Training.* PRIOR TO COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY CDP 1-90-104-A5, a qualified biologist shall provide a pre-construction meeting with all construction personnel (contractors and subcontractors), consisting of a briefing on environmental permit conditions and requirements relative to the proposed project, including but not limited to work windows, construction site management within the project area, locations of environmentally sensitive areas, and how to identify and report sensitive species within the project area. This shall be repeated if there is worker turnover within the construction season, each new worker shall be advised on best practices and requirements. This information shall also be posted at the job site to ensure the importance of these measures are recognized;

E. *Biological Monitoring.* A biological monitor shall be present onsite during initial equipment mobilization, site preparation, vegetation removal, ground disturbance, concrete pours, final construction demobilization, and all other actions that may reasonably result in adverse impacts to sensitive species, marine resources, and water quality, to advise the contractor on and to ensure compliance with the required sensitive resource protection measures of this permit and the CEQA document. The monitor shall be a qualified biologist with the ability to recognize sensitive species and habitats in the in the project vicinity. The monitor shall have the authority to stop work activities in any area if required to avoid adverse impacts to sensitive resources. The monitor shall maintain records of activities, observations, and communications with the Permittee and/or construction personnel. The monitoring logs shall be retained and made available for

agency review upon request and shall be submitted to the Executive Director following completion of construction;

F. *Nesting Birds.* A qualified biologist shall conduct a pre-construction survey within the 7-day period prior to vegetation removal and ground-disturbing activities. If ground disturbance or vegetation removal work lapses for seven days or longer during the breeding season, a qualified biologist shall conduct a supplemental avian pre-construction survey before project activities are reinitiated. Should an occupied nest occur within 500 feet of the project area, a 500-foot buffer shall be established for raptors and 300-foot buffer for all other birds. No work may occur within the buffer until nesting activity has ceased. The results of the required surveys shall be submitted to the Executive Director prior to commencement of development, including a narrative that describes the survey details (e.g., dates, methods, personnel and their qualifications), results, measures proposed to avoid disturbance of nesting birds, and a map that depicts the location(s) of any active nests identified and the associated buffer zones;

G. *Special Status Fish.* A qualified biologist shall conduct a pre-construction survey and relocation activities for fish and lamprey consistent with the measures proposed in the permit application. Survey and relocation monitoring reports shall be submitted to the Executive Director upon request;

H. *Special Status Frogs.* A qualified biologist shall conduct a pre-construction survey and relocation activities for special status frogs consistent with the measures proposed in the permit application. Survey and relocation monitoring reports shall be submitted to the Executive Director upon request;

I. *Invasive Species Prevention.* All construction equipment (e.g., cofferdams, waders, etc.) shall be cleaned prior to entering the work site consistent with California Department of Fish and Wildlife (CDFW) protocols to minimize the potential for the transport of non-native vegetation seeds and plant material or invasive species. Rock, fill, or any material used during construction shall originate from local sources to avoid the inadvertent introduction of non-native plant species to surrounding environmentally sensitive areas. Any material used for erosion control or landscaping shall be free of noxious weed seed and propagules;

J. *Trash/Debris.* During construction, all trash and debris shall be properly contained, removed from the work site, and disposed of on a regular basis to avoid contamination of habitat during construction activities. Any debris inadvertently discharged into coastal waters or surrounding habitats shall be recovered immediately and disposed of consistent with the requirements of this CDP. All construction debris shall be disposed of in an upland location outside of the Coastal Zone or at an approved disposal facility pursuant to the final Grading and Excavated/Dredged Materials Disposal Plan required by Special Condition 8; and

K. *Plastic Netting Prohibition.* Only wildlife-friendly, 100-percent biodegradable erosion and sediment control products that will not entrap or harm wildlife shall be used. Erosion and sediment control products shall not contain synthetic (e.g., plastic or nylon) netting. Photodegradable synthetic products are not considered biodegradable.

7. Erosion and Runoff Control Plan

A. PRIOR TO COMMENCEMENT OF EACH SUB-PHASE OF CONSTRUCTION AUTHORIZED BY COASTAL DEVELOPMENT PERMIT ~~AMENDMENT~~ NO. 1-90-104~~-A2~~, as amended through 1-90-104-A5, the permittee shall submit, for review and approval of the Executive Director, a plan for erosion and run-off control that addresses each sub phase of the project as amended, including Railroad Marsh enhancement, tidal slough dredging and outfall, ~~and~~ other Phase 1A improvements, and project elements associated with development authorized under CDP 1-90-104-A5.

[…]

8. Grading and Excavated/Dredged Materials Disposal Plan

A. PRIOR TO THE COMMENCEMENT OF EACH PHASE OF GRADING AND DREDGING AUTHORIZED BY COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-90-104-A2 AND PRIOR TO THE COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY CDP 1-90-104-A5, the ~~applicant~~ Permittee shall submit, for the review and approval of the Executive Director, a disposal plan for all of the excavated materials to be removed from the entire project site, as amended to include the Railroad Marsh enhancement, tidal slough dredging and outfall training channel, ~~and~~ other Phase 1A improvements, and implementation of components of the Eureka Flood Reduction and Sea Level Rise Resiliency project.

1) The disposal plan shall demonstrate that:

(a) No excavated materials to be removed shall be temporarily placed or stored during grading activities where it may be subject to entering wetlands or other coastal waters;

(b) All of the fill to be removed shall either be: (i) placed and used pursuant to and consistent with state and federal hazardous materials and/or solid waste regulations, as well as consistent with the terms and conditions of Coastal Development Permit No. 1-90-104, as amended ~~or this permit amendment (CDP No. 1-90-104-A2)~~; or (ii) disposed of at an authorized disposal site capable of receiving such fill materials. Side casting or placement of any such material within Humboldt Bay, any slough, waterway, stream course, or lake, or any other wetland area, except as specified above is prohibited; and

(c) Excavated materials removal activities shall not occur during the rainy season consistent with Special Condition No. 7;

2) The plan shall include, at a minimum, the following components:

(a) A site plan showing all proposed locations for stockpiling construction materials, debris, or waste during excavated materials removal operations;

(b) A description of the manner by which the materials will be removed from the construction site and identification of all debris disposal sites that will be used;

(c) If the removed fill material is to be placed and used as part of a development either approved by the Commission under another valid coastal development permit or by another regulatory entity, the permittee shall provide: (i) a copy of the approved permit or authorization, (ii) written permission from the owner of the property governed by the approved permit authorizing the fill, (iii) hazardous materials confirmation testing <u>of the removed fill material for the developed authorized under CDP 1-90-104-A2 </u>indicating that the concentration of Constituents of Concern within the materials are at levels where such stockpiling and reuse would be in conformance with state and federal hazardous materials regulations, and (iv) a written description and site map indicating when and where the materials will be stockpiled for later use in the approved development; and

(d) A schedule for removal of all debris.

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

[…]

10. Assumption of Risk, Waiver of Liability and Indemnity Agreement. By acceptance of this permit, <u>as amended under CDP 1-90-104-A5, </u>the applicant acknowledges and agrees (i) that the site may be subject to hazards from waves, storm surge, and flooding<u>, which will worsen as sea levels rise</u>; or, 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.

[…]

12. **Repair and Maintenance.** Ongoing maintenance of the enhancement project site's hydrologic and biologic improvements, and recreational amenities, including the prompt repair of all drainage facilities (including but not limited to the tide gates and the trash capture device) and interpretative kiosks, ongoing efforts to eradicate exotic-invasive plant species and the replanting, as necessary of restoration native plants, and the periodic collection of litter and other forms of solid wastes, shall be undertaken by the permittee, as proposed within the Phase 1A project description and consistent with the final approved Maintenance Plan for the development authorized by CDP 1-90-104-A5 required by Special Condition 17.

13. **Final Plans.**

    A. PRIOR TO ISSUANCE OF CDP AMENDMENT 1-90-104-A5, the Permittee shall submit for the review and written approval of the Executive Director, final project plans that are consistent with the Project Description (Exhibit 3) and all special conditions of this CDP and substantially conform with the plans submitted to the Commission in the permit application, except with the following changes:

        1) Final plans shall include identification of the locations and design of Hydrodynamic Separator units.

        2) Final plans shall show removal of the storm drain connection between the Simpson Channel and Palco Marsh.

        3) The final plans shall be accompanied by confirmation, with substantiating information, including calculations for the volume of water produced by the 85th Percentile 24-Hour Storm Event for the drainage area, that the final project design includes treatment of 100% of the 85th Percentile 24-Hour Storm Event for the increase in stormwater that will discharge into Palco Marsh as part of the project for all pollutants of concern identified in the draft WQMP (dated February 16, 2024).

    B. The Permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans, including significant delays in construction, shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission approved amendment to this CDP unless the Executive Director determines that no amendment is legally required.

14. **Protection of Special Status Plants.** PRIOR TO THE COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY CDP 1-90-104-A5 in areas with the potential

to impact special status plants, the Permittee shall complete the following protection and mitigation measures:

A. *Conduct Pre-development Floristic Surveys*: The Permittee shall conduct pre-development surveys for Point Reyes salty bird's-beak (*Chloropyron maritimum ssp. palustre*) and any other special status plant species (California Rare Plant Rank 1A, 1B, or 2) with the potential to occur in the project area. Surveys shall be conducted in the appropriate season for optimal species-specific detection (i.e., when plants are flowering) and in the same construction season for the authorized development activities. Survey methods shall comply with CNPS/CDFW rare plant survey protocols and shall be performed by a qualified field botanist.

B. *Schedule Project Activities to Avoid Blooming Periods*: Authorized development in the vicinity of identified special status plant populations including, but not limited to, the species listed above, shall be scheduled for times of the year occurring after the special status plants have dropped their seed (i.e., late summer or fall) to the maximum extent feasible to avoid impacts to plant blooming and seed dispersal of salt marsh flora.

C. *Flag Areas for Avoidance*: If pre-development surveys identify special status plants in the area of work, the plants shall be mapped and flagged for avoidance during development activities to the maximum extent feasible.

D. *Other Mitigation Measures to Minimize Adverse Effects*: If special status plant populations are detected where development will have unavoidable impacts, they shall be conserved by measures appropriate for the individual species which may include methods such as plant relocation, seed collection, and/or nursery plant propagation by a qualified biologist prior to any further activity in the subject area. The plants shall be replanted or seeds redistributed as soon as possible in the vicinity of where they were removed, if feasible, otherwise outside of the area of potential impacts and during the appropriate season and in suitable habitat. Conservation efforts shall be clearly documented and documentation shall be submitted to the Executive Director upon request.

E. *Report Submittal*: The Permittee shall submit for the Executive Director's review and approval the results of the pre-development surveys, including a map that depicts the location(s) of any special status plants identified, the associated survey details (e.g., dates, methods, personnel and their qualifications), the planned construction schedule, and measures proposed to protect any identified special status plants.

15. Habitat Mitigation and Restoration Monitoring.

A. NOT LESS THAN 30 DAYS PRIOR TO COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY CDP 1-90-104-A5, the Permittee shall submit a revised Habitat Mitigation and Monitoring Plan (HMMP) prepared by a qualified restoration ecologist to the Executive Director for

review and written approval. The revised HMMP shall substantially conform with the draft HMMP submitted as part of the permit application (dated January 31, 2024, Exhibit 5), except as supplemented or modified herein, and shall reflect updates to the project description since submittal of the draft HMMP. The final HMMP shall include, in addition to the contents of the draft HMMP, the following components:

1) *Final success criteria.* Final success criteria supported by interim criteria to guide adaptive management and enable measure of mitigation and restoration success. All criteria shall be supported by a clear scientific rationale from either relevant literature or an approved reference site, with statistical tests and criteria for quantitative analysis. Evaluation of final performance shall occur no sooner than five years post-implementation or three years without remedial or maintenance interventions apart from weeding, whichever is later. Final success criteria shall include:

   (a) At a minimum 70% absolute cover of native species after 5 years and invasive species cover thresholds of no more than 5% total for all species ranked high or moderate by Cal-IPC except for non-native annual grasses.

   (b) Criteria for physical parameters such as topography, bare substrate, and tidal channel geometry. The HMMP shall discuss target geometries for constructed, deepened, and/or extended tidal channels and the tidal pool, including justification and intended ecological functioning for the planned design. The interim and success criteria shall include metrics for monitoring tidal channel and pool geometry, as well as erosion or deposition on the marsh plain (e.g., with feldspar marker horizons). Criteria shall include target elevations that ensure tidal channels and the marsh plain do not experience major sedimentation or erosion following construction that negatively impacts ecological functioning.

2) *Invasive Species Control.* Provisions for control of all California Invasive Plant Council-listed species and description of monitoring, control, and target cover. The absolute cover of any Cal-IPC rated high or moderate invasive species shall be no more than 5%, except for non-native annual grasses. If any herbicide is proposed for potential use, rationale for why it would constitute the least environmentally damaging alternative and detail on the specific product(s) that would be used, including its application methods and certification by the California Department of Pesticide Regulation and allowance for the intended application.

3) *Reporting.* Provisions for monitoring of and reporting on mitigation and restoration areas, which shall occur annually for no less than five (5) years, and for at least three (3) years following the conclusion of all remediation and maintenance activities other than weeding, whichever

is later. All reports shall be prepared by a qualified restoration ecologist and be submitted to the Executive Director no later than December 31st of each year. Raw data and associated metadata shall be delivered with all reports.

(a) Annual monitoring reports shall include photos taken from fixed points; assessments relative to interim success criteria; a work plan for the subsequent year; and specific recommendations to adaptively manage the efforts and facilitate mitigation and restoration success.

(b) A final monitoring report shall be submitted at the conclusion of all mitigation and restoration efforts, no sooner than five (5) years following implementation, which shall summarize all prior reports; provide a detailed timeline of the overall progress and success; and include sufficient detail to evaluate comprehensive compliance with the specified goals, objectives, and success criteria set forth in the approved final HMMP.

B. If the final monitoring report indicates that the mitigation or restoration efforts have been unsuccessful or not as intended, in part or in whole, based on the approved success criteria, the Permittee shall submit within 90 days a revised or supplemental HMMP to compensate for those portions of the original program which did not meet the approved success criteria. The revised or supplemental HMMP(s) shall be prepared by a qualified restoration ecologist approved by the Executive Director and shall specify measures to remediate those portions of the original approved HMMP that have failed or have not been implemented in conformance with the original approved HMMP. The revised or supplementation HMMP may be approved by the Executive Director, unless the Executive Director determines that an amendment to the original CDP is legally required.

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

16. Water Quality Monitoring Plan.

A. NOT LESS THAN 30 DAYS PRIOR TO COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY CDP 1-90-104-A5, the Permittee shall submit for the review and approval of the Executive Director a final revised Water Quality Monitoring Plan (WQMP) that substantially conforms with the draft WQMP submitted with the permit application (dated February 16, 2024, Exhibit 6), except as supplemented or revised herein.

1) *Use of Hydrodynamic Separators (HDS) for Flow-Based Treatment*. The final WQMP shall be updated to be consistent with and conform to the project description included as Exhibit 3, including to reflect the proposed inclusion of Hydrodynamic Separators to treat 100% of the 85th Percentile 24-Hour Storm Event for the increase in stormwater that will discharge into Palco Marsh. The final WQMP shall describe maintenance requirements for the HDS treatment units and the City's plans for repairing and maintaining the treatment units over their expected life.

2) *Adaptive Management Measures*. The final WQMP shall include detailed, feasible adaptive management measures that may be implemented if first flush sampling per subpart 3 below indicates that the pollutant loads in the treated 85th Percentile 24-Hour Storm Event for the increase in stormwater exceeds the pollutant concentrations in either the existing stormwater discharge to Palco Marsh or the regulatory thresholds for pollutants of concern listed in the final WQMP, including timeframes for implementation.

3) *First Flush Sampling*. The final WQMP shall include provisions for monitoring and analysis of the first flush[1] annually for a minimum of five years and then every fifth year thereafter for the life of the permit to ensure that the proposed engineered filtration system effectively removes the target pollutants from the stormwater, including all pollutants of concern identified in the final WQMP. Samples shall be collected at multiple locations within the storm drain system near the outfall to Palco Marsh representative of existing stormwater discharge into Palco Marsh and post project treated stormwater discharge into Palco Marsh Sampling results and analyses shall be submitted to the Executive Director within 90 days of collection.

B. If first flush sampling indicates the project is not effectively treating the 85th Percentile 24-Hour Storm Event for the increase in stormwater that will discharge into Palco Marsh by exceeding pollutant concentrations in either the existing stormwater discharge to Palco Marsh or the regulatory thresholds for pollutants of concern identified in the approved final WQMP, the Permittee shall submit within 30 days a revised or supplemental plan that addresses the inadequacies, identifies adaptive management measures to enhance treatment or redirect stormwater flow to ensure that the water quality of Palco Marsh and associated coastal waters is maintained as required by the final WQMP. The revised plan shall be processed as an amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

[1] Begin sampling within the first 30-60 minutes of rainfall, following at least 72 hours of dry weather or as soon as stormwater flows. Ensure the first storm event of the wet season produces 0.1 to 1 inch of rainfall to effectively mobilize surface pollutants.

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

17. Maintenance Plan. NOT LESS THAN 30 DAYS PRIOR TO COMMENCMENT OF DEVELOPMENT AUTHORIZED BY CDP 1-90-104-A5, the Permittee shall submit, for the review and approval of the Executive Director, a plan for the maintenance of the Trash Capture Device and tide gates within Palco Marsh consistent with the maintenance measures described in the permit application, unless supplemented or modified herein.

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

1) Trash capture device nets shall be removed and replaced prior to becoming overly full (expected every 1-3 months) and shall not be permitted to enable trash to overflow.

2) The tide gate shall be inspected and exercised (raised, lowered, opened, closed) approximately every 3 months, and shall be adjusted as needed based on water level monitoring to maintain salt marsh inundation regime.

3) Removal of sediment accumulation shall occur annually within the concrete sump of inverted siphon.

4) Maintenance activities shall be undertaken in a way that avoids impacts to coastal resources, including but not limited to public access impacts and disturbance to wetlands.

5) Logs detailing dates of maintenance and maintenance activities shall be maintained and submitted to the Executive Director upon request.

B. The Permittee shall undertake development in accordance with the approved final Maintenance Plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final measures shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

18. Public Access Protection Plan.

A. NOT LESS THAN 30 DAYS PRIOR TO COMMENCMENT OF DEVELOPMENT AUTHORIZED BY CDP 1-90-104-A5, the Permittee shall submit, for the review and written approval of the Executive Director, a Public Access Protection Plan to maintain reasonable use of the Waterfront Trail and other nearby public coastal access amenities by the public during development activities authorized under this coastal development permit:

1) The Public Access Protection Plan shall demonstrate that the duration and extent of Waterfront Trail closure for construction-related public safety purposes shall be minimized and shall not exceed 14 days total, unless the Executive Director grants in writing for good cause additional time as needed not to exceed 21 days total without an amendment to this coastal development permit; and

2) The Public Access Protection Plan shall include, at a minimum, the following components: (a) A site plan showing where any proposed temporary access barriers would be installed, which portions of the Waterfront Trail will be maintained for unrestricted public access use, and where trail users will be detoured around the site; (b) a narrative description of the proposed temporary access control measures to be used; and (c) a schedule of the estimated dates when the proposed temporary access control measures would be installed/implemented and removed/terminated.

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

19. Authority to Implement Conditions of Approval. PRIOR TO COMMENCEMENT OF DEVELOPMENT AUTHORIZED BY CDP 1-90-104-A5 within the Great Redwood Trail Authority right-of-way, the Permittee shall submit for the review and approval of the Executive Director, evidence that the needed encroachment permit has been obtained from the right-of-way holder, or evidence that no such encroachment permit is required. The encroachment permit or exemption shall provide evidence of the ability of the Permittee to develop within the applicable right-of-way as conditioned herein. The Permittee shall inform the Executive Director of any changes to the project required by the Great Redwood Trail Authority. Such changes shall not be incorporated into the project until the Permittee obtains an amendment to this CDP, unless the Executive Director determines that no amendment is legally required.

20. Protection of Archaeological Resources. The Permittee shall undertake development in compliance with the proposed measured included in Exhibit 4 to protect archaeological resources, including tribal cultural resources, as supplemented or modified herein:

A. NOT LESS THAN 30 DAYS PRIOR TO THE COMMENCEMENT OF GROUND-DISTURBING DEVELOPMENT ACTIVITIES AUTHORIZED BY CDP 1-90-104-A5, the Permittee shall (i) notify in writing, email, and/or phone calls, as necessary the representatives of Native American Tribes listed on an updated Native American Heritage Commission (NAHC) contact list; (ii) invite all tribal representatives on that list to be present and to monitor ground-disturbing activities; and (iii) arrange for any invited

tribal representative that requests to monitor and/or a qualified archaeological resource monitor to be present to observe project activities with the potential to impact archaeological and/or tribal cultural resources. Evidence of written notification shall be made available to the Executive Director upon request.

B. The Permittee shall retain a qualified archaeological resource monitor who is approved by the relevant tribes per subsection (A) to monitor ground disturbing activities related to this project in areas the tribes deem culturally sensitive.

C. If an area of archaeological and/or tribal cultural resources is discovered during project activities, project activities with the potential to impact such resources shall cease and shall not recommence except as provided in subsection (E) hereof, and the Permittee shall retain a qualified archaeologist and/or tribal cultural resource specialist to analyze the significance of the find in consultation with the Native American Tribes listed on an updated NAHC list. The archaeologist and/or tribal cultural resource specialist shall immediately notify the tribes on the NAHC list. An "exclusion zone" where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area that includes a reasonable buffer zone recommended by the monitor(s). Construction may continue outside of the exclusion zone area.

D. Should human remains be discovered on-site during the course of the project, immediately after such discovery, the on-site archaeological monitor shall notify the County Coroner within 24 hours of such discovery, and all construction activities shall be temporarily halted until the remains can be identified. An "exclusion zone" may be established around the discovery area. If the County Coroner determines that the human remains are those of a Native American, the coroner shall contact the NAHC within 24 hours, pursuant to Health and Safety Code Section 7050.5. The NAHC shall deem the Native American most likely descendant (MLD) to be invited to participate in the identification process pursuant to Public Resources Code Section 5097.98. The landowner/Permittee shall comply with the requirements of Section 5097.98 and work with the MLD person(s) to preserve the remains in place, move the remains elsewhere onsite, relinquish the remains to the descendants for treatment, or determine other culturally appropriate treatment. Within five (5) calendar days of notification to NAHC, the Permittee/ landowner shall notify the Coastal Commission's Executive Director of the discovery of human remains and identify any changes to the proposed development or mitigation measures that may be needed related to the inadvertent discovery. The Executive Director shall maintain confidentiality regarding the presence of human remains on the project site. The Executive Director shall determine whether the identified changes to the authorized development are de minimis in nature and scope.

E. If the Permittee seeks to recommence project activities within an exclusion zone following discovery of archaeological or tribal cultural resources (excluding the discovery of human remains, which shall follow Section 5097.98 as noted in (D) above), the Permittee shall submit an Archaeological Protection Plan for the review and written approval of the Executive Director. The Archaeological Protection Plan shall be developed in consultation with the Native American Tribes listed on the NAHC list for the review and written approval of the Executive Director. If the Executive Director approves the plan and determines that the plan's recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, project activities may recommence after this determination is made by the Executive Director in writing. If the Executive Director approves the plan but determines that the changes therein are not de minimis, construction may not recommence until after an amendment to this permit is approved by the Commission.

III. Findings and Declarations

A. Amended Development, Background, and Existing Conditions

1. General Proposal

The City of Eureka has requested to amend existing CDP 1-90-104 to implement a portion of their larger "Eureka Flood Reduction and Sea Level Rise Resiliency" project. Portions of the Eureka Flood Reduction and Sea Level Rise Resiliency project are within the City of Eureka's CDP jurisdiction, and some components are outside of the Coastal Zone. The CDP for the portions of the larger project in the City's jurisdiction was approved in August of 2023 (City of Eureka CDP no. CDP-23-0008). Generally, the proposed amended development would install stormwater and drainage improvements in Palco Marsh and undertake habitat enhancement work within the marsh to improve habitat for estuarine species. Specific components of the proposed amendment are described in detail in subsection (4) below.

2. Project Location and Background

The project is located along the eastern shoreline of Humboldt Bay in the City of Eureka, primarily within a wetland habitat area known as Palco Marsh. Palco Marsh is surrounded by urban development on three sides: 1) Del Norte and Hawthorne Streets and adjacent commercial/industrial uses to the north; 2) Broadway Street (Highway 101) with commercial uses to the east; and 3) the Bayshore Mall to the south. West of Palco Marsh is Humboldt Bay; however, the marsh is separated from the bay by the railroad right-of-way and levee, which traverses north-south across the western portion of the project site. Palco Marsh remains hydraulically connected to Humboldt Bay through a drainage structure that limits the full tidal range from entering and exiting and allows existing stormwater entering Palco Marsh to be conveyed to Humboldt Bay. Palco Marsh is located adjacent to the Waterfront Trail and trailhead which is part of the

California Coastal Trail, the Del Norte Pier, which is a public fishing pier, and the Eureka City Dog Park.

In June of 1990, the Commission granted to the City a CDP authorizing enhancements to 86 acres of freshwater and tidal marsh and public access improvements in and around Palco Marsh. The Commission's findings of approval for the original permit describe the history of Palco Marsh as follows:

> "… Through a series of natural and human-induced events, the resources of the area have suffered a gradual loss of natural and scenic values. During the mid 1800's, the project area was wetland (probably saltmarsh) with a narrow bank of shallow tidal flats. By 1870, most of the area south of Vigo Street was diked and used as pastureland. In 1901, the Northwest Pacific Railroad was completed, which restricted, but did not eliminate tidal influence eastward into the marsh. By 1927, much of the area west of the railroad had been filled and was used for industrial activities. Since 1944, numerous small fills have encroached on the marshes..."

The approved project involved implementation of the Palco Marsh Enhancement Plan, a jointly developed plan of the City and the Coastal Conservancy. At the time, Palco Marsh had been a focus of concern for enhancement activities by a number of agencies; the Army Corps of Engineers designated the site as an "Area of Importance" to the functioning of the Humboldt Bay ecosystem; the Commission included Palco Marsh on its list of priority public acquisition sites; and the City designated this site in its LCP for acquisition and enhancement activity and requested funding from the Coastal Conservancy for acquisition and eventual enhancement improvements. The Coastal Conservancy agreed to provide funding to acquire, plan and restore Palco Marsh with three primary objectives: (1) enhance tidal action in Palco Marsh; (2) remove fill in the "drying shed" area and restore to marsh habitat; and (3) assemble land in the project area to improve future management.

The original permit was approved subject to seven standard conditions and four special conditions and resulted in increased tidal action to the Palco Marsh area, removal of invasive species, and planting of a buffer of native riparian vegetation to screen the marsh from adjacent roads and commercial development. There have been several amendments to the original permit before the current amendment request, which have resulted in additional enhancements to marsh habitat, through such additional development as installing culverts and drainage control structures, excavating tidal channels, removing debris racks and non-functioning drainage control and tidegate structures, and performing exotic/invasive plant eradication and native species replanting activities.

3. Existing Stormwater Discharge to and Drainage from Palco Marsh

The larger Eureka Flood Reduction and Sea Level Rise Resiliency project is described in the City's submitted project description (Exhibit 3) as follows:

> "Many portions of the City's existing storm water system are old and undersized, resulting in significant flooding, which is being exacerbated by sea level rise. Although the impacts propagate to upstream portions of the system, the low-lying areas of the City experience the most flooding…With the potential effects of rising sea levels and increased precipitation intensities, the City is susceptible to similar or more severe flooding at more frequent intervals.
>
> […]
>
> The City of Eureka proposes the Eureka Flood Reduction and Sea Level Rise Resiliency Project (Project) within urbanized coastal areas to reduce flooding, increase sea level rise resiliency, and improve water quality in Humboldt Bay. The Project would increase the storage capacity and conveyance of the storm drain network, implement water quality improvements, reduce trash conveyance into waterways, and enhance tidal circulation to provide flood reduction and sea level rise resiliency….Increased storage capacity and conveyance would be achieved by replacing undersized storm drain pipes with larger diameter pipes, installation of tide gates at strategic locations within the system, and construction of a new storm drain pipe alignment. Water quality improvements would be accomplished with hydrodynamic separators to separate and trap debris, sediment, and hydrocarbons from stormwater runoff in addition to trash capture devices installed in key locations along the storm drain alignments. Water quality benefits would be achieved by reducing sediment and associated contaminants to Humboldt Bay. The trash capture devices (TCDs) would also reduce pollutants entering Humboldt Bay and assist the City in meeting their MS4 requirements. Enhancements to the existing muted tidal system at Palco Marsh include channel excavation and replacement of the existing hydraulic conveyance structure between the marsh and Humboldt Bay with larger capacity culverts and adjustable flap gates. The new culverts would increase the lower tidal range, match existing tidal inundation duration, store peak water levels within the marsh area and avoid offsite flooding, enhance sediment exchange from the Bay to Palco Marsh, reduce velocities within the crossing, and enhance sediment deposition on the marsh plain to promote adaptation of the marsh ecosystem to rising sea levels."

The existing stormwater facilities in the project area consist of a culvert that conveys stormwater from a constructed channel that runs through a developed industrial area north of Palco Marsh, to under Del Norte Street and through a stormwater structure within the northwestern area of Palco Marsh. This stormwater structure is designed to primarily convey stormwater westward towards Humboldt Bay, through three 30-inch diameter pipes to a constructed channel referred to as Palco/Park Chanel. There are tide gates on the outlets of these stormwater pipes to allow stormwater to drain but to prevent the tidal waters of Humboldt Bay from flowing in. However, due to frequent blockage within the Palco/Park channel, stormwater currently is typically discharged directly to Palco Marsh through the stormwater structure.

Palco Marsh is separated from Humboldt Bay by the existing defunct railroad (now owned by the Great Redwood Trail Agency), the City's Waterfront Trail (a segment of the California Coastal Trail), and certain municipal infrastructure. The marsh is connected to the bay through an existing drainage structure called an inverted siphon that allows for tidal exchange as well as the discharge of stormwater from Palco Marsh to Humboldt Bay. However, the existing inverted siphon is undersized, constricting tidal flows and creating a muted tidal range typically between elevation 3 feet (ft) and 5.3 ft while water levels in Humboldt Bay range from 0 ft to 6.5 ft (approximate Mean Lower Low Water to Mean Higher High Water in NAVD88). The existing inverted siphon structure consists of a 48-inch-diameter high-density polyethylene pipe that transitions to two 18-inch diameter pipes. The configuration of the structure is designed to use hydraulic head pressure on lower elevation sections of pipe (the two 18-inch-diameter pipes) to convey flow up to a higher elevation section (48-inch-diameter pipe) to go under municipal utilities that cross the alignment.

4. Proposed Project Components

The specific components of the Eureka Flood Reduction and Sea Level Rise Resiliency Project subject to this permit amendment are shown on page 1 of Exhibit 2 and described below. For project layouts and a more detailed project description[2], see Exhibits 2 and 3, respectively.

Stormwater Outfall Improvements & Increase in Stormwater Discharge into Palco Marsh

The existing stormwater outfall structure in the northwest area of Palco Marsh at Del Norte Street will be replaced with a new structure that contains a Trash Capture Device (TCD) and tide gate. The existing outfall structure will be removed and disposed. The TCD will capture trash in debris nets as stormwater flows through the structure. It will consist of concrete headwalls, wingwalls and rock slope protection aprons. A tide gate would be placed on the structure to prevent tidewater from flowing upstream of Palco Marsh into the urban environment. Installation of the TCD, headwalls, wingwalls and rock slope protection aprons would require excavation beyond the footprint of the structure, placement of geotextile fabric, and aggregate fill for bedding. Following installation of the replacement structure, the excavation would be backfilled with native materials or imported fill and compacted.

New stormwater pipes along Del Norte Street permitted by the City under its approved CDP for the portion of the larger project in the City's jurisdiction will connect to the proposed replacement outfall into Palco Marsh. The implementation of the new stormdrain pipe along Del Norte Street will increase the contributing stormwater runoff area to Palco Marsh from 396 acres to 685 acres while correspondingly reducing the stormwater runoff area that discharges directly to Humboldt Bay at other locations north of Palco Marsh.

[2] Note that the project layouts and more detailed project description include information about the larger Eureka Flood Reduction and Sea Level Rise Resiliency Project and only the portion within the Palco Marsh area is subject to this CDP amendment.

Enhancements within Palco Marsh

To enhance tidal connectivity and habitat within the marsh, while also improving the drainage of stormwater out of the marsh to Humboldt Bay, approximately 350 ft of new tidal channel is proposed to be excavated in the northern extent of Palco Marsh and 800 feet of existing channel will be deepened. The new channel will connect to the replacement outfall at Del Norte Street to convey both stormwater and tide water within the marsh and out to the bay. The material generated from the channel excavations (approximately 2,760 cubic yards) will be spread at a depth of approximately one foot within approximately 1.7 acres of low lying areas of Palco Marsh that are transitioning to mudflat (approximately 4 feet elevation) in order to restore vegetated salt marsh elevations (approximately 5 feet elevation). The tidal influence in Palco Marsh is muted due to the existing undersized inverted siphon between Humboldt Bay and Palco Marsh, and sediment is not replenishing Palco Marsh at the rate it would under a fully tidally influenced system, resulting in low elevation, subsiding mudflats. The placement of fill will replicate sediment exchange across the marsh plain and build resiliency of the salt marsh habitat within Palco Marsh to rising sea levels.

Drainage Structure Improvements

As described above, the existing inverted siphon drainage structure between Palco Marsh and Humboldt Bay lies beneath the CCT and railroad and conveys both stormwater and tide waters between Palco Marsh and Humboldt Bay. While it allows for tidal exchange, the existing inverted siphon is undersized, constricting flows and resulting in a muted tidal range within Palco Marsh. The project will replace the existing structure with a larger, similar structure (4 24” lower elevation pipes and 2 48” pipes), which would include new concrete headwalls, wingwalls and rock slope protection aprons constructed on each side of the structure. Tide gates will be installed to limit a portion of the flood tide to maintain target tidal inundation patterns.

Construction Schedule, Equipment, and Staging

Construction will occur within one to two construction seasons, likely taking eight to twelve months. Earthwork involving grading will be limited to the time period between June 15 and September 15. If feasible, vegetation clearing will occur outside of the nesting bird season, prior to February 15 or after August 15. Construction hours will be limited to 7:00 a.m. to 6:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturdays. Construction will not occur on Sundays.

Equipment required for construction will include pumps, storage tanks, jackhammers, drill rigs, concrete mixer and concrete pumping trucks, all terrain forklifts, snooper truck, compressors, tracked excavators, backhoes, graders, excavators, bulldozers, dump trucks, skid steers, and pick-up trucks.

Stockpiling and staging areas for the project will be located within a paved, formerly developed area just north of Palco Marsh (see page 1 of Exhibit 2). Excess materials will not be stockpiled on-site once the project is complete.

Traffic and Access Control

Temporary lane closures of City streets and Broadway Street (Highway 101) will be required for pipeline, Hydrodynamic Separators, and tide gate installations and will require traffic control. A standard Caltrans-approved traffic control plan will be implemented. Public access along the Waterfront Trail will be temporarily limited during construction at the tidal inlet to Humboldt Bay. Trail use will be routed around the construction area, likely via Del Norte St. and Felt St.

Maintenance and Operation

The City will maintain and operate the project site and infrastructure under normal operations as a City facility. Once construction is complete, general operation and maintenance activities associated with the proposed project will include routine cleaning and replacement of nets of the Trash Capture Devices and absorbent pads of Hydrodynamic Separators, annual inspections, testing, exercising, and servicing of valves and tide gates, and repairs of piping and equipment, and other similar operational requirements. No maintenance is anticipated within Palco Marsh, and minor maintenance (if any) of the culverts which connect Palco Marsh to Humboldt Bay is anticipated, which would consist of removing debris from culverts during low tide.

B. Standard of Review

The proposed project will occur within the Coastal Commission's retained Coastal Development Permit (CDP) jurisdiction. The City of Eureka has a certified 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 project is the Chapter 3 policies of the Coastal Act.

C. Other Agency Approvals

North Coast Regional Water Quality Control Board (NCRWQCB)

The project requires a Clean Water Act Section 401 Water Quality Certification from the NCRWQCB. This approval was granted on August 27, 2024 (WDID permit no. 1B23151WNHU).

Humboldt Bay Harbor, Recreation, and Conservation District (HBHRCD)

The project requires a Shoreline Development Permit from the HBHRCD. This approval was granted on January 11, 2024 (District permit no. 2023-06).

U.S. Army Corps of Engineers (USACE)

The project requires a Clean Water Act Section 404 Permit from the USACE. This approval was issued on October 29, 2024 (USACE permit no. SPN-2023-00436).

U.S. Fish and Wildlife Services (USFWS)

The project requires formal consultation with the USFWS for potential impacts to tidewater goby under the federal Endangered Species Act. USFWS completed a Biological Opinion on May 29. 2024 concluding that the project may affect and is likely

to affect tidewater goby but is not likely to jeopardize the continued existence of the goby (File no. AFWO-2022-0062998).

National Marine Fisheries Service (NMFS)

The project requires informal coordination with NMFS for potential impacts to the following critical habitats and species protected under the federal Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act: Southern Oregon/Northern California Coast coho salmon, California Coastal Chinook salmon, Northern California steelhead, and Southern Distinct Population Segment green sturgeon. NMFS completed a Letter of Concurrence finding that the project is not likely to adversely affect the subject listed species and designated critical habitats (File no. SPN-2023-00436).

City of Eureka Conditional Use Permit

The project requires a Conditional Use Permit (CUP) from the City of Eureka, The City of Eureka approved this permit on August 14, 2023 (CUP no. 23-0004).

D. Property Rights

Section 30601.5 of the Coastal Act states:

> *Where the applicant for a coastal development permit is not the owner of a fee interest in the property on which a proposed development is to be located, but can demonstrate a legal right, interest, or other entitlement to use the property for the proposed development, the commission shall not require the holder or owner of any superior interest in the property to join the applicant as coapplicant. All holders or owners of any other interests of record in the affected property shall be notified in writing of the permit application and invited to join as coapplicant. In addition, prior to the issuance of a coastal development permit, the applicant shall demonstrate the authority to comply with all conditions of approval.*

The project requires an encroachment permit from the Great Redwood Trail Agency for work within the defunct railroad right-of-way. The remainer of the project area subject to this permit amendment is property owned by the City of Eureka. The City has not yet submitted copies of the required encroachment permit; therefore, **Special Condition 19 (Authority to Implement Conditions of Approval)** requires that copies of this document or other sufficient evidence of a legal right, interest or other entitlement to use the project site for the proposed development as conditioned be submitted prior to commencement of construction.

The City conducted outreach to the State Coastal Conservancy (SCC), as the SCC holds a conservation easement over Palco Marsh with which the project must be compatible. The easement limits the use of Palco Marsh for open space, habitat, and conservation purposes. SCC staff concluded that the project will not have an adverse impact on the water quality, hydrology, or natural communities of Palco Marsh and that project actions are consistent with the terms of the conservation easement.

E. Protection of Water Quality and Marine Resources

Section 30230 of the Coastal Act states as follows:

> *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 as follows:

> *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 30232 of the Coastal Act states as follows:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

The proposed project has the potential to degrade the biological productivity and quality of coastal waters, wetlands, and marine resources by increasing the volume of stormwater discharge flowing into Palco Marsh from upland urban neighborhoods of the City. As shown on page 7 of Exhibit 6, the installation of the new storm drainpipe along Del Norte Street that will carry stormwater runoff from upstream areas will increase the contributing runoff area to Palco Marsh from 396 acres to 685 acres. At the same time, there will be a corresponding reduction of the amount of polluted stormwater runoff discharging directly to Humboldt Bay at other locations in the Coastal Zone north of the project site (outside of the project area covered by this permit amendment), as stormwater runoff that currently flows to that area will be diverted to the new Del Norte Street pipeline infrastructure that will contain Hydrodynamic Separators. As previously discussed, the majority of the larger Eureka Flood Reduction and Sea Level Rise Resiliency project, including the Del Norte Street stormwater pipeline, is located in areas within the City's CDP jurisdiction or outside the Coastal Zone (e.g., stormwater system elements in inland residential areas), and the City approved a separate CDP in 2023 for development of project components outside of Palco Marsh. Although there will be no change to the total volume of stormwater discharging to Humboldt Bay as a result

of the project, the change in distribution of flow and resulting additional stormwater discharge into Palco Marsh before eventually discharging into Humboldt Bay raises the potential for the degradation of the water quality and biological productivity of the marsh and connected coastal waters.

Marine Resources within the Project Area

A Biological Resources Evaluation (BRE) report and Aquatic Resources Delineation report submitted with the permit amendment application describe baseline environmental conditions within the project area. Palco Marsh is a three-parameter wetland consisting primarily of Northern Coastal Saltmarsh habitat (a type of sensitive natural community under state rarity rankings) dominated by pickleweed (*Salicornia pacifica*), common spikerush (*Eleocharis macrostachya*), seaside arrowgrass (*Triglochin maritima*), and invasive dense-flowered cordgrass (*Spartina densiflora*). Palco Marsh drains to Humboldt Bay via a culvert structure ("inverted siphon") fitted with a tidegate on its outboard end. The BRE included a rare plant survey, which documented the presence of Point Reyes bird's-beak (*Chloropyron maritimum* ssp. *palustre*). The Point Reyes bird's-beak is considered to have a California Rare Plant Rank of 1B.2 meaning it is rare within California and elsewhere. Fisheries sampling also was conducted within Palco Marsh on April 27, 2022, including field surveys and laboratory eDNA methods. Survey and sampling results indicated the absence of any federally- and/or state-listed fish species within Palco Marsh, including Coho Salmon, Chinook Salmon, Steelhead, and Tidewater Goby. Although Longfin Smelt was not considered during eDNA analysis, this state-listed threatened species was not documented during seining or monitoring.

Proposed Increase in Stormwater Discharge to Palco Marsh

Palco Marsh currently receives untreated runoff from commercial, industrial and residential areas totaling 395.7 acres. As previously discussed, Palco Marsh is topographically separated from Humboldt Bay by a strip of land (developed with the CCT and the railroad corridor), but the bay and marsh are hydraulically connected via culverts with tide gates that provide a muted tidal prism within the marsh. The additional 289 acres of runoff contributions proposed to be discharged to Palo Marsh under this permit amendment request will include stormwater runoff flowing from residential (255 acres), commercial (30 acres) and open space (4.5 acres) areas. In total, approximately 27% (289 acres or 15.7 acre-ft) of the total watershed (1,076 acres or 58.3 acre-ft) will be conveyed through Palco Marsh to Humboldt Bay, instead of directly to Humboldt Bay via multiple discharge locations. Maps of the existing and proposed stormwater sub-basins are included on page 7 of Exhibit 6.

The duration of stormwater retention within the marsh is affected by (1) the flow rate and duration of stormwater discharge into the marsh, (2) the flow rate of discharge from the marsh to Humboldt Bay, and (3) tidal water levels (there is an approximate 7.5-foot difference between mean higher high water levels and mean lower low water levels in Humboldt Bay's mixed diurnal tides). Pollutant concentration within Palco Marsh is a result of the stormwater discharge volume and pollutant concentration and the volume and pollutant concentration of tidal water that has entered Palco Marsh from Humboldt Bay through the inverted siphon drainage structure. The 85th percentile 24-hour storm

event was modeled and evaluated for existing and proposed conditions in combination with two tidal scenarios on Humboldt Bay. In general, under both existing and proposed conditions, during an ebb (outgoing) tide, stormwater may continually discharge from Palco Marsh to Humboldt Bay. During flood tide, stormwater will be prevented from flowing out of Palco Marsh due to the incoming tide and higher water level in Humboldt Bay compared to Palco Marsh. This hydraulic condition results in stormwater discharges to Palco Marsh remaining in the marsh and mixing with tidal waters. The mixed water within Palco Marsh begins to discharge to Humboldt Bay on the ebb tide, once water levels in Palco Marsh are greater than water levels in Humboldt Bay.

Based on the modeling, under proposed conditions, the peak water level in Palco Marsh will be greater than existing conditions, but water levels within the marsh will drop at a faster rate and reach a lower water level, discharging nearly all stormwater and tidal waters within one tidal cycle before the flood tide prevents further discharge to Humboldt Bay and begins to fill Palco Marsh again. Although under existing conditions less stormwater enters Palco Marsh, the discharge capacity of this stormwater is limited, as there is not currently a defined path (i.e., via channels) for stormwater that enters Palco Marsh from the existing outfall at Del Norte Street to flow out of the marsh to Humboldt Bay. As a result, under existing conditions stormwater does not fully drain from the marsh before the flood tide prevents further drainage and stormwater and tide water begin filling Palco Marsh again.

Deepening and extending channels within Palco Marsh will expand the tidal prism within the marsh system, thereby flushing stormwater that flows into the marsh out of the marsh to Humboldt Bay more effectively. The increased tidal prism will also be facilitated by the proposed replacement of the inverted siphon drainage structure between Humboldt Bay and Palco Marsh, which will lower the minimum water levels allowing the area to “flush” (drain) more effectively. Although the project will result in a larger volume of stormwater entering Palco Marsh, the modeling shows that the stormwater will be held in the marsh for a shorter duration than under current conditions, and the basin will drain more effectively.

Proposed Treatment Measures to Maintain Water Quality

As discussed, the proposed increase in stormwater discharge flowing into Palco Marsh will result from the redirection of stormwater runoff from 289.6 acres of mostly residential areas upstream (outside of the Coastal Zone) that currently flows to Humboldt Bay via two outfalls in the Coastal Zone north of Palco Marsh (at 14th Street and Washington Street). Although stormwater is expected to flush out of the Palco Marsh system more effectively than current conditions, limited sampling data and lack of available case studies for estuary mixing and contaminant exposure make fully assessing the pollutant load impacts of the additional runoff on water quality in the marsh a challenge. Therefore, the City proposes to treat the portion of additional stormwater runoff that is proposed to be redirected to Palco Marsh under the project prior to its discharge into the marsh.

The 85th Percentile 24-hour Storm Event (0.65 inches) runoff volume from the additional 289.6 acres cannot be completely retained and infiltrated (e.g., via Low Impact

Development Best Management Practices) prior to discharging into Palco Marsh due to the extent of existing development and limited available space within City right-of-way for onsite retention/treatment. The Humboldt Low Impact Development Manual notes that "In highly urbanized areas where pervious space is limited or non-existent, bioretention facilities may take the form of flow-through-planters." [3] Given the contributing drainage area is highly limited in space available to convert impervious areas to pervious space for retention and infiltration, a volume-based approach to retain stormwater runoff is not feasible. Thus, a flow-based approach is proposed to treat 100% of the increase in the 85th Percentile 24-Hour Storm Event to Palco Marsh as a result of the project using Hydrodynamic Separators.

Hydrodynamic Separators (HDS) are commonly used proprietary systems, designed and manufactured to meet project specifications. They have been tested, verified and certified to capture and retain total settleable solids (TSS) (80% removal of coarser particles[4]), and, in turn, the pollutants that bind to sediment such as nitrate and phosphate and metals.[5] Two configuration options have been identified as potential alternatives for the project based on modeled water quality treatment flows to effectively treat 100% of the increase in the 85th Percentile 24-hour Storm Event to Palco Marsh associated with the new storm drainpipe connection along Del Norte Street. The HDS units will be outfitted with additional features to further remove contaminants, such as absorbent pads to capture total petroleum hydrocarbons (tph). The units will be installed in pipeline infrastructure in the stormwater system up-watershed of Palco Marsh. In general, precast units and internal screens, baffles and other concrete and metal components of a typical HDS unit would be expected to achieve a minimum 25-year design life with regular maintenance and cleaning. Absorbent pads are generally recommended to be replaced annually at minimum, prior to the first flush.

To verify that the added volume of stormwater entering Palco Marsh will be effectively treated and will not result in an increase in polluted runoff discharge to the marsh, as part of their permit application the City submitted a draft Water Quality Monitoring Plan (WQMP) (Exhibit 6). The draft plan includes a description of proposed monitoring frequency, location, analytical analysis, and sampling methodologies. During the application review process, the City modified their proposed project to add the HDS units and thus also modified the proposed monitoring procedures of the draft WQMP. Therefore, certain aspects of the draft plan must be updated to reflect these changes prior to commencement of construction (see Special Conditions 13 and 16 below). The City will sample during a "first flush" event", meaning the first 30-60 minutes of rainfall after a minimum of 72 hours of dry weather during the first storm event of the wet season that produces 0.1 to 1 inch of rainfall, in order to capture the maximum concentration of pollutants in the stormwater and confirm the stormwater is undergoing effective treatment as proposed. This confirmation "first flush" sampling will take place in

[3] https://northcoaststormwatercoalition.org/wp-content/uploads/2021/10/Humboldt-LID-Stormwater-Manual_V3.0.pdf

[4] https://stormtrap.com/hydrodynamic-separators/

[5] https://link.springer.com/article/10.1007/s11270-023-06513-3

multiple locations within the current storm drain system near the existing outfall to Palco Marsh and will test for the suite of constituents of concern identified in the final WQMP, including temperature, dissolved oxygen, polychlorinated biphenyl, ammonia, nitrate, phosphate, atrazine, glyphosate, and N-(1,3-Dimethylbutyl)-N-phenyl-p-phenylenediamine (6PPD) Quinone. Results and an analysis will be submitted to the Commission's Executive Director, as well as to the Regional Water Board.

As certain aspects of the HDS designs are being finalized, the Commission attaches **Special Condition 13 (Final Plans)** to require submittal of the final project plans including final details on the HDS units prior to issuance of the amended permit. In addition, as the draft WQMP requires certain updates, the Commission attaches **Special Condition 16 (Water Quality Monitoring Plan)** to require submittal of a final WQMP with the updates described above prior to commencement of construction. Special Condition 16 also requires that the final WQMP include detailed descriptions of potential adaptive management measures that may be implemented if confirmation sampling indicates 100% of the 85th Percentile 24-Hour Storm Event for the increase in stormwater that will discharge into Palco Marsh as a result of the project is not undergoing effective treatment before discharging into the marsh or if the stormwater's pollutant concentrations are exceeding regulatory thresholds.

Finally, as described in Section A, the project also includes installing a Trash Capture Device (TCD) within the replacement outfall into Palco Marsh at Del Norte Street. TCDs collect debris carried by storm water runoff prior to entering receiving waters. The TCD within the upgraded outfall into Palco Marsh will capture trash and other debris 5mm or greater in a debris net as stormwater flows through the structure and into Palco Marsh. The City proposes to maintain the TCDs by removing and replacing nets as they fill up with trash, approximately every 1-3 months. To ensure that the TCDs are maintained as proposed so that trash and other debris is not discharged into Palco Marsh or surrounding coastal waters and habitat areas, the Commission attaches **Special Condition 17 (Maintenance Plan)**, requiring submittal and implementation of a final plan for the maintenance of the TCD, as well as for the maintenance of new tide gates.

Measures to Protect Water Quality and Marine Resources During Construction

In addition to the water quality concerns associated with stormwater discharge discussed above, the project also has the potential to degrade water quality during construction activities if appropriate measures are not taken. The City proposes to employ various standard best management practices to protect coastal waters, wetlands, and marine resources during construction, including but not limited to:

- Wetlands in and near the project area to be protected, except for areas that would be unavoidably impacted during construction, will be excluded with protective fencing prior to construction.
- Silt fences and other erosion control measures will be deployed along construction areas adjacent to Humboldt Bay, wetlands, and waters to prevent sediment input into these resources.

- Fueling and equipment maintenance will occur at least 100 feet away from wetlands and waterways.
- Prior to the start of construction activities, a qualified biologist shall provide on-site worker environmental awareness training, including identification of sensitive species and procedures to be followed if sensitive species are observed on-site.
- Hazards and hazardous materials spill prevention best management practices (BMPs) will be implemented to prevent hazardous materials from spilling into the environment. These practices include:
- Equipment on site during construction shall be required to have emergency spill cleanup kits immediately accessible in the case of any fuel or oil spills.

A more complete compilation of best management practices and other measures proposed to protect coastal waters, wetlands, and marine resources is included as Exhibit 4. **Special Conditions 6 (Construction Responsibilities)** and **7 (Erosion and Runoff Control Plan)** are modified and reimposed with additional specifications to reinforce and supplement these proposed measures.

In addition, although the City has proposed to dispose of all trash, debris, and other excess materials at an appropriately permitted upland disposal facility, specific details on debris disposal for the project have not been provided, such as the names of authorized disposal site(s) where materials may be lawfully disposed of and a schedule for when materials would be removed from the construction site, as this information normally is determined by the contractor at the time of construction. Thus, to avoid potential adverse impacts to coastal waters and marine resources from unlawful disposal and discharges of debris, the Commission modifies and reimposes **Special Condition 8 (Grading and Excavated/Dredged Materials Disposal Plan)** to require submittal of a plan for the review and approval of the Executive Director prior to the commencement of construction for the disposal of excess construction debris and other materials. The plan must list the names of all authorized disposal site(s) where materials will be lawfully disposed of and that describes the manner and schedule by which the materials will be removed from the construction site and transported for disposal.

F. Allowable Filling & Dredging in Coastal Wetlands

Coastal Act Section 30233 states, in relevant part, as follows:

> *(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:*
>
> [...]

(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.

[…]

(6) Restoration purposes.

[…]

(b) Dredging and spoils shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation...

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

Dredging and Filling Activities Within Coastal Wetlands

Section 30108.2 of the Coastal Act 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." Additionally, the Commission has long considered grading, excavating, and other ground-disturbing activities in coastal wetlands, riparian areas, and estuaries to be a form of dredging or fill.

Project activities that constitute dredging and filling of coastal waters and wetlands include:

- Temporary clearing and grubbing of herbaceous wetland vegetation to install the replacement outfall into Palco Marsh and the replacement inverted siphon drainage structure between the marsh and the bay.
- Permanent wetland fill as a result of the replacement of the outfall into Palco Marsh with a larger, upgraded structure and replacement of the inverted siphon drainage structure between the marsh and bay with a larger, upgraded structure.
- Excavation within Palco Marsh to create the new tidal channel and tidal pool and to deepen the existing channel.
- Fill placement within subsided areas of Palco Marsh to increase marsh elevation.

Specifically, a 665 square feet (0.015 acre) area is anticipated to be permanently filled by the replacement outfall into Palco Marsh and a 1,095 square feet (0.025 acre) area is anticipated to be permanently filled by the replacement inverted siphon. The anticipated area of temporary wetland impacts is 30,365 square feet (0.697 acre) from the channel excavation (approximately 1,430 linear feet, including approximately 630 linear feet of new channel and 800 linear feet of existing channel) and 20,365 square feet (0.468 acre) from construction access for the channel excavation. In addition, the placement of beneficial fill at an approximate depth of one foot will occur within approximately 1.7 acres of subsided historical salt marsh.

Habitat maps and figures showing anticipated impacts are included in the appendix of the draft HMMP (Exhibit 5).

Allowable Uses for Dredging and Filling of Coastal Wetlands

Any proposed diking, dredging, or filling in coastal waters and 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) in this case are (4) incidental public service purpose for impacts associated with installing the replacement outfall into Palco Marsh and replacement crossing to Humboldt Bay and (6) restoration purposes for the tidal channel and pool excavation and beneficial fill placement within subsided marsh areas. Each category of use is discussed separately below.

Incidental Public Service Purpose

As the project is being undertaken by a public agency to serve the public (municipal facilities), and the upgraded stormwater infrastructure will replace existing stormwater and drainage infrastructure, the Commission finds that the proposed dredging and filling within coastal wetlands to install the upgraded outfall with a trash capture device and upgraded inverted siphon drainage structure between the marsh and the bay is for an incidental public service purpose, an allowable use pursuant to Coastal Act section 30233(a)(4).

Restoration Purpose

Finding that certain project elements constitute a “restoration purpose” is based, in part, on the assumption that these project elements will be successful in restoring historic habitats and processes as proposed, will increase habitat values, and will be self-sustaining.

As discussed in Section A, the original permit and subsequent amendments have involved enhancements to Palco Marsh. Among other changes, CDP 1-90-104-A2 authorized the replacement of the drainage structure that existed at that time between Palco Marsh with the currently existing inverted siphon structure in order to increase the tidal exchange between the marsh and the bay and improve water quality in the marsh by increasing the flushing rate between these waters, as well as improving safe passage and connectivity for salmonids and other estuarine aquatic species between the marsh and bay. In addition, invasive plant eradication, native plant revegetation, and hand-dug tidal channel improvements were also undertaken in certain areas. Special Condition 5 of -A2 required biannual monitoring of the wetland enhancement for five years. Post-construction monitoring reports concluded that these enhancements were partially but not entirely successful considering the defined success criteria for the project. In addition, more recent studies of Palco Marsh completed for the project subject to this proposed amendment demonstrate that the existing tidal prism in the marsh continues to be muted and that the marsh habitat could benefit from additional enhancement efforts. Special Condition 5-B required that if the enhancement efforts were unsuccessful in part or in whole based on the approved goals and objectives the

City should submit a revised or supplemental enhancement program, which should be processed as an amendment to this coastal development permit.

The proposed dredging of Palco Marsh to deepen and extend a tidal channel, in connection with the replacement of the existing hydraulic conveyance structure (inverted siphon) between the marsh and Humboldt Bay with a larger capacity inverted siphon structure with adjustable flap gates, will enhance the existing muted tidal system and sediment deposition on the marsh plain, which will help restore salt marsh and promote adaptation of the marsh ecosystem to rising sea levels. The new channel will be extended to an existing brackish area of Palco Marsh at its northern end where existing stormwater currently discharges and where limited tidal inundation occurs, which is due largely to a lack of hydraulic connection to existing tidal channels. Existing drainage channels within this area experience continual aggradation that has diminished the conveyance of both stormwater runoff that flows into the marsh under current conditions and the tidal extent within the northern reaches of the marsh. Ground elevations in the area range from approximately 6.5 ft to 9 ft, and typical spring tides within Palco Marsh are between elevation 3 ft and 6 ft. The proposed new channel will increase the reach of tidewater flow to the northern marsh, thereby enhancing estuarine aquatic habitat in the marsh. The proposed new channel also will increase stormwater conveyance capacity and efficiency through the marsh during storm events. and provide a self-maintaining channel for ebb and flood tides to move through the northern extent of Palco Marsh more regularly and efficiently. New channel dimensions are based on the footprints of existing aggraded channels and also were informed by historical tidal channel geometry, with a top width of up to 20 feet, side slopes of 2H:1V, and typically require 1.5 to 4 feet of excavation. These dimensions are expected to accommodate the twice-daily flushing of Humboldt Bay tidewaters in a self-sustaining manner to result in a mix of tidal mudflat and estuarine aquatic habitats. The proposed design also includes the development of tidal pool that will provide rearing habitat for fish and other aquatic organisms. The tidal pool design is based on tidal pool designs implemented in other estuarine restoration projects on Humboldt Bay, such as the Elk River Restoration Project, which have demonstrated high biological productivity and use by various marine organisms.

As mentioned previously, there is currently a lack of sediment exchange between Humboldt Bay and Palco Marsh due to the muted tidal influence, resulting in a marsh elevation that is lower than it would be if it received full tidal inundation and portions of the marsh converting to mudflat. Therefore, the material generated from the channel excavations (approximately 2,760 cubic yards) will be spread at a depth of approximately one foot within approximately 1.7 acres of low-lying areas of Palco Marsh that are transitioning to mudflat (approximately 4 feet elevation) in order to restore salt marsh elevations (approximately 5 feet elevation). The beneficial reuse of material dredged from the tidal channel and tidal pool within these low lying areas will increase their elevation and create a diversity of salt and brackish marsh habitats. These areas of fill placement will build resiliency of the salt marsh habitat within Palco Marsh to rising sea levels while also remaining estuarine wetlands.

Should the project be unsuccessful, not self-sustaining, or if the subject wetland dredging and filling impacts for restoration purposes actually result in long-term degradation of the wetlands, these project elements would not be for a “restoration purpose”. A Habitat Mitigation and Monitoring Plan (HMMP) was submitted with the application, which states that the goal of the restoration elements of the project is to restore and maintain historical tidal habitats. Specific objectives identified in the HMMP are (1) enhance management of tidal range to support salt marsh with sea level rise; (2) achieve ground elevations within Palco Marsh that support salt marsh vegetation in locations that have subsided to tidal mudflat; (3) enhance tidal circulation and tidal range within Palco Marsh; and (4) enhance intertidal habitat.

To ensure that the restoration elements of the project are successful and do not result in unintended adverse impacts, the Commission attaches **Special Condition 15 (Habitat Mitigation and Monitoring)**, which requires submittal of a final revised HMMP that substantially conforms with the HMMP submitted as part of the permit application with certain additions and modifications to add clarity and strengthen the monitoring requirements and success criteria.

Therefore, the Commission finds that the proposed channel and tide pool dredging and fill placement in low-lying areas of the marsh constitute development for “restoration purposes” consistent with Section 30233(a)(6).

Alternatives Analysis for Dredging and Filling of Wetlands

For projects involving diking, dredging, and filling of wetlands, the Commission must ensure that the approved project has no feasible less environmentally damaging alternative, consistent with section 30233 of the Coastal Act. Coastal Act section 30108 defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors.”

Hydraulic modeling of the project concepts showed that the primary flood reduction purpose of the project could feasibly be achieved by:

- Implementing tide gates to maintain flood storage capacity in the stormdrain system and prevent surcharging of high tides through drain inlets under current and future sea level rise scenarios;
- Increasing pipe capacity in select locations; and
- By reducing the volume of conveyance that is currently conveyed to Clark Slough (at the intersection of Washington and Koster), and Humboldt Bay via Commercial Street.

Reducing this runoff volume from the upper watershed that currently floods low elevation areas north of the project site can be achieved by rerouting a portion of the flow from the upper watershed to other outfalls. The proposed alternative was selected because Palco Marsh exhibited the greatest available capacity to intercept additional stormwater and because this alternative would avoid the creation of a new stormwater

outfall location, which would not be permissible under Coastal Act section 30233. The existing outfall to the Palco/Park channel, adjacent to Palco Marsh, could theoretically be modified to connect to the new Del Norte Street pipeline and intercept the increased stormwater. However, this would require more frequent and extensive dredging of the Palco/Park channel to accommodate the increased stormwater discharge and maintain adequate capacity, compared with the proposed alternative where channels within Palco Marsh that will convey stormwater and tide waters are expected to be self-maintaining. Modifying the Palco/Park channel outfall to accept the increased stormwater discharge while removing the existing Palco Marsh outfall would also likely result in the mobilization of contaminants that are known to occur in the channel upstream (Simpson Channel), including dioxins. Therefore, this would not be a less environmentally damaging alternative.

As described above, upgrading the existing outfall into Palco Marsh and the drainage structure between Palco Marsh and Humboldt Bay will require both temporary wetland dredging and filling impacts during construction and permanent impacts as a result of the larger size of the replacement structures. The larger structures are necessary to convey the larger volume of stormwater proposed to discharge into the marsh, to accommodate the new Trash Capture Device, and to convey a greater tidal prism compared with the existing muted tidal prism created by the existing undersized inverted siphon. The City explored alternative designs that could potentially reduce environmental impacts, such as softer alternatives to the proposed rock slope protection around the upgraded outfalls, but no feasible alternatives were identified that would lessen the environmental impacts.

Not including the restoration elements of the project (channel deepening and extension, tide pool creation, and beneficial fill placement) would result in a continued muted tidal exchange, lack of tidal connectivity and estuarine habitat in the northern area of Palco Marsh, and lower relative marsh plain elevations in the areas of the marsh where fill is proposed to be placed to support salt marsh restoration and resiliency. Constrained water exchange and sediment supply under the current hydrologic regime would result in continued water quality impairment, progressive habitat simplification, reduced long-term habitat resiliency (e.g., inability for estuarine habitats within Palco Marsh to accrete sediment and keep pace with sea level rise, resulting in drowning of the salt marsh habitat). Not replacing the existing inverted siphon would also mean no improvements to aquatic organism passage through the Palco Marsh to Humboldt Bay drainage structure by reducing peak velocities and increasing the duration of acceptable fish passage velocities.

Therefore, based on the above alternatives analysis, the Commission finds that the proposed project minimizes disturbance to wetlands and, with the feasible mitigation measures discussed below, is the least environmentally damaging feasible alternative available, consistent with section 30233(a).

Feasible Mitigation Measures for Impacts to Coastal Wetlands

Section 30233 further requires that feasible mitigation measures be provided to minimize adverse environmental effects of dredging and filling within wetlands. In addition, the project must maintain and enhance the functional capacity of coastal wetlands and waters consistent with Section 30233.

Depending on the manner in which the proposed project is completed, the proposed dredging and filling within coastal wetland habitat could have significant adverse environmental effects on the quality and functional capacity of the wetland habitat as well as the hydrologically connected coastal waters and marine resources of Humboldt Bay. However, as discussed in the following sections, various best management practices (BMPs) and mitigation measures will be implemented to minimize the potential adverse impacts of the project.

Measures to Mitigate for Unavoidable Impacts to Coastal Waters and Wetlands

As described above, temporary impacts to wetlands will occur during channel excavation and deepening within Palco Marsh, access to the areas for channel and tide pool excavation and deepening, and during installation of the upgraded outfalls. Areas of temporary impact will be restored to pre-construction conditions via grading and seeding of all areas greater than 6.5 feet elevation. Certain areas such as the new and deepened Palco Marsh tidal channel will not be seeded because these areas are lower than 6.5 feet elevation and are subject to daily tidal fluctuations. Invasive dense-flowered cordgrass (*Spartina densiflora*) will be removed along the access pathway and excavation area within Palco Marsh as a component of mitigating temporary impacts.

To compensate for unavoidable permanent fill for incidental public service purpose (i.e., the upgraded stormwater outfalls), the City proposed to create estuarine intertidal emergent wetland habitat adjacent to an existing wetland ditch feature between Palco Marsh and Humboldt Bay. The existing adjacent wetland exhibits estuarine intertidal habitat because it is flooded and exposed by tidal movement and contains estuarine emergent wetland habitat due to the herbaceous ground cover. Wetland creation will consist of excavation of uplands and replanting of the excavated areas with native salt-tolerant wetland plant species. Additionally, approximately 40 square feet of Palco Marsh would be restored due to the removal of an existing concrete storm drain structure. Collectively, mitigation in these two areas will total 8,600 square feet which i the required compensatory mitigation at a 4 to 1 ratio.

The City has submitted a draft Habitat Mitigation and Monitoring Plan (HMMP, Exhibit 5), which discusses measures to restore temporarily impacted wetlands to pre-project conditions and mitigation measures to offset permanent wetland impacts. The HMMP describes proposed goals and monitoring of the restoration elements of the project, describes proposed post-construction wetland revegetation efforts for certain temporarily impacted areas and additional wetland habitat creation as mitigation for anticipated permanent impacts for non-restoration purposes. The draft HMMP includes proposed monitoring procedures and success criteria.

Although the measures proposed in the HMMP are appropriate, the draft plan lacks certain details, supporting rationales, and appropriate success criteria. Therefore, **Special Condition 15 (Habitat Mitigation and Monitoring)** requires submittal of a final revised Habitat Mitigation and Monitoring Plan that substantially conforms with the draft HMMP submitted as part of the permit application (Exhibit 5), with certain modifications. These modifications include clarified goals and objectives supported by clearer rationales, improved success criteria, and stronger monitoring and reporting requirements, which collectively will better ensure appropriate mitigation and revegetation as well as wetland restoration success, including management of invasive species which have the potential to spread or be introduced to the site during project activities.

Measures to Protect Special Status Plants During Construction

As mentioned in Section E, a rare plant survey was completed that documented the presence of Point Reyes bird's-beak (*Chloropyron maritimum* ssp. *palustre*). No project work is proposed in the area where Point Reyes birds-beak was observed, and a pre-construction survey is proposed within the planned area of disturbance to determine if a new population of Point Reyes birds-beak or another special status plant is present. If so, the plants will be avoided to the extent feasible. If avoidance is not feasible, the City proposes to conserve the plants by either relocating plants, collecting seeds prior to disturbance and spreading seeds in suitable nearby habitat, and/or nursery plant propagation and replanting. The City's proposed measures to protect special status plants can be found in Exhibit 4.

To ensure that the special status plants are protected as proposed, **Special Condition 14 (Protection of Special Status Plants)** reinforces the City's proposed measures with certain modifications to add clarity and specificity and to require the submittal of survey results and specific measures that will be used to protect the identified species. In addition, the general construction responsibilities and water quality protection measures required by Special Conditions 6 and 7 will further protect any special status plant species that may occur within the project area.

Measures to Protect Special-Status Wildlife During Construction

As mentioned in Section E, a Biological Resources Evaluation (BRE) was submitted with the permit amendment application that, among other information, evaluated the potential for special status species to occur within the project area. Based on the results of the BRE, depending on the manner in which the proposed project is undertaken, construction activities within wetland habitats at the project site could have significant impacts on wildlife, including special status frogs, nesting and foraging birds, and fish. The potential impacts to and measures to protect these sensitive species are discussed in the following paragraphs.

Special Status Frog Species

According to the BRE, although it is unlikely that northern red-legged frogs would be substantially impacted due to the absence of freshwater dominant habitat, there is the potential for northern red-legged frogs to occur within the project area and be impacted by temporary habitat disturbance as well as injury or mortality as a result of crushing or burying from construction equipment use and excavation/earth moving. Therefore, to avoid impacts to northern red-legged frogs, the City proposes to have a qualified biologist perform a pre-construction survey and to relocate any individuals or egg masses that occur within the work-impact zone to nearby suitable habitat. Any northern red-legged frogs observed in an active construction zone will also be moved to a safe location in similar habitat outside of the construction zone. Details of the City's proposed measures to protect special status frogs can be found in Exhibit 4.

To ensure that the special status frogs are protected as proposed, **Special Condition 6(h) (***Special Status Frogs***)** reinforces the City's proposed measures. In addition, the general construction responsibilities and water quality protection measures required by Special Conditions 6 and 7 including the requirement for biological monitoring during project activities that may impact sensitive species, will further protect any special status frogs that may occur within the project area.

Nesting and Special Status Birds

The BRE identified that suitable nesting and/or foraging habitat is present within the project area for several special status bird species, and that nesting birds are expected to be present in the project area during the nesting season (February 15 through August 15). Specifically, according to the BRE, which included a review of recent California Natural Diversity Database and eBird records from the one-quad search area, the following species have potential to occur in the project study boundary based on existing habitat, recent nearby records, and a consideration of the species' natural history:

- Great Egret (*Ardea alba*; CDFW Special Animals List [SAL])
- Great Blue Heron (*Ardea Herodias*; SAL)
- Northern Harrier (*Circus hudsonius*; CDFW SSC)
- Yellow-billed Cuckoo (*Coccyzus americanus*; federally threatened)
- Snowy Egret (*Egretta thula*; SAL)
- White-tailed Kite (*Elanus leucurus*; CDFW Fully Protected [FP])
- Black-crowned Night Heron (*Nycticorax nycticorax*; SAL)
- Bank Swallow (*Riparia riparia*; state threatened)

Of the species listed above, all but Northern Harrier, Snowy Egret, and occasionally Black-crowned Night Heron, nest in trees. No trees will be removed as part of the project; however, vegetation (such as salt marsh grasses and herbaceous plants) is anticipated to be removed during project work within the marsh. Therefore, construction activities may adversely impact ground nesting species via clearing and grubbing of vegetation and dredging and filling within the marsh and construction related noise and/or visual disturbance (from ground disturbance) may adversely impact both tree and ground nesting birds.

The City proposes to avoid ground disturbance and vegetation clearing during the nesting season (generally February 15 – August 15) to the extent feasible. If ground disturbance or vegetation clearing must occur during the nesting season, a qualified biologist will conduct pre-construction surveys to check for nesting activity of native birds and to evaluate the site for presence of raptors and special status bird species. Construction free buffers will be implemented around any active nests. Details of the City's proposed measures to protect nesting birds can be found in Exhibit 4.

To ensure that nesting and special status birds are protected as proposed, **Special Condition 6(f) (***Nesting Birds***)** reinforces the City's proposed measures with certain modifications to add clarity and specificity. In addition, the general construction responsibilities required by Special Condition 6, including the requirement for biological monitoring during project activities that may impact sensitive species, will further protect any nesting and special status birds that may occur within the project area.

Special Status Fish

The construction work area will be temporarily isolated during construction by blocking the tidal inlet into Palco Marsh at low tide with cofferdam(s), which may preclude or significantly reduce the need to use pumps or other methods of dewatering except to dewater small, shallow, isolated areas. The City proposes to survey isolated pools of water to determine whether aquatic species are present and, if so, they would be relocated into suitable habitat within Humboldt Bay. It is not expected that salmonids or Longfin Smelt would not need to be relocated during dewatering in Palco Marsh due to the absence of detection of these species during surveys and eDNA analysis completed during preparation of the BRE as well as the absence of interconnected upstream habitat that could be utilized by salmonids or Longfin Smelt. However, although unlikely, relocation of federally-listed Tidewater Goby could occur within Palco Marsh because the isolated pockets of water that can occur in the Palco Marsh system are attractive to goby. During dewatering of Palco Marsh, if present, goby would be relocated from the small, shallow, isolated areas of remaining water following dewatering, and into suitable habitat. Non-special status species would be relocated as feasible.

The City also proposes to have a qualified biologist provide on-site worker environmental awareness training for crews at the commencement of construction. The training would include identification and life history of sensitive species, applicable regulations, species and habitat protection measures, fines and penalties, and procedures to be followed if sensitive species are observed on-site.

Details of the City's proposed measures to protect special status fish can be found in Exhibit 4.

Other potential impacts to fish could occur from general construction impacts, such as increased levels of in-water sediment and chemical or petroleum spills. However, general BMPs to reduce erosion, dust, and the potential for polluted run-off into receiving waters will be implemented which will reduce potential impacts to fish.

As stated in Section C, informal consultation occurred with the National Marine Fisheries Service regarding potential impacts to critical habitats and species protected under the federal Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act, including Southern Oregon/Northern California Coast coho salmon, California Coastal Chinook salmon, Northern California steelhead, and Southern Distinct Population Segment green sturgeon, and they concluded in their Letter of Concurrence that the project is not likely to adversely affect the listed species and designated critical habitats under their jurisdiction. Formal consultation occurred with the United States Fish and Wildlife Service regarding potential impacts to tidewater goby under the federal Endangered Species Act and they concluded in their Biological Opinion that the project may affect and is likely to adversely affect the federally endangered tidewater goby (*Eucyclogobius newberryi*).

To ensure that special status fish are protected as proposed, **Special Condition 6(g) (***Special Status Fish***)** reinforces the City's proposed measures. In addition, the general construction responsibilities required by Special Conditions 6 and 7, including the requirement for biological monitoring during project activities that may impact sensitive species, will further protect any fish that may occur within the project area.

Maintenance and Enhancement of Functional Capacity of Wetlands

Another general limitation set by section 30233 of the Coastal Act is that any proposed dredging or filling in existing coastal wetlands must maintain or enhance the functional capacity of the wetlands.

In addition to the primary flood reduction purpose of the project, environmental benefits of the project include removal of trash from stormwater discharges; beneficial reuse of excavated soils for marsh creation in locations that have subsided and lost marsh; improved aquatic organism passage between Palco Marsh and Humboldt Bay by reducing peak velocities and increasing the duration of acceptable fish passage velocities as a result of the larger capacity inverted siphon drainage structure; increased tidal circulation as a result of the excavation of a new channel to connect a low-elevation tidal pond to regular tidal flow; lowering of low tide to increase the tidal range and more closely match a natural tidal cycle; improved hydraulic control of water levels within the marsh to support the resiliency of marsh habitat to sea level rise; and discontinuation of dredging practices within the adjacent Palco/Park channel. Implementation of the final HMMP, as described above, will ensure that all wetlands impacted by dredging and filling activities will be restored and appropriately mitigated for.

Conclusion

For all of the reasons set forth above, the Commission finds that the amended project, as proposed and conditioned, is an allowable use within wetlands, that there is no feasible less environmentally damaging alternative, that feasible mitigation will be provided to minimize all significant adverse impacts associated with the dredging and

filling of coastal wetlands, and that wetland habitat values will be maintained or enhanced.

G. Flood Hazards and Sea Level Rise

Section 30235 states (emphasis added):

> *Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fishkills should be phased out or upgraded where feasible.*

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

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

Section 30270 of the Coastal Act states:

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

As discussed in Section A, the primary purpose of the larger “Eureka Flood Reduction and Sea Level Rise Resiliency Project” is to reduce flood hazards and increase resiliency of the City’s stormwater system to sea level rise, although the project incorporates other benefits to Palco Marsh and overall water quality of Humboldt Bay as well. Many portions of the City's existing storm water system are old and undersized, resulting in significant flooding, which is being exacerbated by sea level rise. Although the impacts propagate to upstream portions of the system, the low-lying areas of the City experience the most flooding. Approximately one foot of flooding was witnessed on Washington Street north of Palco Marsh during November 2012, when the area experienced high rainfall coinciding with high tides, which prevented the system from

draining. Similar flooding was observed in January 2019. With the potential effects of projected rising sea levels and increased precipitation intensities as a result of climate change, the low-lying portions of the City are susceptible to similar or more severe flooding at more frequent intervals.

As discussed elsewhere in other sections, among other changes to the City's stormwater system, the larger Eureka Flood Reduction and Sea Level Rise Resiliency project will address these flooding issues by redirecting a portion of the City's runoff to discharge through Palco Marsh before flowing out to the bay, as Palco Marsh was found to have greater capacity to intercept additional stormwater discharge compared with other existing outfall locations in the City. The flood reduction benefits of the larger project were initially developed as a part of the Eureka Area Watersheds Storm Water Resource Plan, including site specific modeling, calibration, validation, identification of boundary conditions, assumptions, etc. Additional modeling focused on Palco Marsh was completed that utilized water level monitoring data collected within Palco Marsh to calibrate and validate Palco Marsh's capacity to intercept additional stormwater discharge and the hydraulics of the inverted siphon connection to Humboldt Bay.

As discussed, development with the Palco Marsh area includes, in part, upgrading the existing outfall into the marsh and the inverted siphon drainage structure out to the bay to enhance stormwater drainage and tidal circulation within the project area, among other benefits. Both structures will include new tide or flap gates, which will increase the resiliency of the City to sea level rise and existing flood hazards by protecting the stormwater system from being overwhelmed by tidal surges. Historical isolation of Palco Marsh and limited tidal exchange through the existing inverted siphon drainage structure between Palco Marsh and Humboldt Bay does not provide equivalent sediment deposition compared to salt marshes experiencing the full tidal range in Humboldt Bay. As a result, some areas of the historical marsh plain within Palco Marsh have transitioned from salt marsh to mudflat due to the compounding effects from land subsidence and lack of sediment supply to maintain marsh elevations. As sea levels rise, the tidal range within Humboldt Bay and Palco Marsh will shift up in elevation, increasing the duration of inundation on the marsh plain. Therefore, without adequate sediment supply or intervention, there will be continual conversion of salt marsh habitat to mudflat within Palco Marsh.

The project will enhance the tidal prism within Palco Marsh by replacing the existing drainage structure between the marsh and Humboldt Bay with a larger capacity structure with an adjustable tide gate mounted on tracks. Channel improvements will be made to enhance tidal circulation and restore and enhance estuarine aquatic and salt marsh habitats within Palco Marsh. Excavated soils from the proposed new and deepened channel and tidal pool will be placed in areas that were historically salt marsh and have transitioned to mudflat. The adjustable tide gate on the replacement inverted siphon drainage structure will allow the vertical position to be moved to limit flow from the bay into Palco Marsh while allowing for the free outflow from Palco Marsh to the bay, which will provide additional hydraulic control to manage Palco Marsh water levels to support salt marsh habitat as sea levels rise. In the event that sediment accretion

(natural or by project intervention) does not occur in Palco Marsh, the tide gates may be adjusted to a lower elevation to maintain/achieve a percent time inundation that supports salt marsh. This hydraulic control could be achieved until water levels regularly overtop the existing land between Palco Marsh and Humboldt Bay.

The California Ocean Protection Council's State of California Sea-Level Rise Guidance 2024 Update[6], and the Commission's Public Review Draft of its Sea Level Rise Policy Guidance 2024 Update[7], both contain a set of sea level rise scenarios for 14 tide gauges throughout California, and both agencies recommend using these scenarios and related information as best available science on sea level rise in California. Table 1, below, provides the scenarios for Humboldt Bay (measured at NOAA's North Spit Tide Gage), which has the highest relative rate of sea level rise in the State due to active land subsidence.

Table 1. Median Values of Sea Level Scenarios* for North Spit, Humboldt Bay

	Intermediate	Intermediate-High	High
2030	0.6	0.6	0.7
2040	0.9	1	1.1
2050	1.2	1.4	1.6
2060	1.5	2	2.4
2070	1.9	2.7	3.5
2080	2.5	3.6	4.7
2090	3.1	4.5	6
2100	3.9	5.5	7.3

*Values are displayed in feet

The elevation of the existing high ground between Palco Marsh and Humboldt Bay is typically between 9-10 feet (NAVD). Therefore, given current Mean Higher High Water (MHHW) is 6.5 ft at the site, with 2.5-3.5 feet of sea level rise, MHHW tides and greater would be expected to overtop the high ground, resulting in increased inundation duration that can no longer be effectively managed by the adjustable tide gate. However, with 2.5-3.5 feet of sea level rise, much of the City's shoreline will experience regular overtopping. In anticipation of this, the City is currently planning for potential long-term sea level rise adaptation measures for their capital infrastructure, which would be implemented over the next 55 to 75 years, including within the Palco Marsh area. One potential long term adaptation concept identified by the City for the Palco Marsh area is to relocate sewer and water infrastructure from the current position along the shoreline and retreat to the eastern edge of Palco Marsh, at which time, a full tidal regime could be restored to Palco Marsh and the tide gate, structure, and existing high

[6] Ocean Protection Council Sea-Level Rise Guidance: 2024 Update is accessible online at: https://opc.ca.gov/wp-content/uploads/2024/05/Item-4-Exhibit-A-Final-Draft-Sea-Level-Rise-Guidance-Update-2024-508.pdf

[7] The California Coastal Commission's Public Review Draft of the Sea Level Rise Guidance 2024 Update is accessible online at: https://documents.coastal.ca.gov/assets/slr/CCCSLRPolicyGuidance_2024Update_PublicReviewDraft.pdf

ground removed. Any future changes to the site would require an additional amendment to this permit.

The percent time of tidal inundation within Palco Marsh can be controlled between now and then via the adjustable tide gate and the placement of fill on the salt marsh plain will help increase marsh elevations and prepare for potential future retreat and restoration of the marsh to full, future tidal amplitude. Additionally, potential interim future restoration and sea level rise resiliency projects in the project vicinity, such as an expansion of tidal marsh habitat adjacent to Palco Marsh, may require increased tidal conveyance at the drainage structure to provide adequate hydraulics, which could be achieved with the new drainage structure and adjustments to the tide gate elevations.

Thus, the Commission finds that the proposed project as sited and designed will reduce flood risk in the City, and in Palco Marsh in particular, the potential for flooding to surrounding streets, the coastal trail, and other municipal infrastructure will be reduced through the enhancement of the drainage capacity of Palco Marsh as discussed above. The existing drainage structure between the marsh and the bay that currently limits tidal exchange will be upgraded to improve water circulation, water quality, and habitat values within the marsh. In addition, the project design incorporates rock slope protection around the replacement outfalls and monitoring of the channel excavation and beneficial fill placement over a minimum of five years, which will assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area, consistent with section 30253.

Therefore, the project reduces existing flood hazards within the City expected to worsen with sea level rise and incorporates consideration of long-term management and sea level rise adaptation of Palco Marsh with adaptation pathways. However, as the project is located within an area vulnerable to flood hazards that will be exacerbated as sea levels rise, existing **Special Condition 13 (Assumption of Risk, Waiver of Liability, and Indemnity Agreement)** is modified and reimposed, requiring the City to acknowledge and assume the risk of hazards and accept a waiver of liability against the Commission for any injuries or damages from the hazards.

The Commission therefore finds that the proposed amended project as conditioned is consistent with Sections 30235, 30253 and 30270 of the Coastal Act.

H. Public Access

Coastal Act section 30210 states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act section 30211 states:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Coastal Act section 30212(a) states, in applicable part:

Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected.

Coastal Act section 30214 states:

(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

(1) Topographic and geologic site characteristics.

(2) The capacity of the site to sustain use and at what level of intensity.

(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.

(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.

(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.

(c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.

As described in Section A, Palco Marsh is located adjacent to the City's Waterfront Trail, which is part of the California Coastal Trail. The Del Norte Pier, which is a public

fishing pier, is adjacent to the project to the north. A popular City Dog Park abuts the marsh area to the northwest.

Public access through or around the work area will be maintained at all times during construction, with a maximum of one 8-hour closure of the section of the Waterfront Trail where the inverted siphon will be replaced. At that time, users of the trail will temporarily be rerouted around the construction area, likely via Del Norte Street and Felt Street.

To ensure that the project's impact on public access is temporary and minimized, the Commission attaches **Special Condition 18 (Public Access Protection Plan)**. This condition requires submittal of a public access protection plan prior to permit amendment issuance for the Executive Director's review and approval. The access plan must demonstrate that (a) the portion of the Waterfront Trail proposed to be temporarily closed to the public during construction shall be minimized; (b) the duration of Waterfront Trail closure shall be minimized and shall not exceed 14 days total, unless the Executive Director grants in writing for good cause additional time as needed to ensure public safety not to exceed 21 days total without an amendment to this coastal development permit; and (c) the boardwalk/pier shall remain open and accessible in full to the public on holiday weekends.

The project will ultimately reduce flooding of low-lying areas of the City near the shoreline, resulting in improved public access to the coast.

Therefore, the Commission finds that the proposed amended project, as conditioned, will not have a significant adverse effect on public access, and the project as conditioned is consistent with the requirements of Coastal Act sections 30210, 30211, 30212, and 30214.

I. Archaeological Resources and Tribal Consultation

Section 30244 of the Coastal Act states as follows:

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

A Cultural Resources Investigation was prepared for the project to evaluate cultural resources potentially affected by the project as well as a Cultural Resources Monitoring Report. The Cultural Resources Investigation included a pedestrian survey of the project's Area of Potential Effect (APE), and database searches of recorded archaeological resources of the APE and within 0.5 miles of the APE, which is located within Wiyot ancestral lands. The Cultural Resources Monitoring Report included observations of soil borings within the vicinity of known archeological resources identified in the Cultural Resources Investigation and concluded that no archaeological deposits were observed.

During preparation of the Cultural Resources Investigation, communication with the Tribal Historic Preservation Officers (THPOs) from local tribes (Bear River Band of Rohnerville Rancheria, Blue Lake Rancheria, and the Wiyot Tribe) occurred, which resulted in the City identifying measures to be taken prior to and during construction to avoid impacts to archaeological resources, including preparation of a monitoring plan to be reviewed by the THPOs of the three local tribes listed above, and presence of an archaeological monitor within certain work areas. The specific measures proposed by the City are included in Exhibit 4.

Consistent with the Commission's Tribal Consultation Policy[8], Commission staff reviewed the information concerning tribal consultation undertaken by the City submitted as part of the permit application and Commission staff wrote to the Tribal representatives and individuals identified by the NAHC to inform them of the project's CDP application and the Commission's upcoming hearing on the project, to offer consultation, and to advise them of the opportunity to provide comments for the CDP hearing. No responses have been received.

To reinforce the City's proposed measures to protect any sensitive archaeological resources in the project area, the Commission includes **Special Condition 20 (Protection of Archaeological Resources)**. Special Condition 20 further requires that if the City seeks to recommence project activities within an exclusion zone following a discovery of archaeological or tribal cultural resources, they must submit an Archaeological Protection Plan for the review and written approval of the Executive Director, who shall also determine whether any resulting changes to the project require a permit amendment.

In conclusion, based on the findings of the records search and surveys, the tribal consultation and outreach performed by the City, their consultants, and the Commission; as well as the archaeological and tribal cultural resource protection protocols that will be implemented by the City as part of the project, the Commission finds that the proposed amended project, as conditioned, includes reasonable mitigation measures to protect archaeological resources consistent with Coastal Act Section 30244.

J. California Environmental Quality Act (CEQA)

The City of Eureka served as the lead agency for California Environmental Quality Act (CEQA) purposes for the project. The City prepared an Initial Study and adopted a Mitigated Negative Declaration (State Clearing House Number 2023060362) for the project on August 14, 2023.

The Commission's regulatory program for reviewing and granting CDPs has been certified by the Resources Secretary to be the functional equivalent of environmental review under CEQA. (14 CCR § 15251(c).) Section 13096 of Title 14 of the Commission's regulations requires Commission approval of CDP applications to be

[8] https://documents.coastal.ca.gov/assets/env-justice/tribal-consultation/Adopted-Tribal-Consultation-Policy.pdf

supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirement of CEQA. Under the Commission's certified regulatory program, Section 21080.5(d)(2)(A) of CEQA still applies to the Commission's CDP regulatory process and prohibits approval of a proposed development if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

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