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W12b

MEMORANDUM

Date: **January 5, 2015**

To: Commissioners and Interested Persons

From: Alison Dettmer, Deputy Director
Bob Merrill, District Manager
Melissa Kraemer, Supervising Planner

Subject: **Addendum to Commission Meeting for Wednesday, January 7, 2015**
North Coast District Item W12b
CDP Application 1-14-0820 (Border Coast Regional Airport Authority)

The purpose of this staff report addendum is to (1) clarify the scope of the subject permit and its relationship to permit approved in September of 2013 for the Applicant's Runway Safety Area Improvement Project at the Crescent City airport; (2) make certain changes to the recommended special conditions and related findings of the December 19, 2014 staff report; (3) add clarifying and supplemental findings to the Project Description, Wetlands, ESHA, Visual Resources, and Flood Hazard sections of the staff report in response to public comments received since publication of the staff report; and (4) present and respond to public comments received since publication of the staff report.

Staff continues to recommend that the Commission approve the project with the special conditions included in the staff recommendation of December 19, 2014, as modified by the changes recommended herein.

I. Clarification on Scope of CDP 1-14-0820

The impetus for the proposed habitat restoration at Pacific Shores and the Bay Meadows sites is to satisfy, in part, the special condition requirements of the CDP issued for the Del Norte County Regional Airport Runway Safety Area (RSA) Improvement Project in September of 2013 (CDP 1-13-009), which requires mitigation for impacts on wetlands and dune habitats. At the time the RSA permit was approved, the specific locations and plans for some of the proposed mitigation had not been determined yet, and thus one of the conditions of approval of the RSA permit required the applicant to obtain all necessary permits, including CDPs for proposed mitigation, once specific locations had been chosen and specific plans for the development of the mitigation sites had been prepared. The current application seeks authorization for the development of some

of the proposed mitigation sites. While the Commission is reviewing the development of the proposed habitat restoration for consistency with the Coastal Act, Commission staff is separately reviewing the overall mitigation plan which includes the restoration proposed in CDP Application 1-14-0820 as well as other mitigation measures for compliance with the mitigation requirements of the RSA permit approval.

II. Revisions to Special Conditions

Staff is recommending various modifications to special conditions 1 and 6 of the December 19, 2014 staff report. The recommended changes include clarifications to ensure the conditions are objectively verifiable. Text to be deleted is shown in ~~strikethrough~~, and text to be added appears in **bold double-underline**.

❖ ***Modify Special Condition 1 as follows***:

1. **Construction Responsibilities & BMPs.** The Permittee shall adhere to various construction-related responsibilities and best management practices (BMPs) during proposed restoration activities at all project sites (Pacific Shores, Bay Meadows, and the Bay Meadows Project LLC property):

A. Pre-construction contractor training: PRIOR TO COMMENCEMENT OF ANY DEVELOPMENT AUTHORIZED BY THIS CDP, the Permittee shall ensure that all on-site workers and contractors understand and agree to observe the standards for work outlined in this permit and in the detailed project description included as part of the application submittal and as revised by these conditions. A biological monitor shall be present on all project sites during periods when work may occur adjacent to environmentally sensitive habitat areas.

B. Timing of work:

i. Earth-disturbing activities shall be limited to the latter part of the dry season, May 1 through October 31. The Executive Director may grant an extension of the work windows through November 30th for good cause upon written request, provided evidence is submitted that continued dry weather is forecast by the National Weather Service during the requested extension period.

ii. Woody vegetation removal activities shall avoid the bird nesting season: March 15 through August 15. Vegetation removal during the nesting season may only occur if (a) a qualified biologist has surveyed the area according to the approved Sensitive Bird Nesting Habitat Protection Plan required by **Special Condition 2** of this CDP, and (b) the survey results indicate that no sensitive bird nest~~sing habitat is~~ **are** present in the area. Authorized vegetation removal may occur without these restrictions between August 15 and March 15.

C. ~~Limits~~ **Delineating areas** of disturbance: PRIOR TO COMMENCEMENT OF ANY DEVELOPMENT AUTHORIZED BY THIS CDP, the limits of disturbance areas shall be delineated with conspicuous flagging or fencing in cooperation with a qualified biologist, limiting the potential area affected by construction and ensuring that (i) all existing wetlands outside of the ~~project~~ footprint **of wetland restoration and enhancement areas**, (ii) **all** habitat features such as trees and snags and other vegetation

proposed or required by the special conditions of the permit to be retained within or adjacent to work areas for wildlife habitat, and (iii) ~~property boundaries with~~ **all areas** on adjoining privately owned lots at Pacific Shores shall be ~~flagged and/or fenced for~~ avoid**ed**~~ance~~ and protect**ed**~~ion~~. All construction vehicles and equipment shall be restricted to pre-established work areas and haul routes and to established or designated staging areas.

D. Protection of sensitive plants: PRIOR TO COMMENCEMENT OF DEVELOPMENT ~~IN ANY GIVEN YEAR IN WHICH DEVELOPMENT IS AUTHORIZED~~, the Permittee shall complete updated pre-construction surveys for sensitive species of plants pursuant to **Special Condition 6** of this CDP. A qualified botanist shall flag and/or fence for avoidance and protection any environmentally sensitive plant habitat located adjacent to the project area.

E. Protection of sensitive amphibians and reptiles: NO MORE THAN ONE WEEK PRIOR TO COMMENCEMENT OF GROUND DISTURBANCE IN A PARTICULAR WORK AREA AT ALL RESTORATION SITES, a qualified biologist shall survey the ground-disturbance area for northern red-legged frogs and western pond turtles and shall coordinate with the California Department of Fish and Wildlife staff to relocate any animals that occur within the work impact zone to nearby suitable habitats.

F. Protection of archaeological resources: The authorized development shall protect archaeological resources consistent with **Special Condition 9** of this CDP.

G. Salvaging of plant material: At Bay Meadows, appropriate woody material suitable for reuse as habitat features in the restored habitats, such as root wads and large woody debris, shall be salvaged and stockpiled on site for relocation to restored habitat areas.

H. Water quality protection: (i) No construction materials, debris, or waste shall be placed or stored where it may be subject to entering coastal waters or wetlands; (ii) any and all debris resulting from construction activities shall be removed from the project site and disposed of properly; (iii) during the course of construction, all trash shall be properly contained, removed from the work site on a regular basis, and properly disposed of to avoid dispersal of litter and contamination of habitat; (iv) any on-site stockpiles of construction materials, debris, soil or other earthen materials shall be covered and contained whenever there is a potential for rainfall, to prevent polluted water runoff from the development site; (v) appropriate BMPs, as detailed in the proposed erosion, sediment, runoff, and pollution control plans and SWPPPs for each restoration site, shall be used to control runoff and to prevent the entry of polluted stormwater runoff into coastal waters and wetlands during construction and post-construction; (vi) heavy equipment maintenance and fueling shall not occur within 100 feet of coastal wetlands, waters, and drainages **unless the applicant provides evidence to the satisfaction of the Executive Director that spill prevention measures will be incorporated into the project that will prevent discharges of fuels and lubricants into adjacent wetlands, waters, and drainages;** and (vii) hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call, and any accidental spill shall be rapidly contained and cleaned up.

I. Dewatering: Excess ground water shall not be pumped or discharged into surrounding wetlands outside of the project area footprint to prevent sediment-laden water from entering coastal waters or wetlands.

J. Straw mulch: Only certified weed-free straw mulch shall be used for erosion, sediment, and runoff control purposes to avoid the inadvertent introduction of nonnative plant species to surrounding environmentally sensitive areas.

K. Plastic netting prohibition: To minimize wildlife entanglement and plastic debris pollution, the use of temporary rolled erosion and sediment control products with plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers used in fiber rolls, erosion control blankets, and mulch control netting) is prohibited. Any erosion-control associated netting shall be made of natural fibers and constructed in a loose-weave design with movable joints between the horizontal and vertical twines.

L. Debris, soil, and spoils disposal: All construction debris, including demolished road material, culverts, vegetative spoils, soil spoils not authorized to be deposited at the on-site soil disposal areas at Bay Meadows, debris, waste, and other excess material generated by the proposed project, shall be removed from project sites and disposed of in an upland location outside of the coastal zone or at an approved disposal facility pursuant to the final debris disposal plans approved pursuant to **Special Condition 3** of this CDP.

❖ ***Modify Special Condition 6 as follows***:

6. Measures to Protect Against Significant Disruption of ESHA Habitat Values and to Protect Adjacent ESHA at Pacific Shores.

A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-14-0820, the Permittee shall submit a plan for the review and approval of the Executive Director that (1) ensures that protective measures are undertaken during invasive species removal activities and enhancement planting activities at Pacific Shores to protect environmentally sensitive Oregon silverspot butterfly habitat, environmentally sensitive coastal dune habitat, and environmentally sensitive coastal prairie habitat from disruption of habitat values, and (2) protects sensitive plants, host plants for the Oregon silverspot butterfly larvae, and known butterfly nectar plants adjacent to paved roadways proposed for removal:

i. The plan shall demonstrate that:

a. Updated botanical surveys of the project area, adjacent road right-of-way areas, and all construction staging and stockpile areas shall be conducted by a qualified botanist prior to commencement of construction ~~in any given year in which construction activities are proposed~~;

b. ~~Any~~ **The limits of disturbance areas shall be delineated with conspicuous flagging or fencing in cooperation with a qualified biologist limiting the potential area affected by construction and ensuring that** all target plants, including sensitive plants and host plants for Oregon silverspot butterfly larvae, located outside of paved roadway areas proposed for restoration or located in the vicinity of proposed invasive species removal areas and habitat enhancement planting areas shall be ~~flagged and/or fenced for~~ avoided**ed**~~ance~~ and protect**ed**~~ion~~

with temporary flagging/exclusion fencing prior to commencement of construction/development;

c. Invasive plant removal activities shall be restricted to hand removal methods only and shall minimize ground disturbance;

d. Vegetative spoils shall be disposed of consistent with the approved final debris disposal plan required by **Special Condition 3**;

e. Provisions are included for submittal of restoration updated final revegetation plans to the Executive Director for review and approval prior to commencement. The updated final revegetation plans shall depict where on the Applicant's property additional butterfly nectar resources are proposed to be planted; and

f. No plants shall be relocated onto or planted on private properties outside of the Applicant's ownership.

ii. The plan shall include at a minimum the following components:

a. Provisions for submittal of the botanical survey results and updated maps to the Executive Director for review prior to commencement of restoration construction;

b. Provisions for submittal of maps depicting the proposed salvaged nectar plant transplant locations to the Executive Director for review and approval prior to commencement of restoration construction, which shall demonstrate that no plants will be relocated to lands within Pacific Shores other than lands owned by the Applicant; and

c. A schedule for botanical surveys, plant salvaging, transplantation, and planting of nectar resource areas on the Applicant's property.

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.

III. Recommended Changes to Staff Report Findings

Staff is recommending various modifications to the staff report findings to incorporate information and clarifications in response to public comments. Text to be deleted is shown in ~~strikethrough~~, and text to be added appears in **bold double-underline**.

❖ ***Modify the Project Description Finding IV-A-1 on pages 14-15 as follows:***

A. Proposed Project Description

The BCRAA ("Applicant") proposes to implement habitat restoration projects on property that it owns at two locations: (1) within the Pacific Shores Subdivision located at the north end of Lake Earl; and (2) an approximately 80-acre property referred to as Bay Meadows located south of Lake Earl. It also proposes to implement about 0.2-acre of wetland restoration on a portion of property immediately adjacent to Bay Meadows owned by Bay Meadows Project LLC. The impetus for the proposed habitat restoration projects is to satisfy in part special conditions of the coastal development permit (CDP) issued for the Del Norte County Regional Airport Runway

Safety Area (RSA) Improvement Project in September of 2013 (CDP 1-13-009), which require mitigation for impacts of the RSA project on wetlands and dune habitat as explained in Finding IV-B below. Each proposed restoration project is discussed separately below.

(1) Proposed Restoration Activities at Pacific Shores

The Applicant proposes to restore/reestablish approximately 10.5 acres of palustrine emergent wetlands and 0.5-acre of coastal dune habitats in a variety of locations throughout Pacific Shores (see Table 1 below and **Exhibit 3**). The Applicant also proposes to enhance and restore coastal prairie habitat through the removal of invasive species and planting of native dune and prairie species at a number of locations on the Applicant's property in the subdivision. In general, wetlands would be restored by removing a total of 44 discrete segments of existing 24-foot-wide paved road segments ranging in length from approximately 160 feet to 1,850 feet, and reestablishing wetland and dune habitats within these former roadway areas adjacent to existing wetland and dune habitats. Road removal would occur entirely on land owned by the Applicant[1] and only where adjacent parcels also are in the Applicant's ownership (having been recently acquired from willing sellers) or where adjacent areas already are owned by the State (Lake Earl Wildlife Area or Tolowa Dunes State Park). **Road removal would occur within upland areas only (i.e., existing paved roadways), which have been confirmed to be upland by the Applicant's consultant[2] and verified by the Commission's Ecologist (Dr. John Dixon).** As stated in the adopted Environmental Impact Report (EIR) completed for the project,[3] the proposed restoration design is based on habitat surveys and hydrology studies[4] verifying that the proposed project would provide the best opportunities for re-establishment of wetlands as well as rehabilitation and preservation of existing wetlands and uplands. As further stated in the EIR, the proposed road removal segments meet one or more of the following criteria: (1) they are in close proximity to existing wetlands, (2) they create larger contiguous habitat blocks, (3) removal of the road segments would result in connectivity of existing preserved habitats, and (4) the road segment removal would re-establish/rehabilitate existing wetlands. Proposed road removal activities would not interfere with the ability of the surrounding private property owners to physically access their properties (see page 2 of **Exhibit 3**). One existing culvert would be removed as a part of the removal of one of the road segments near Lake Earl. With removal of the road and its conversion to wetland, the culvert is no longer needed to serve its intended purpose of preventing the ponding of water on the road segment (since the road segment will be removed and the area reverted to wetland habitat). In addition, road removal and wetland restoration activities would not modify existing drainage channels along roadways.[5]

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[1] On December 9, 2014 the County of Del Norte approved resolutions authorizing the vacation of each road segment proposed to be removed and restored by the Applicant and agreeing to transfer the road segments to the Applicant.

[2] **GHD August 2014a, August 2014b, March 2014c, March 2014e, and May 2013b.**

[3] BCRAA and URS. February 2011 (Appendix I) and September 2011.

[4] For example, see GHD November 2014a, March 2014c, March 2014d, March 2014e, May 2013a, May 2013b, and April 19, 2013.

[5] GHD November 2014c and GHD March 2014d.

❖ ***Modify the Protection of Wetlands and Water Quality Finding IV-F on pages 24-25 as follows:***

Most of the habitat restoration and enhancement activities will occur in areas that are currently upland roadways at Pacific Shores[6] or in degraded uplands at Bay Meadows. Development of these upland areas will not result in the diking dredging or filling of wetlands. However, as part of the proposed ~16 acres of wetland creation and enhancement at Bay Meadows, the Applicant proposes to dredge (excavate) approximately 2 acres of existing coastal wetlands. Therefore, the proposed dredging in coastal wetlands associated with the proposed restoration activities at Bay Meadows must be evaluated for its consistency with Coastal Act section 30233. These wetlands are scattered mostly within the upland grassy areas where most of the wetland creation is proposed to occur. While these existing coastal wetlands meet the definition of wetlands under the Coastal Act[24] based on their documented predominance of wetland-oriented vegetation (such as Hooker willow, red alder, cascara, Sitka spruce, and beach pine),[25] these presumed wetlands[26] lack field indicators of hydric soils and wetland hydrology. Essentially, these coastal wetlands are seasonal wetlands at the drier end of the hydrology scale. The Applicant proposes to increase the wetland hydrology in these areas and adjacent upland areas (i.e., make the areas "wetter") by lowering (via proposed excavation) the ground surface to "raise" the relative groundwater level closer to the surface. Higher groundwater will lead to more prolonged periods of inundation and soil saturation in the upper soil layer, which in turn will create habitat conditions supportive of wetland-oriented plants and animals. **At Pacific Shores, the Applicant does not propose any diking, dredging, or filling of any coastal wetlands or waters, because (1) the proposed excavation (dredging) activities will be limited to existing paved areas only, which are not currently wetlands and will only become wetlands in some locations after the road removal occurs as shown on the proposed plans, Exhibit 3), and (2) the proposed placement of fill material (e.g., to re-connect dunes and provide topographic variation in road removal areas) will occur within upland areas only.**

...

❖ ***Modify the Water Quality section of the ESHA Finding IV-G(2), "Proposed Development Adjacent to ESHA," on page 37 as follows:***

Water quality protection. As cited above, Sections 30230 and 30231 of the Coastal Act require the protection of marine resources and the biological productivity and quality of coastal waters and wetlands appropriate to maintain optimum populations of marine organisms and for the protection of human health. Development in areas adjacent to coastal wetlands and waters, such as the proposed activities at Pacific Shores in the vicinity of Lake Earl and Lake Talawa, shall minimize adverse effects of waste water discharges and entrainment, control runoff, and prevent depletion of ground water supplies and substantial interference with surface water flow. As detailed in the hydrology analysis completed by GHD[40] (discussed in more detail in Finding IV-J below), the project as proposed will not change groundwater conditions on the site, will not interfere with surface water flow, and the project could help alleviate storm-related flood conditions in the area. The Commission attaches **Special Condition 1** to ensure that the project

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[6] **GHD August 2014a, August 2014b, March 2014c, March 2014e, and May 2013b**

implements appropriate water quality and runoff control protection measures as proposed, including (1) restricting excavation and grading to the latter part of the dry season (May 1-October 31), (2) installing temporary sediment fences and barriers between work areas and existing wetlands and waters, performing heavy equipment maintenance and fueling at least 100 feet away from any drainage or wetland, (3) implementing appropriate BMPs, as detailed in the erosion, sediment, runoff, and pollution control plans and SWPPPs for each restoration site, to control runoff and to prevent the entry of polluted stormwater runoff **and airborne dust** into coastal waters and wetlands during construction and post-construction, and various other measures to minimize the potential adverse effects of waste water discharges and entrainment and to control runoff, consistent with Section 30230 and 30231 of the Coastal Act.

...

❖ ***Modify the Landform Alteration and Visual Compatibility Finding IV-H on page 39 as follows:***

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

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

The proposed development at Pacific Shores does not raise any visual resource issues. The majority of the proposed development will occur on paved roadway segments. The finished grade of the proposed restored wetland and dune habitats will be similar to the existing site topography (see project plans, Exhibit 3). In addition, the proposed planting plans, both for invasive species removal areas and for proposed enhancement planting areas on the Applicant's property, include regionally appropriate native species that will be visually compatible with the character of surrounding areas. As summarized in the Project Description Finding (IV-A-1), the Applicant also proposes to remove and dispose of existing dumped garbage and debris from designated areas associated with road removal segments, which will restore and enhance the visual quality of visually degraded areas. Therefore, the proposed development at Pacific Shores will protect public views, minimize the alteration of natural land forms, and be visually compatible with the character of surrounding area, consistent with Section 30251 of the Coastal Act.

The proposed project activities at Bay Meadows include the proposed onsite disposal of over 116,000 cubic yards of excess soil spoils generated by the proposed wetland restoration activities in two separate disposal areas. The northern disposal area on the agricultural land will accommodate approximately 39,000 cubic yards of topsoil spread across about 4.3 acres with an average compacted height of approximately 4.5 feet. The southern disposal area on the non-agricultural (suburban residential) land will accommodate disposing of approximately 77,000 cubic yards of subsoil spread across about 8.5 acres with an average compacted height of approximately 5.6 feet across this acreage. Because placement of this volume of material over

the disposal sites has the potential to significantly alter the natural topography of the site and be visible from public vantage points such as Lake Earl Drive, the Commission must consider whether the project has been sited and designed to minimize the alteration of natural land forms and to be visually compatible with the character of the surrounding area.

...

❖ ***Modify the Flood Hazard Finding IV-J on pages 42-43 as follows:***

Section 30253 of the Coastal Act states in applicable part (emphasis added):

> *New development shall do all of the following:*
>
> *(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*

...

Some of the proposed project areas, particularly Pacific Shores, are located within areas prone to flooding. As such, Section 30253 of the Coastal Act requires that proposed development at Pacific Shores must minimize risks to life and property in this high flood hazard area.

To assess the potential effects of the proposed removal of roads and restoration of wetlands on surface water hydraulics in Pacific Shores, the Applicant completed a hydrologic analysis.[42] The analysis considers the potential effects on surface water hydraulics at the site under various road removal options. The purpose of the report is to quantify the change in stormwater runoff between existing conditions (pre-project) and post project implementation.

The hydrology report notes that the majority of surface drainage at Pacific Shores presently occurs through man-made drainage ditches along roadsides, which flow to Lake Earl. A major drainage way passes north to south through the western portion of the subdivision, discharging to Lake Talawa. As noted above in Finding IV-A(1), road removal and wetland restoration activities will not modify existing drainage channels along roadways, and all existing drainage ditches along roadways will be preserved. The hydrology report describes the existing condition of the drainage ditches as follows:

> *...often heavily vegetated with grasses, herbs shrubs, and in some cases with trees. During rain events water can be observed backing up onto paved road surfaces, especially on the east side of the subdivision. This inundation is likely due to a combination of high water tables, the sometimes marginally defined drainages, the low gradient undulating topography, and the unmaintained state of the existing roads and drainage networks.*

The hydrology report further notes that the soils within the project vicinity are predominantly sand, which is characterized by hydrologic soil group A. The Soil Conservation Service defines HSG A as having "...a low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sand or gravel and have a high rate of water transmission (greater than 0.3 in/hr)."

The hydrology analysis modeled stormwater runoff volumes and peak flow rates for various design storms over a range of mitigation options (e.g., removing 8, 10, 12, and 15 acres of road). The results show a reduction in the amount of runoff proportional to the increase in road removal/restoration area size, which the report states "...is to be expected, as impermeable asphalt surfaces are being replaced with vegetated dunes, which allow for more infiltration and evapotranspiration during storm events." The hydrology analysis also modeled flow velocities in drainage channels under different road removal/restoration scenarios, and the model shows that velocity decreases as the road removal/restoration area size increases. The analysis did not find a correlation between groundwater levels and water surface elevations of Lake Earl (GHD March 2014d).

The hydrology report concludes that the project **"lessens the potential for flooding to properties adjacent to mitigation areas." The report indicates that** existing conditions on the site display more stormwater runoff and higher peak flow rates and velocities of stormwater runoff through existing drainage channels compared to post-project conditions. In other words, the project as proposed will not increase flooding and ~~could~~ **will** help alleviate storm-related flood conditions in the area. **This conclusion is due to the fact that (1) the project will convert approximately 10 acres of existing impervious surfaces (paved roads) to pervious habitat areas (restored wetlands and dunes), thereby allowing for increased infiltration of stormwater into the ground rather, (2) the soils in the area are predominately sand, which have low runoff potential and high infiltration rates even when thoroughly wetted, and (3) the project as proposed will not alter existing drainage ditches, so existing County-maintained ditches along remaining roadways in the subdivision will continue to function as designed. As stated in the report conclusions, removing more impervious surface will have "a direct effect on lessening the impacts on the stormwater conveyance channels at the PSS site, by reducing the volume of water that is discharged and decreasing the related water depth and velocities."**

Therefore, the Commission finds that the project as proposed will minimize risks to life and property in an area subject to high flood hazard and is consistent with Section 30253 of the Coastal Act.

IV. Comments and Responses

The Commission received the following comments letters in response to the December 19, 2014 staff report. Each letter is attached to this addendum packet and has been added to the staff report as Exhibit 6. Several comment letters raise issues relating to the appropriateness of the proposed development for mitigation purposes. As discussed above, the scope of the subject permit application is limited to whether or not the proposed habitat restoration is consistent with the Coastal Act. Commission staff is separately reviewing the proposed development as part of a large mitigation plan submitted by the Applicant for compliance with the mitigation requirements of the RSA permit approval. Therefore, the below comment responses only relate to comments that raise coastal resource issues associated with the subject CDP application and which have not been otherwise addressed by the revision to the findings discussed above.

Comment letters received after publication of the December 19, 2014 staff report:

- E-mail from Earl McGrew received January 4, 2015 expressing support for the project.
- E-mail from Maxine Curtis received January 4, 2015 expressing support for the project.
- Letter from Chad Roberts received January 4, 2015 expressing support for the project.
- Letter from Friends of Del Norte received January 4, 2015 expressing support for the project, with certain recommended changes (discussed below).
- Letter from the Northcoast Environmental Center received January 5, 2015 expressing support for the project.
- Letter from Dolores Howard received January 5, 2015 expressing opposition to the project (response below).
- Letter from The Smith Firm received January 5, 2015 expressing opposition to the project (response below)
- Letter from Tolowa Dunes Stewards received January 5, 2015 expressing support for the project.

Response to Dolores Howard comment letter

The commenter is opposed to the proposed project activities at Pacific Shores and is concerned about its effects on surrounding private properties in the subdivision. Special Condition 1-C requires that prior to commencement of construction, the limits of disturbance areas shall be delineated with conspicuous flagging or fencing, and property boundaries with all adjoining privately owned lots at Pacific Shores shall be flagged and/or fenced for avoidance and protection. All construction vehicles and equipment shall be restricted to pre-established work areas and haul routes and to established or designated staging areas. The commenter also raises visual resource impact concerns, which are addressed in the supplemental findings discussed above.

Response to The Smith Firm comment letter

The commenter, representing the Pacific Shores Property Owners' Association, is opposed to the proposed project activities at Pacific Shores. The quote from the staff report (page 26) referenced in the letter (*The purpose of the proposed project is to increase the wetland hydrology in these degraded wetlands and in surrounding degraded upland areas by lowering the ground surface to "raise" the groundwater level*) pertains to the proposed wetland restoration activities at Bay Meadows rather than at Pacific Shores. The comment letter also raises a concern related to asbestos in the roads proposed for removal. The commenter alleges that according to (unspecified) Del Norte County records (which are not referenced or cited in the letter), the roads were sealed with an asbestos composite, which is "a very significant threat to health and safety" that was not considered or analyzed. The Applicant's consultant tested the gravel beds at Pacific Shores Subdivision (LACO Associates, March 15, 2013) and found that three samples of the base rock were <0.25% (non-detect) for asbestos, and one sample contained 0.25% Chrysotile asbestos, a naturally occurring material in ultramafic rock (the presumed source of the Chrysotile asbestos is in gravel taken from the Smith River, which is presumed to be where the road base material came from). The asphalt road surface was not tested but may also contain rock material from the same source. Special Condition 3 requires submittal of final debris disposal plans for

the Executive Director's review and approval prior to commencement of construction. The plans must demonstrate, among other requirements, that all construction debris, including all road surfaces and road base materials, shall be lawfully disposed of outside of the coastal zone at an authorized disposal site(s) capable of receiving such materials

EXHIBIT 6

PUBLIC COMMENTS RECEIVED AFTER PUBLICATION OF STAFF REPORT

- Letter from Earl McGrew received 1/4/15
- Letter from Maxine Curtis received 1/4/15
- Letter from Chad Roberts received 1/4/15
- Letter from Friends of Del Norte received 1/4/15
- Letter from Northcoast Environmental Center received 1/5/15
- Letter from Dolores Howard received 1/5/15
- Letter from The Smith Firm received 1/5/15
- Letter from Tolowa Dunes Stewards (Sandra Jerabek) received 1/5/15

Kraemer, Melissa@Coastal

From: Merrill, Bob@Coastal
Sent: Monday, January 05, 2015 10:37 AM
To: Susan Daugherty (sdaugherty@co.del-norte.ca.us)
Cc: Kraemer, Melissa@Coastal
Subject: FW: Pacific Shores Mitigation comment letter

From: Earl McGrew [mailto:mcgrewel@hotmail.com]
Sent: Sunday, January 04, 2015 3:54 PM
To: Merrill, Bob@Coastal
Cc: jerabek@jeffnet.org
Subject: RE: Pacific Shores Mitigation comment letter

California Coastal Commission
Attn. Robert Merrill or Melissa Kraemer
North Coast District Office
1385 8th Street, Suite 130
Arcata, California 95521

Dear Commissioners:

Re: In Support of Staff Recommendation with regards to Mitigation in Pacific Shores Subdivision, Application No. 1-14-0820, Border Coast Regional Airport Authority.

I am writing to support this permit and Pacific Shores Subdivision (subdivision) mitigation plan. I have been a Pacific Shores lot owner for more than 50 years. My wife and I are very grateful for this mitigation project and the opportunity to sell our lot at long last, which occurred last Fall.

I was one of the original lot owners in the subdivision. Back in the early 1960s when I was living in an apartment in West Los Angeles, a door-to-door salesman persuaded me to buy the lot for $1,290 without mentioning that the property was in the wetlands and had problems with local flooding. Then I discovered years later that I would never be able to build a house on my lot because of these problems, constrained both legally and physically. For decades I continued to pay property taxes, subdivision water district fees, etc. making my total investment total over $4,000.

As I learned more about the whole subdivision, my interests obviously differed from those of the Pacific Shores Property Owners Association. When the Association filed a federal lawsuit against the Airport Authority in an attempt to block its lot acquisition plan, I intervened in support of the Airport. The case was dismissed in 2014, enabling my lot to be subsequently purchased.

Sincerely,

Earl L. McGrew

5119 Cypress Links Blvd.

Elkton, FL 32033

Kraemer, Melissa@Coastal

From: Maxine Curtis <maximik@msn.com>
Sent: Sunday, January 04, 2015 10:18 PM
To: Merrill, Bob@Coastal; Kraemer, Melissa@Coastal
Subject: Comment on Pacific Shores mitigation plan

California Coastal Commission
Attn. Robert Merrill and Melissa Kraemer
Bob.Merrill@coastal.ca.gov
Melissa.Kraemer@coastal.ca.gov
North Coast District Office
1385 8th Street, Suite 130
Arcata, California 95521

Dear Commissioners:

Re: In Support of Staff Recommendation for Runway Safety Area Mitigation in Pacific Shores Subdivision, Application No. 1-14-0820, Border Coast Regional Airport Authority.

I am writing to support the Airport Authority's proposed mitigation in the Pacific Shores Subdivision (Subdivision). I have owned my property in this Subdivision for close to 30 years now. I applaud the Airport's acquisitions which have helped extricate nearly 200 more unfortunate lot owners. The Shores is the true swampy scam in which we all became deeply "mired" much to our regret.

I purchased my Subdivision lot in 1987 in order to build a retirement home. I lived in Del Norte County for many years and came to understand the Subdivision would never be developed because it is located in sand dunes and coastal wetlands in the Smith River floodplain. I recognized that I would never be able to build anything on this lot, and have long since retired to nearby Medford, Oregon.

For nearly 20 years we all paid taxes to the Subdivision Water District for water and sewer services, which were never built and which we never received. Having these lots acquired for conservation purposes is the best possible outcome. I am very pleased to support the Airport's progress toward safer runways and hope that you grant this permit.

Sincerely,

Maxine D. Curtis

111 Victoria Way
Central Point, OR 97502

Kraemer, Melissa@Coastal

From:	Chad Roberts <recp@cal.net>
Sent:	Sunday, January 04, 2015 9:39 PM
To:	Merrill, Bob@Coastal
Cc:	Kraemer, Melissa@Coastal
Subject:	RCR Comment to CCC re BCRAA MMP
Attachments:	RCR Comments to CCC re BCRAA MMP FINAL.pdf

Bob and Melissa,

Attached please find a comment for Commission consideration regarding existing and current environmental resources in the Pacific Shores Subdivision. Please make copies and deliver to the Commission and all other interested parties. If you have questions please feel free to contact me.

The Lake Earl-Tolowa Dunes region is entirely ESHA, including the PSS, notwithstanding the existing roads. The statewide significance of this area should be recognized, as the Commission has done for other coastal duneland systems in California.

In my comments I'm suggesting an approach to functional mitigation under section 30240 (as well as 30233, although not as directly in this case) that is more ecologically defensible, and which will ultimately (if not currently) prove to be more satisfactory, than a focus on the attempted "restoration" of communities that are not restorable. At some point it might be useful to have some focused dialog.

Best,

Chad

Conserving Current and Historic Environmentally Sensitive Resources in the Pacific Shores Subdivision through BCRAA MMP Implementation

Chad Roberts, Ph.D.
Professional Wetland Scientist No. 268, SWS
Senior Ecologist, ESA
P.O. Box 2173
Davis, CA 95617

02 January 2015

Executive Summary

The Pacific Shores Subdivision (PSS) site is an element in a larger landscape that has a significant conservation context, the Lake Earl/Tolowa Dunes (LETD) coastal landscape. The LETD landscape unit is an Environmentally Sensitive Area as defined in Section 30107.5 of the Coastal Act. The environmental sensitivity derives from the rarity of coastal dune complexes in California. The Coastal Commission has recognized the significance of such rarity by designating a number of these dune landscapes in their entirety as Environmentally Sensitive Habitat Areas (ESHAs).

A number of environmentally sensitive species occur in the LETD region, including the PSS. The staff report describes forests within the PSS dominated by shore pine and Sitka spruce. The BCRAA studies also documented abundant plant species that have been identified as hosts for the Oregon silverspot butterfly. Prior studies on the PSS site documented occurrences of numerous sand dune phacelia individuals within the PSS boundary. The geographical and evolutionary histories of the rare species considered above tie them to the presence and health of the unique duneland ecosystem found in the LETD region. These sensitive species have been documented within the PSS region for periods that typically exceed the existence of the PSS.

The occurrences of the sensitive species in specific locations within the PSS or elsewhere within the LETD region can't be predicted with certainty, because individual organisms move from place to place in order to assure their survival and reproduction. As local conditions change in response to local stressors or in response to longer-term global stressors like climate change, the species may occur in one location in a series of years, and then shift to another locality. Past management of the PSS has not removed the natural dynamics that support the occurrences of these species. Suitable conditions may occur at almost any point in the PSS at some point in time. The probability of occurrence of suitable habitat conditions will remain the same following the implementation of the proposed mitigation as it is currently, and the management approach identified by the BCRAA for the PSS should not be seen as burdensome for remaining landowners.

This LETD region's environmental sensitivity is broadly distributed within the coastal dune complex stretching between Point Saint George and the mouth of the Smith River; in effect this entire dune complex constitutes a "regional" Environmentally Sensitive Habitat Area (ESHA). Because the same factors are ubiquitous within the PSS, the subdivision functions as an element in this regional ESHA. The PSS includes habitat for numerous sensitive and rare species, which may be adversely affected by human activities.

Section 30240 of the Coastal Act protects ESHAs from "any significant disruption of habitat values." Protection from significant disruption in the LETD ESHA fundamentally means protecting the ecological processes that sustain this coastal dune ecosystem. The appropriate focus for maintaining ESHAs in the region must address maintenance and enhancement of the functional capacity of the regional ecosystem. The BCRAA MPP addresses mitigation within the ESHA through ecological restoration that includes maintaining or improving ecosystem functional capacity by restoring and enhancing *hydrological connectivity*; connectivity is important because it counteracts processes that lead to *landscape fragmentation.*

In my opinion the MPP proposal for the PSS does enhance the functional capacity of the PSS and the larger LETD ESHA. Removing road surfaces and restoring infiltration capacity in the PSS contributes substantially to the hydrological integrity of the PSS and the larger region. The enhancement in hydrological connectivity that results from these actions will contribute to the biotic integrity of the entire LETD ESHA.

I first visited the PSS in the early 1980s, and I observed the obvious ecological similarities between the biotic community in this dune landscape and that occurring on the Samoa Peninsula west of Humboldt Bay in which I'd roamed extensively as a teenager. However, I noted that the PSS was *a lot wetter* than the dune forest ecosystem on the Samoa Peninsula.

The Del Norte County coast receives almost twice as much rainfall, on average, as does the Humboldt County coast. This abundant rainfall is associated with the occurrence of groundwater above or close to the land surface over extensive areas, which remains there for prolonged periods (weeks to months). The BCRAA hydrological report documents the occurrence of groundwater within the near-surface zone throughout the PSS. The BCRAA hydrological report also documents the fact that groundwater elevations in most of the PSS are not statistically related to water surface elevations in Lake Earl.

The GHD hydrological study and the Commission's staff analysis confirm that the proposed mitigation will not worsen drainage within the PSS. This result stems from a reduction in impervious road surfaces, which will be accompanied by an increase in permeable land surfaces. This 1-for-1 replacement of impervious cover by permeable substrate will reduce runoff and increase infiltration into the sands.

While the original construction of the PSS roads did not, in my opinion, significantly alter the hydrology within the PSS, the construction of those roads was an environmental impact, or stressor, under current state and federal water-quality regulations. The restoration of parts of the roadway area within the PSS to more hydrologically natural conditions therefore constitutes an enhancement of functional capacity, relative to current conditions, within the PSS and the LETD region.

The establishment of the PSS included excavating several large channels in various parts of the subdivision. In my opinion these channels did not at any past time, and currently do not, have a substantial effect in lowering groundwater elevations in the PSS or on reducing the extent of wetlands in the subdivision. These features are unlined, and because of the high permeability of the sand, the water in the features is not separated from adjacent high groundwater. These channels are, and always have been, long, narrow depressional wetlands, hydrologically dominated by rainfall/groundwater. While initially unvegetated, most of the features have become substantially filled with sand and organic material, are now fully vegetated with willows and other aquatic species, and are thus best characterized as linear emergent marshes and swamps.

The California coast, including LETD region, was photographed by the Department of Boating and Waterways in 1972, the year that the Coastal Initiative was adopted by voters. A photo in this record (Plate I) showing the landscape at the northern end of the PSS illustrates a high degree of hydrological contiguity within the LETD region. Abundant aquatic features north of Kellogg Road indicate a high groundwater surface throughout the region, which extends south into the PSS. The elevated groundwater surface in turn has supported the development of abundant wetlands within the PSS and elsewhere in the region, evident in the 1972 photos.

The National Wetland Inventory (NWI) is a formal wetland mapping program of the US Fish and Wildlife Service. The NWI mapping for the Del Norte County coastal region was prepared from 1983 color aerial photos. The resulting NWI maps are <u>not</u> based on on-the-ground delineations of wetlands, and NWI documentation (as well as personal comments to me by the person who prepared the maps) declare that there are abundant wetlands in the LETD region, including the PSS, the extent of which are not reflected in the NWI maps.

The NWI maps were subjected to field-testing in the late 1980s by personnel from the Eureka consulting firm Winzler & Kelly. While the W&K study also used aerial photo interpretation, 11 on-the-ground transects allowed W&K staff to establish measures related to wetland characteristics as related to mapped locations. As a result, W&K concluded from the work that they had done that the USFWS NWI map could not be contested as to total wetlands area. The W&K results were a validation of the fundamental accuracy of the NWI mapping.

Historical aerial imagery of the PSS site shows wetland indicators beyond the NWI-mapped areas, and I would identify more wetland areas on that basis. My personal experience on the PSS site in recent years also indicates a greater percentage of wetlands in the PSS than does the NWI map. The criteria used for defining jurisdictional wetlands change through time, and increased understanding of wetland hydrology, substrate characteristics, and vegetational relationships contributing to wetland identification/delineation in recent years results in identifying greater wetland extents.

When extensive wetland delineations were conducted within the PSS by GHD in support of the BCRAA application, many wetland areas were identified by on-the-ground delineations outside the boundaries of NWI-wetlands. According to GHD considerably more than half of the PSS consists of jurisdictional wetlands; of the 180 parcels delineated by GHD staff, 61% of the area consisted of jurisdictional wetlands. Assuming that the same result applies to the remainder of

the PSS, the actual extent of wetlands in the PSS exceeds the area mapped as wetlands by the NWI.

These PSS wetlands are protected ESHAs under the Coastal Act. The minimum area of these wetlands within the PSS is reflected in the NWI maps; recent investigations indicate that even more of the site is wetland. In my opinion, the PSS has supported wetlands of at least the current extent since the original jurisdiction of the Coastal Commission was established. In fact, the PSS site undoubtedly has supported wetlands to at least this extent since EuroAmericans first settled this region, and likely before that.

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1.0 Introduction

This brief comment is provided to the California Coastal Commission for consideration in the approval deliberations for the mitigation elements of the proposed Border Coast Regional Airport Authority's (BCRAA) Runway Safety Area (RSA) improvements, a project that the Commission has already approved (CDP 1-13-009). The staff analysis prepared for Application 1-14-0820 addresses Coastal Act requirements and the Commission's administrative requirements sufficiently well that numerous comments about the information provided by staff for Commission review are not necessary. However, the staff analysis does not fully convey the historical project setting, including the overall ecological and conservation significance of the Pacific Shores Subdivision (PSS) site, which is a fundamental element of the Commission's public review. The PSS site is not merely a landscape element at which mitigation is proposed. The PSS site is an element in a larger landscape that has a significant conservation context, the Lake Earl/Tolowa Dunes (LETD) coastal landscape. The purpose of this comment is to provide validation for the mitigation proposal by: (1) describing further certain pre-project conditions in the Lake Earl region that are germane for mitigation proposal consideration, and (2) amplifying certain conclusions regarding the role of the PSS in the mitigation that are based on conservation science and historical conditions on the site.

2.0 Geological and Evolutionary History

The LETD landscape unit, of which the PSS is a part, is an environmentally sensitive landscape element in its own right. The sensitivity derives, in part, from the relative rarity of coastal dune complexes in California, a consequence of North American geology. As summarized by Cooper (1958, page 3):

> "Sand dunes occur at irregular intervals along the entire Pacific coast of North America. Because of the steep, rugged nature of this coast they are less continuous and cover a far lesser frontage than on the Atlantic side of the continent, but in many localities they are massive and complex. …
>
> "South of Cape Blanco (Oregon), all the way to the Golden Gate, dune masses are comparatively small and widely separated. There are localities of interest at Point St. George, Humboldt Bay, Point Arena, and Bodega Head. Just south of the Golden Gate there was once a wide expanse of dunes, now completely obliterated. The shore of Monterey Bay is bordered by a dune complex of more than ordinary extent and significance. Next in order is an interesting area at Morro Bay near San Luis Obispo. The most extensive and complex dune masses of the California coast lie north and south of the Santa Maria River and Point Sal."

As summarized by Cooper (also see Cooper 1967), coastal dune landscapes are inherently rare in California. The Coastal Commission has recognized the significance of such rarity by designating a number of these dune landscapes in their entirety as Environmentally Sensitive Habitat Areas (ESHAs), adopting findings such as "Coastal dune habitat constitutes one of the rarest and most geographically constrained habitats in California" (staff report, City of Grover Beach LCP Amendment No. 1-12 Part 1, 11 Apr 2013 Commission hearing, as one among many).

The second source of singularity for the LETD region results from the evolutionary history of vegetation in North America (a subject related, to some degree, to the geological history that formed the coastal dune complexes). Northwestern California is one of the two regions in California with a high diversity of endemic plant genera (Stebbins and Major 1965), a result jointly derived from two patterns. The first is the geological history of this region, which includes the Klamath Mountains, which have been a topographic feature in California landscape for more than 100 million years (as compared, for example, to the Sierra Nevada, with a history as a surface feature of less than 5 million years).

The second factor is the biogeographic location of Del Norte County in the NW corner of the state, which in numerous ways functions as part of the Pacific Northwest botanically (Franklin and Dyrness 1973). Many plant species in the LETD region are derived from families with ranges northward from Del Norte County, rather than to plant families more common in areas to the south. The majority of plant species occurring in Del Norte County today are "Arcto-Tertiary" in origin (Raven and Axelrod 1978). The Pleistocene epoch was significantly cooler and generally wetter than current Del Norte County climate, and Pleistocene ice caused sea level to drop to as much as 130 meters (ca 400 feet) lower than sea level today; the actual coastline then was approximately the 400-foot-depth contour today. During the most recent 15,000 years the ice melted, temperatures generally rose, and California became drier, although the degree of change was not uniform everywhere.

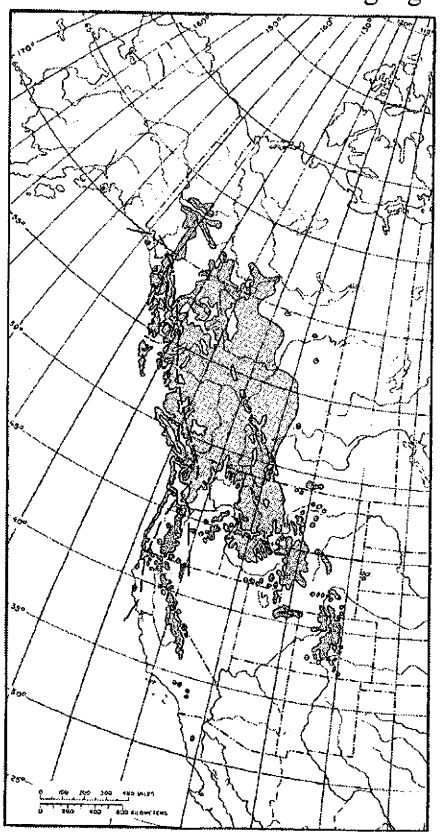


Figure 1. Distribution of Pinus contorta *in western North America. Generalized ranges of the three subspecies are indicated by dashed lines. The subspecies found along the west coast is shore pine,* P. contorta *ssp.* contorta. *Shore pine is distributed in a relatively continuous distribution as far south as the Smith River Plain; farther south it occurs in only two localized populations. Map from Critchfield (1980).*

What the vegetation patterns were like in California's northern coastal region during the Pleistocene isn't known with certainty. Northern species like Sitka spruce (*Picea sitchensis*) occurred south of the Bay Area; today this species occurs only in coastal forests north of Fort Ross. This pattern is perhaps best illustrated by shore pine (*Pinus contorta*), a "hard pine" related to ancestors in the northern circumpolar region during the Tertiary; it isn't closely related to

other pines common in California (other than lodgepole pines in the Sierra). Shore pine is well known to be a "colonizing" species of recently disturbed areas in Alaska and northern Canada (Figure 1), and it became abundant in recently deglaciated areas as the Pleistocene was ending (Critchfield 1985). Coastal shore pine populations between southern Alaska and northern California are not distinct genetically; that is, all of the coastal shore pines are genetically part of the same population, a result that would be consistent with rapid movement in response to changing climate.

Despite the apparent continuity shown in Figure A, while shore pine currently is a common species in plant communities in coastal sand sheets along the Oregon coast (Christy et al 1998), the distribution in Oregon is not continuous, being mostly associated with the same dune complexes described by Cooper (1958). The current distribution of shore pines in California includes only two other occurrences besides the LETD region, a somewhat smaller population around the northern end of Humboldt Bay (generally but not solely in the dune forests of the Samoa Peninsula), and a very small population of physically small trees in Mendocino County near Caspar. This pattern suggests that the distribution, particularly in California, is a fragment of a formerly more widespread range, of which the current occurrences are remnants or "relicts." This restricted range renders shore pines in California as rare and vulnerable to extinction (see below). Similar patterns exist for Douglas's Spirea (*Spiraea douglasii*), reindeer lichen (*Cladina portentosa* ssp. *pacifica*), and bearberry manzanita (*Arctostaphylos uva-ursi*), found along the coast with shore pine from California to Alaska

3.0 Rare Species in an Uncommon Regional Environment

Shore pine and Sitka spruce have been identified as "environmentally sensitive" by the California Department of Fish and Wildlife. The Department assigns an "S2" classification for all plant series in California including Sitka spruce; all series including shore pines receive an "S3" classification. An "S2" classification is identified as "imperiled in California," and an "S3" classification is considered to be "vulnerable to extirpation or extinction in California." This pattern of environmental sensitivity resulting from a relictual condition may apply equally well to the Oregon silverspot butterfly (*Speyeria zerene hippolyta*), a subspecies listed as "Threatened" under the federal Endangered Species Act. The Point Saint George population is disjunct from a remnant population of the same subspecies found along the coast in northern Oregon and southern Washington (USFWS 2001). A similar distribution pattern exists for sand dune phacelia (*Phacelia argentea*), restricted to dune environments in northern California and southern Oregon. This species is not federally or state listed, although this taxon has a NatureServe Conservation Status Rank for California as "S1," or "critically imperiled in California."

These sensitive species still occur in the LETD region, including the PSS. The Commission staff report describes forests within the PSS dominated by shore pine and Sitka spruce. The BCRAA studies also documented abundant plant species that have been identified as hosts for the Oregon silverspot butterfly, although searches for the butterflies themselves were not conducted. Prior studies on for the PSS site (Winzler and Kelly 1989) documented occurrences of numerous sand dune phacelia individuals within the PSS boundary. While the PSS region also provides habitat for several generally rare species or those associated with other uncommon but non-duneland habitat types (as identified in the staff report), the geographical and evolutionary histories of the

rare species considered above tie them to the presence and health of the unique duneland ecosystem found in the LETD region.

It should be noted that all of the sensitive species above (and others) have been documented within the PSS region for periods that typically exceed the existence of the PSS (for example, botanical museum specimens exist for shore pines in the Lake Earl area from 1927, 1939, and 1953; early collection dates for Sitka spruces in the Lake Earl vicinity include 1896, 1902, 1907, and 1912; *Phacelia argentea* collections from the dunes northwest of Lake Earl exist from 1902, 1923, 1939, 1940, and 1946). The occurrences of these species in specific locations within the PSS or elsewhere within the LETD region, however, are "probabilistic;" that is, specific occurrences at given locations at particular times can't be predicted with certainty. Organisms move from place to place, to the extent that they're able to do so, in order to assure their survival and reproduction. Annual plant species may respond in years of adverse conditions by not germinating at all, although the arrival of favorable conditions results in their reappearance. As local conditions change in response to local stressors or (in a longer-term sense) in response to global stressors like climate change, the species may occur in one location in a series of years, and then shift to another locality.

In consequence, the entire PSS represents the place of "occurrence," and no single lot should be seen as specifically the "most important" location for any of the sensitive species. Further, management of the PSS since its creation has not removed the natural dynamics that support the occurrences of most of these species, meaning that suitable conditions may occur at almost any point in the PSS at some point in time. This means that any point in the PSS can probabilistically expect to host one or more of these species at some point in time. Because the probability of occurrence of suitable habitat conditions will remain the same following the implementation of the proposed mitigation as it is currently, the management approach identified by the BCRAA for the PSS should not be seen as burdensome for remaining landowners.

The co-occurrence in time and space of the geological and ecological factors described above constitute the elements of an *Environmentally Sensitive Area* as the term is defined in Section 30107.5 of the Coastal Act:

> "'Environmentally sensitive area' means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

These factors are broadly distributed within the coastal dune complex that stretches between Point Saint George and the mouth of the Smith River, and in effect the entire dune complex between Point Saint George and the Smith River has all of the elements of a "regional" Environmentally Sensitive Habitat Area (ESHA). Because these factors are ubiquitous within the Pacific Shores Subdivision, the entire subdivision area functions as an element in this regional ESHA.

It should be noted that the environmental significance of the landscape elements within the PSS was described in the applicant's submitted documentation in support of the MMP. The MMP documented that 61 percent of the area in the parcels acquired from willing sellers meets the federal criteria for identification as wetlands, and additional area satisfies the criteria for identification as wetland under the Coast Act. The GHD consultants (K Mierzwa, GHD, pers.

comm.) also expressed an opinion that "most of the rest of the PSS" is ESHA. In fact, *all* of the rest of the PSS meets the definition of "Environmentally Sensitive Area" in §30107.5. The entire PSS includes habitat for sensitive and rare species, which themselves may be adversely affected by human activities. More significantly, all of the PSS is part of a coastal dune ecosystem that can be easily disturbed or degraded by human activity.

4.0 Conservation Ecology in the LETD Region

Landscape-scale processes are of central importance in conservation, and the framework for most conservation assessments today includes an evaluation of regional landscapes. For the LETD ESHA, including the PSS, the relevant landscape is the combination of (primarily) the "Flandrian" dunes (Cooper 1967) and the older dunes of the Battery Formation (see Roberts 2013 for amplification). A conservation assessment of the BCRAA region engages conditions throughout this landscape, but for the purposes of assessing the conservation ecology in the PSS a narrowed focus on the PSS elements indicates that the MMP is well-crafted.

Owing to substantial changes caused by human actions in the project area as well as to worldwide changes (such as increased temperature and altered rainfall patterns resulting from changing climate), restoring ecological communities that existed prior to the development of the PSS, while remaining a desired outcome, may be a constrained option. However, as noted in the staff report, ecological restoration for mitigation purposes also includes a focus on maintaining or improving functional capacity, a focus that is predicted by many scientists to be an important element in responding to the effects of climate change (Hobbs et al 2014).[1] The Commission's staff report presciently identifies the importance of restoring and enhancing ecological processes that support functional capacity within the communities in the PSS, including ecological and hydrological connectivity, as an essential part of the BCRAA mitigation program.

To illustrate the emerging issue summarized above, the prevalence of exotic species that are already present in the region, particularly perennial Eurasian grasses like velvet grass (*Holcus lanatus*) and vernal grass (*Anthoxanthum odoratum*), which are dominant species in many of the perennial (not annual) grasslands or "prairies" of the PSS, indicates a fair likelihood that "restoration" of pre-EuroAmerican biotic communities may not be feasible, as it's unlikely that these fully naturalized species can be eliminated from the regional landscape. Given this fact, an appropriate focus on restoring and maintaining ecosystem processes in the LETD region is both the most rational and the most needed mitigation strategy. This focus also recognizes that the now-ineradicable prairies do provide ecological functionality, through providing habitat values for local wildlife, providing organic material that sustains ecosystem processes in the PSS, and protecting land surfaces from erosion, among other ecosystem benefits.

The underlying ecological process that most significantly affects the LETD ESHA region is hydrology (considered further below). The conservation significance of regional hydrology in the

[1] There has been an increase in global mean temperature of approximately 1°F since the mid-20th Century; current IPCC projections are largely consistent for an additional 1°F increase before mid-century. The effect of these changes on biota in most of the United States is currently not well understood. One effect widely predicted by ecologists is the likely development of "no-analog" communities that will be unlike extant communities. If the restoration of existing communities cannot occur as a result of such ecologically driven changes, then the alternative focus of restoring or enhancing ecological functions emerges as the most rational mitigation strategy.

LETD system probably can't be overstated, as it's the dominant factor in determining the occurrence of all biotic elements, including the sensitive species described above. However, among the functional properties of the LETD ESHA that are most significant in a conservation sense (a substantive concern for Coastal Act decision-making), one of the most significant is regional *landscape connectivity*.

"Connectivity" is a concept of landscape ecology and conservation biology that refers to the capability of landscape elements to maintain population processes like local density, migration, and related behavioral patterns, all of which are important in assuring population viability (see Rudnick et al 2012 for an overview). Landscape connectivity is a substantial issue for conservation planning in California today, reflected in the "Areas of Conservation Emphasis" program ("ACE II;" http://www.dfg.ca.gov/biogeodata/ace/) of the California Department of Fish and Wildlife. The Department has commissioned work by conservation scientists to identify programmatic approaches (see https://www.wildlife.ca.gov/Conservation/Planning/Connectivity) to maintain and/or restore connectivity to California's landscapes.

Connectivity is important because it counteracts processes that lead to *landscape fragmentation.* Fragmentation is a process involving stages of landscape degradation, beginning with the "perforation" of an undisturbed landscape matrix by altered conditions or conflicting uses, followed by the proliferation and coalescence of these stressors, and ending when the formerly connected landscape matrix is converted into a different type of landscape dominated by the altered uses, in which the former connectivity is lost (Noss and Csuti 1994).

The Commission staff report for the BCRAA project properly emphasizes that one of the focuses of the mitigation plan is protecting the environmentally sensitive areas in the Pacific Shores Subdivision. The Coastal Act standard for Environmentally Sensitive Habitat Areas[2] is stated in Section 30240:

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

Protection from significant disruption in the LETD ESHA fundamentally means protecting the ecological processes that sustain the coastal dune ecosystem, meaning that the wetlands and the habitat values for all of the sensitive species must be maintained or restored. As noted previously, the meaning of "restoration" in the current period of changing climate does not support a focus solely on the re-creation of previously existing biotic communities. The future will very likely not resemble the present in many aspects, and the future unquestionably will not look like conditions present when EuroAmericans arrived in Del Norte County. The appropriate focus for maintaining ESHAs in the region must perforce address the maintenance and enhancement of the functional capacity of the regional ecosystems. Conservation science as practiced at the present time indicates that maintaining the functional capacity means maintaining or enhancing properties like "connectivity."

[2] For the purposes of this assessment I include wetlands within this category, as the Commission generally does.

In my opinion, the MPP proposal for the PSS does enhance the functional capacity of the PSS and the larger LETD ESHA. Removing road surfaces and restoring the infiltration capacity of the land surface in the PSS constitutes a substantial contribution to the hydrological integrity of the PSS and the larger region (as noted below these combined actions reverse a stressor created at the time of the original development); the removal of a portion of the existing pavement and the restoration of infiltration capacity will increase the hydrological connectivity of the ecosystem elements. Additionally, in my opinion, the enhancement in hydrological connectivity that results from these actions will lead to an enhancement in the biotic integrity within this area (such as, for example, by improving connectivity within amphibian communities in the coastal forest).

In my judgment the enhancement of hydrological connectivity constitutes a demonstration that the requirements of Section 30240 will have been met. This demonstration establishes a functional standard that the Commission may find it beneficial to consider in other projects where ESHAs are affected. In my opinion the proposed BCRAA mitigation approach undoubtedly will increase the ecological connectivity within the PSS (and thus within the LETD ESHA), and the staff recommendation should be approved.

5.0 Hydrology within the Pacific Shores Subdivision

When I first visited the PSS in the early 1980s, I was struck by two facts. The first was the obvious ecological similarities between the biotic community in this dune landscape and that occurring on the Samoa Peninsula west of Humboldt Bay in which I'd roamed extensively as a teenager. The other was that the PSS was *a lot wetter* than the dune forest ecosystem on the Samoa Peninsula. One of the major differences between these two relictual California occurrences of Pleistocene North America is that the Del Norte County coast receives almost twice as much rainfall, on average, as does the Humboldt County coast (Table 1). Both areas, however, clearly demonstrate the basic Mediterranean climate pattern of winter rainy and summer dry seasons that has made the California Floristic Province one of the world's 25 "biodiversity hotspots" (Conservation International 2014).

Table 1. Summary of average monthly and annual rainfall in Eureka and Crescent City.

Location	Monthly Average Rainfall (inches) 1948-2005												Annual Total (inches)
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Eureka	6.86	5.32	5.31	3.00	1.69	0.65	0.13	0.34	0.76	2.66	5.73	7.12	39.57
Crescent City	11.59	8.75	8.46	4.81	3.18	1.40	0.36	0.74	1.59	5.02	8.99	11.61	66.50

Source: Western Regional Climate Center, http://www.wrcc.dri.edu/summary/climsmnca.html.

The BCRAA has provided for the Commission's use a substantive hydrological assessment, which documents some important hydrological facts about the LETD ESHA as a whole and the PSS in particular. The most significant is the occurrence of groundwater within the near-surface zone of most of the PSS. In a previous comment to the Commission about the BCRAA project (Roberts 2013) I included discussions about hydrological dynamics in duneland regions and the effect of near-surface groundwater on the development of wetland conditions. In brief, groundwater responds to subsurface hydraulic pressure gradients; there are typically several

interacting gradients of hydraulic pressure and subsurface flow in duneland areas like the PSS, and groundwater movement can be complex. Because groundwater flows tend to move upward toward the bases of slopes and emerge at the surface, the toes of dune slopes and any associated flatter areas tend to be wetter than the dunes faces and dune tops (as portrayed in Figure 2). When there is abundant rainfall, as in coastal Del Norte County, groundwater occurs above or close to the land surface over extensive areas, and remains there for prolonged periods (weeks to months).

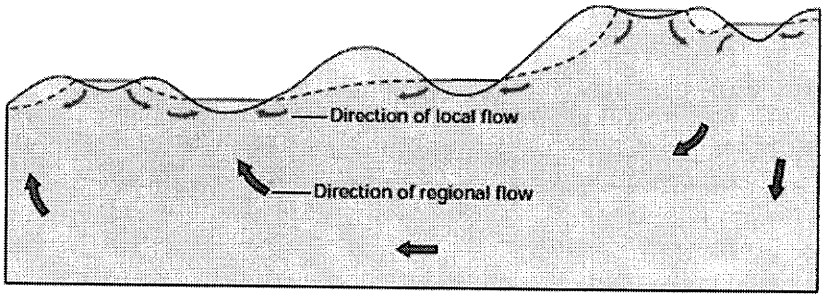
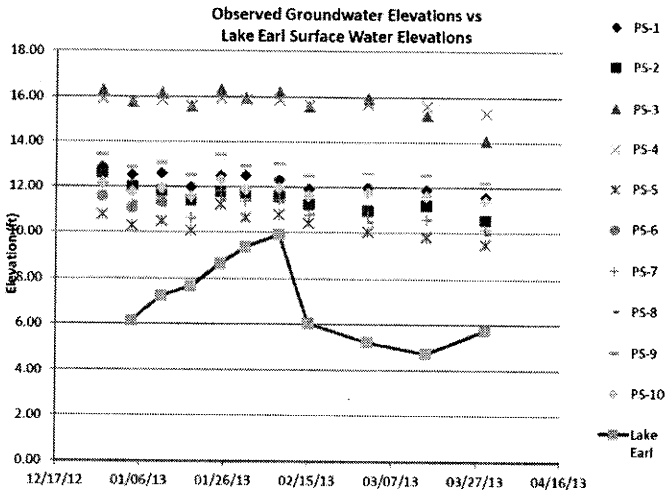


Figure 2. Hydrological dynamics in dune terrain involve the interactions of local, intermediate, and regional groundwater flow systems. Groundwater responds to complex subsurface pressure gradients, and interacts with lakes and surface wetlands. Wetlands that recharge local groundwater flow systems may be present in lowlands, while wetlands that receive discharge from local groundwater may be present in uplands. (From Figure 24 in Winter and others 1998.)

The hydrological report provided to the Commission by the BCRAA also documents the fact that groundwater elevations in most of the PSS are not statistically related to water surface elevations in Lake Earl (Figure 3). The groundwater elevation trend for all wells shown in Figure 3 demonstrates a gradual decrease in elevation that tracks the regional decline in rainfall summarized in Table 1. The recorded surface elevations in Lake Earl, however, demonstrate the well-characterized dynamics of filling as a result of regional runoff into the lagoon, then a rapid decline following a breach (California Department of Fish and Game 2003).

Figure 3. Groundwater elevations in wells PS-1 through PS-10 and Lake Earl water surface elevations observed by GHD scientists between December 2012 and April 2013. Reproduced from Figure 8 in GHD (2014).



In my prior comment to the Commission I included a portion of the groundwater elevation monitoring data assembled by the Department of Fish and Wildlife for the Lake Earl Wildlife Area, which demonstrated that groundwater levels in the high dunes southwest of Lake Earl often reach elevations many times the highest surface elevations ever recorded in the lagoon, consistent with the dynamics shown in Figure 2. Groundwater elevations within the PSS (and indeed throughout the LETD ESHA) are not statistically related to the water surface elevation in Lake Earl.

The applicant-submitted hydrological study and the Commission's staff analysis confirm that the proposed mitigation will not worsen drainage within the PSS. This result stems from a reduction in impervious road surfaces, which will be accompanied by an increase in permeable land surfaces. This combination (essentially a 1-for-1 replacement of impervious cover by permeable substrate) will reduce runoff and increase infiltration into the sands. While the lack of an adverse drainage effect represents an important finding by the Commission in meeting Coastal Act requirements, the removal of impervious surfaces and the increase in infiltration also constitutes a *functional restoration* of (a portion of) the natural hydrodynamics in the PSS region, as summarized previously. That is, removing impervious cover and increasing infiltration in a portion of the PSS roadway locations partially offsets the stressor[3] created on wetlands and other hydrological resources in the PSS by the original installation of those roads. While the original construction of the subdivision roads did not, in my opinion, significantly alter the hydrology within the PSS, the emplacement of the impervious surfaces nonetheless constituted a stressor as that term is applied pursuant to the Clean Water Act and the comparable California law, the Porter-Cologne Act; the restoration of the roadway areas to more hydrologically natural conditions constitutes an enhancement of functional capacity within the PSS and the LETD region.

The original establishment phase of the PSS included excavating several large channels in various parts of the subdivision (see Plate I), which were characterized in the MMP and the staff analysis as being parts of a "drainage system." I have studied these features in aerial photo sets prepared during the past four decades and have looked at portions of most of them on the ground, and in my opinion these features did not at any past time, and currently do not, have a substantial effect in lowering groundwater elevations in the PSS or on reducing the extent of wetlands in the subdivision. These features are unlined, and because of the high permeability of the sand, the water in the features is not separated from adjacent groundwater (which current hydrological studies have amply documented is close to, at, or above the ground surface in most of the PSS). These features essentially are, and always have been, long, narrow depressional wetlands, hydrologically dominated by rainfall/groundwater. While initially unvegetated, most of the features have become substantially filled with sand and organic material, are now fully vegetated with willows and other aquatic species, and are thus best characterized as linear emergent marshes and swamps.

6.0 Wetlands within the Pacific Shores Subdivision

The occurrences of wetlands within the PSS well illustrate the result of the interactions of many factors in the LETD region, including (in particular) hydrological processes in combination with the ecological tolerances or requirements of plant and wildlife species. Several threads of this story exist, though they have not been well integrated previously.

[3] The term "stressor" is widely used in regulatory contexts relating to aquatic resources. Many definitions exist; all have the same essential meaning as the following definition from the USEPA Ecological Risk Assessment Program (http://www.epa.gov/reg5sfun/ecology/index.html): "A stressor is any factor that may harm plants or animals; includes chemical (e.g. metals or organic compounds), physical (e.g. extreme temperatures, fire, storms, flooding, and construction/development) and biological (e.g. disease, parasites, depredation, and competition)." In this context the original construction of the PSS roads were a stressor that adversely affected wetlands, aquatic organisms, water quality, and other aquatic resources.

The California coast, including LETD region, was photographed by the Department of Boating and Waterways in 1972, the year that the Coastal Initiative was adopted by voters. The Boating and Waterways photos have been acquired by the California Coastal Records project and posted online, making the images of the PSS region available for public review. A 1972 photo[4] showing the landscape on the northern and southern sides of Kellogg Road (Plate 1) illustrates the contiguity of the hydrological environment in the larger LETD region. The abundance of aquatic features north of Kellogg Road is impressive, indicating a generally high groundwater surface elevation throughout the region. The high groundwater elevations continue to the south side of Kellogg, with abundant surface water features evident in the photo. The photo also shows one of the canals constructed as part of the PSS project in an unsuccessful attempt to lower the groundwater surface within the subdivision.

The elevated groundwater surface shown in the 1972 photos in turn supported the development of abundant wetlands within the PSS and elsewhere in the region. The record of occurrence of wetlands is largely anecdotal prior to the last third of the 20th Century, but the passage of the Federal Water Pollution Control Act Amendments of 1972 (better known as the Clean Water Act) accelerated development of federal wetland mapping programs for sites that included the Del Norte coastal plain. The National Wetland Inventory (NWI) is a formal wetland mapping program of the US Fish and Wildlife Service (http://www.fws.gov/Wetlands/NWI/index.html) that has mapped many wetland areas in North America. Mapping typically has been conducted by USFWS contractors as funding has been available. The NWI mapping for the Del Norte County coastal region was prepared in the 1980s (USFWS 1983; this document is attached as Appendix I).[5]

I recall this mapping project, and I discussed the mapping conventions with the FWS contractor (Andrea Pickart, now a senior FWS staff member at the Humboldt Bay NWR). The mapping process was an exercise in aerial photo interpretation, with some work on the ground to assure that the mapper was interpreting the aerial imagery appropriately. That is, the NWI maps are NOT a result of extensive on-the-ground delineations of wetlands using the federal definition, the Coastal Commission's approach, or another formally adopted delineation protocol. Ms. Pickart stated at the time (as the document in Appendix I repeats), and has re-stated since (pers. comm.), that there were abundant wetlands in the LETD region, including the PSS, but that the maps did/do not fully represent their extent.

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[4] http://www.californiacoastline.org/cgi-bin/image.cgi?image=7201057&mode=sequential&flags=0&year=1972. Other photos in the series illustrate adjacent areas in the LETD region in 1972.

[5] As described in Appendix I, the NWI maps were prepared from 1983 color aerial photos by photointerpretation, and the conditions included in the NWI maps are those in the 1983 imagery. The actual map preparation work occurred within the following two years, but the completion of the mapping should not be confused with the date of the imagery and the resulting mapped wetland information. The document in Appendix I is also publically posted within the "Wetland Mapper" on the NWI website, accessible through a dropdown menu from any polygon in the GIS database for the Del Norte coastal NWI map.

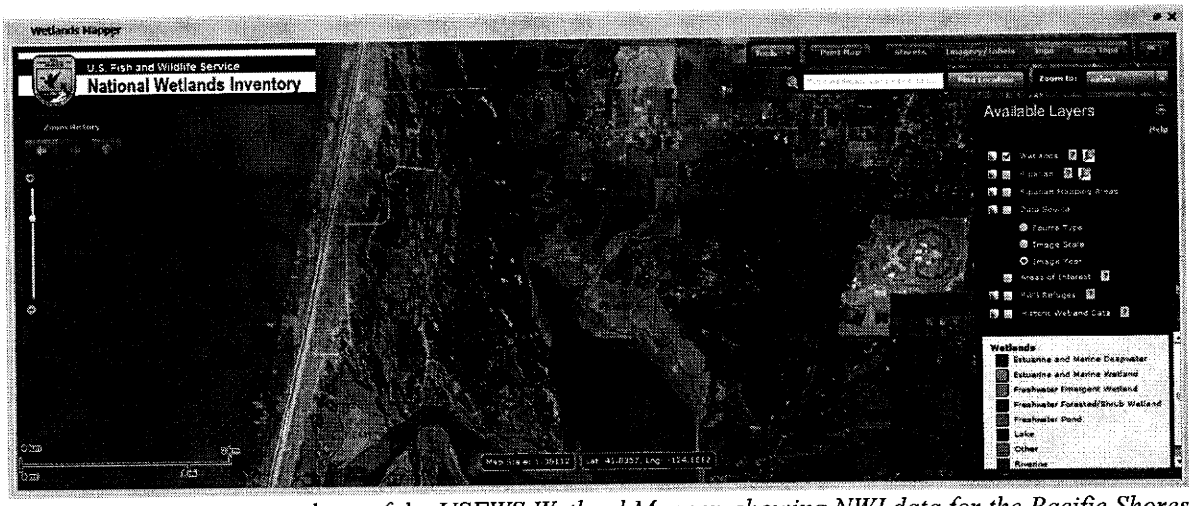

Figure 4. Screen-capture photo of the USFWS Wetland Mapper, showing NWI data for the Pacific Shores Subdivision region. These wetland polygons are a georeferenced digital rendition of the polygons mapped in the 1980s. See http://www.fws.gov/Wetlands/Data/Mapper.html.

The resulting 1983 map remains the current NWI mapping for the Del Norte coastal region; an excerpt showing the PSS region is included in Figure 4. The NWI maps were subjected to field-testing in the late 1980s by personnel from the Eureka consulting firm Winzler & Kelly (W&K, the predecessor of the firm GHD). The W&K work was conducted for the PSS Water District, and a specific task was an evaluation of the validity (or "reasonableness") of the NWI mapping. The W&K study also used aerial photo interpretation, although 11 transects were set up by W&K staff in which plant species affinity for wetlands was used to establish "prevalence indices" that relate to wetland character. A copy of the W&K rendition of the NWI map is included here as Plate II. In the W&K report to their PSS clients (Winzler & Kelly 1989), the W&K staff reported:

> "Based on the Prevalence Index scores for 11 sample transects, we were able to establish correlations between the PIs and colors in our aerial photo. This allowed us to map tentative wetlands delineations (sic) for sample areas and compare them to published USFWS mapping. Although we could refine our map by further ground-truthing and by additional tests for hydric soils, we conclude from the work that we have done that the USFWS map cannot be contested as to total wetlands area based on the methodology used in this study." (Biological Resource Appendix, page 12)

The W&K results are a validation of the fundamental accuracy of the NWI mapping; that is, the NWI maps, when subjected to actual, though limited, on-the-ground challenge, were not found to be an over-representation of wetland area within the PSS.

Does the NWI mapping indicate all the wetlands within the PSS? Aerial photo interpretation is notoriously inaccurate as a methodology for identifying wetland characteristics (e.g., actual plant species present or substrate color) and (especially) boundaries. Many NWI maps in variegated environments like that represented by the LETD region underestimate the extent of wetlands; it's well established among wetland practitioners that aerial images alone are insufficient for identifying all of the jurisdictional wetlands in most sites. I would interpret much of the historical aerial imagery of the PSS site (such as the photo in Plate I) as showing substantial substrate saturation beyond the NWI-mapped areas, and would identify more wetland areas on that basis.

Based on my personal experience on the PSS site in recent years, I'd certainly identify a greater percentage of the PSS as wetland than does the NWI map.

The specific criteria used for defining jurisdictional wetlands change through time, and since the 1980s the increased understanding of wetland hydrology, substrate characteristics, and vegetational relationships contributing to wetland identification/delineation has resulted in identifying greater wetland extents.[6] The extent of substrate inundation, the relative hydrophytic affiliations of dominant plant species, and (importantly for the sandy substrates in the LETD region) the understanding of causal relationships in saturated or inundated soils within the PSS all indicate from their current conditions that more of the PSS site is wetland than the NWI map shows.

When extensive wetland delineations were conducted in the PSS by GHD in support of the BCRAA application, many wetland areas were identified by their on-the-ground delineations beyond the boundaries of wetlands mapped in the NWI. For example, Figure 2-11 in the MMP (incorporated by reference here) shows actually delineated wetlands within the subject parcels, in combination with an over-plot of the existing USFWS NWI maps, documenting that there are wetlands within many of the PSS parcels that are not identified within the NWI mapping. GHD wrote: "Considerably more than half of Pacific Shores Subdivision consists of jurisdictional wetlands; on the 180 delineated parcels, 61% of the total area consisted of jurisdictional wetlands" (MMP, pp 11-12). Assuming that the same result applies to the remainder of the PSS, the actual extent of wetlands in the PSS exceeds the area mapped as wetlands by the NWI.

The 1972 aerial photos (as in the example in Plate I) show the conditions in the LETD region and the PSS at the time the Coastal Initiative was adopted. They demonstrate widespread high groundwater throughout the LETD region. The extent of near-surface groundwater demonstrated in Plate I is a significant indicator of wetland development throughout the photo, in places like the grassland/prairie in the central part of the photo, in dune swales and in the dune slack near the foredunes on both sides of Kellogg Road, and in essentially any area where the groundwater reaches within approximately 20 inches of the ground surface for more than approximately two weeks in the growing season (which is essentially all year at this location).[7] These wetlands are protected ESHAs under the Coastal Act.

The 1972 mapping is repeated in other imagery data sets from later years, such as those on the California Coastal Records Project website. The minimum area of these wetlands is reflected in the NWI maps; recent investigations indicate that even more of the site is wetland. In my opinion, based on the evidence available the high groundwater within the PSS has supported wetlands within the PSS site of at least the current extent since the original jurisdiction of the

[6] For example, the US Army Corps of Engineers has had regulatory authority over wetlands under the Clean Water Act since the 1970s, and various Corps District offices had internal methods used to identify jurisdictional wetlands, but the Corps did not have a uniform methodology for identifying and delineating wetlands until 1987. The Corps has subsequently developed regionalized guidance for wetland identification and delineation that is far more detailed than the 1987 methodology, and these updated guidance documents typically result in expanded boundaries of jurisdictional wetland areas. See USACE (2010) for the current regional guidance for the Del Norte County region.

[7] These are the currently adopted US Army Corps guidance standards.

Coastal Commission was established. In fact, the PSS site undoubtedly has supported wetlands to at least this extent since EuroAmericans first settled this region, and likely before that.

7.0 Summary

Well-established ecological evidence supports the identification of the dunelands in the Lake Earl/Tolowa Dunes region as an Environmentally Sensitive Area as defined by Coastal Act Section 30107.5. The Pacific Shores Subdivision site, which occurs within and is part of this area, incurred ecological stressors at the time the project was originally developed. Nonetheless, the development did not substantially alter the underlying hydrological and ecological factors that support important habitat values for a variety of sensitive species, for wetlands, and other sensitive coastal ecosystem elements, and substantial evidence exists that these have all remained largely intact within the PSS over the years.

Substantial evidence also exists that the duneland environment in the LETD region, including the PSS, has exhibited abundant groundwater for many decades, beginning prior to the establishment of the PSS, and that the development of the PSS project did not alter this condition. The abundant groundwater supported, and continues to support, the presence of abundant wetlands within the PSS. These wetlands have been mapped by the US Fish and Wildlife Service as part of the National Wetland Inventory, and subsequent testing has confirmed that the NWI maps accurately reflect the general occurrence of wetlands in the PSS. Nonetheless, additional mapping has indicated that more wetlands exist in the PSS than are portrayed in the NWI maps.

Current understanding of conservation ecology, when applied in the PSS region, indicates that a desirable long-term conservation approach for the LETD region and the PSS includes an emphasis on sustaining the regional ecosystem's functional capacity. This will be best achieved by sustaining and enhancing the ecological connectivity in the region, and conservation science indicates particularly that sustaining and enhancing the hydrological connectivity in these dunelands is likely to be the most effective approach to maintaining connectivity and reversing fragmentation in the region.

The proposed BCRAA mitigation project contributes to a functional restoration of hydrological dynamics for the PSS and for the LETD ESHA as a whole. The removal of impervious surfaces in the PSS, and their replacement by permeable surfaces that enhance infiltration of rainfall to the groundwater, represent an enhancement of the hydrological connectivity in the LETD region. This is an important finding for wetlands with respect to the requirements of Section 30233(a)(6) of the Coastal Act; regional hydrology is clearly a primary sustaining dynamic for wetlands in the regional ESHA and the proposed mitigation advances restoration and enhancement of their functional capacity. The same result is also an important finding regarding the requirements of Section 30240 of the Coastal Act, as regional hydrology constitutes the primary ecological factor sustaining the regional ESHA and the specific elements of this ESHA that occur within the PSS.

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PLATES

Plate I

Aerial Image from California Coastal Records Project showing Lake Earl Tolowa Dunes Region in Winter 1972

Plate II

Winzler & Kelly 1989 Reproduction of National Wetland Inventory Map for Pacific Shores Subdivision

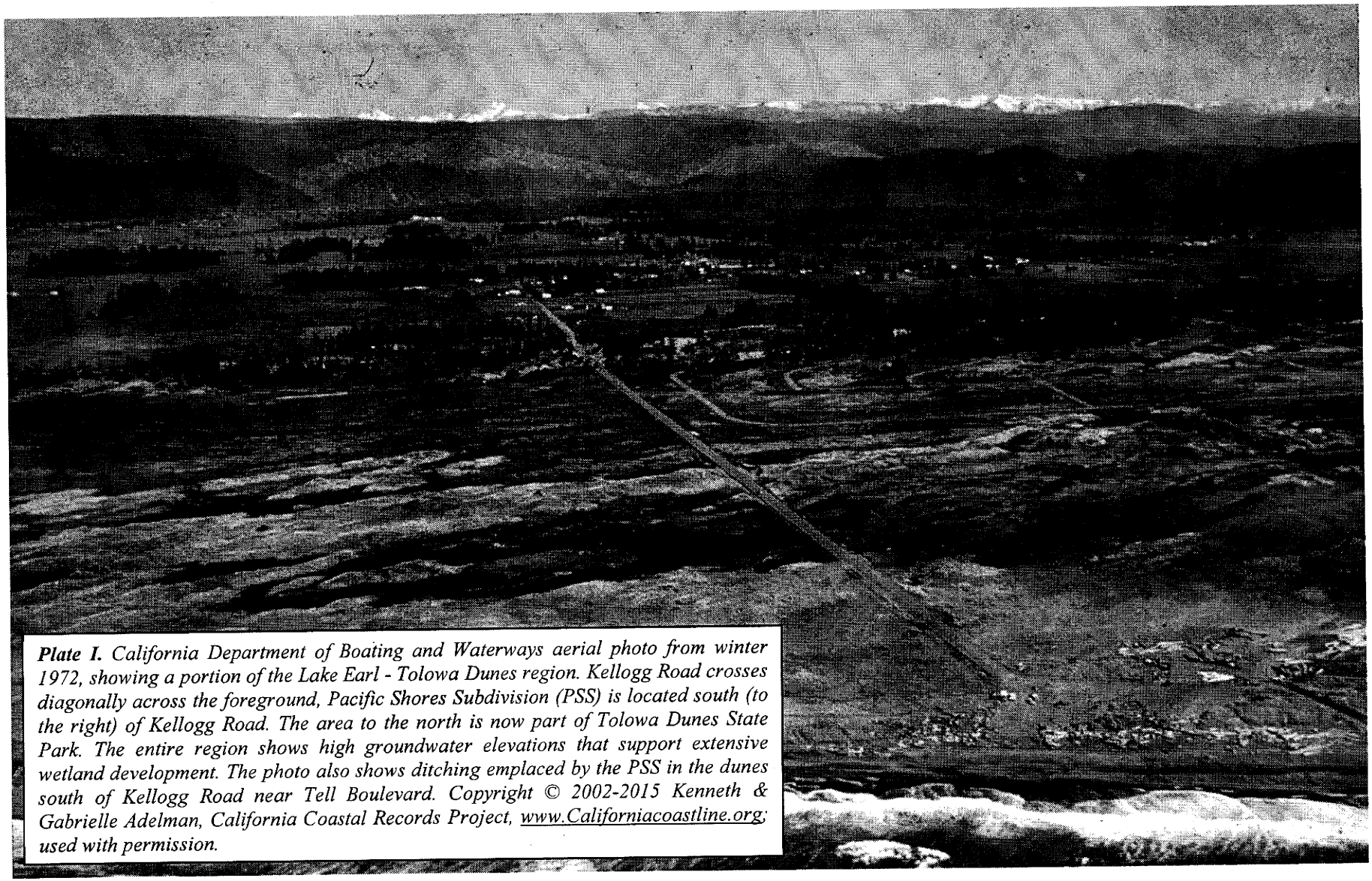

Plate I. *California Department of Boating and Waterways aerial photo from winter 1972, showing a portion of the Lake Earl - Tolowa Dunes region. Kellogg Road crosses diagonally across the foreground, Pacific Shores Subdivision (PSS) is located south (to the right) of Kellogg Road. The area to the north is now part of Tolowa Dunes State Park. The entire region shows high groundwater elevations that support extensive wetland development. The photo also shows ditching emplaced by the PSS in the dunes south of Kellogg Road near Tell Boulevard. Copyright © 2002-2015 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org; used with permission.*

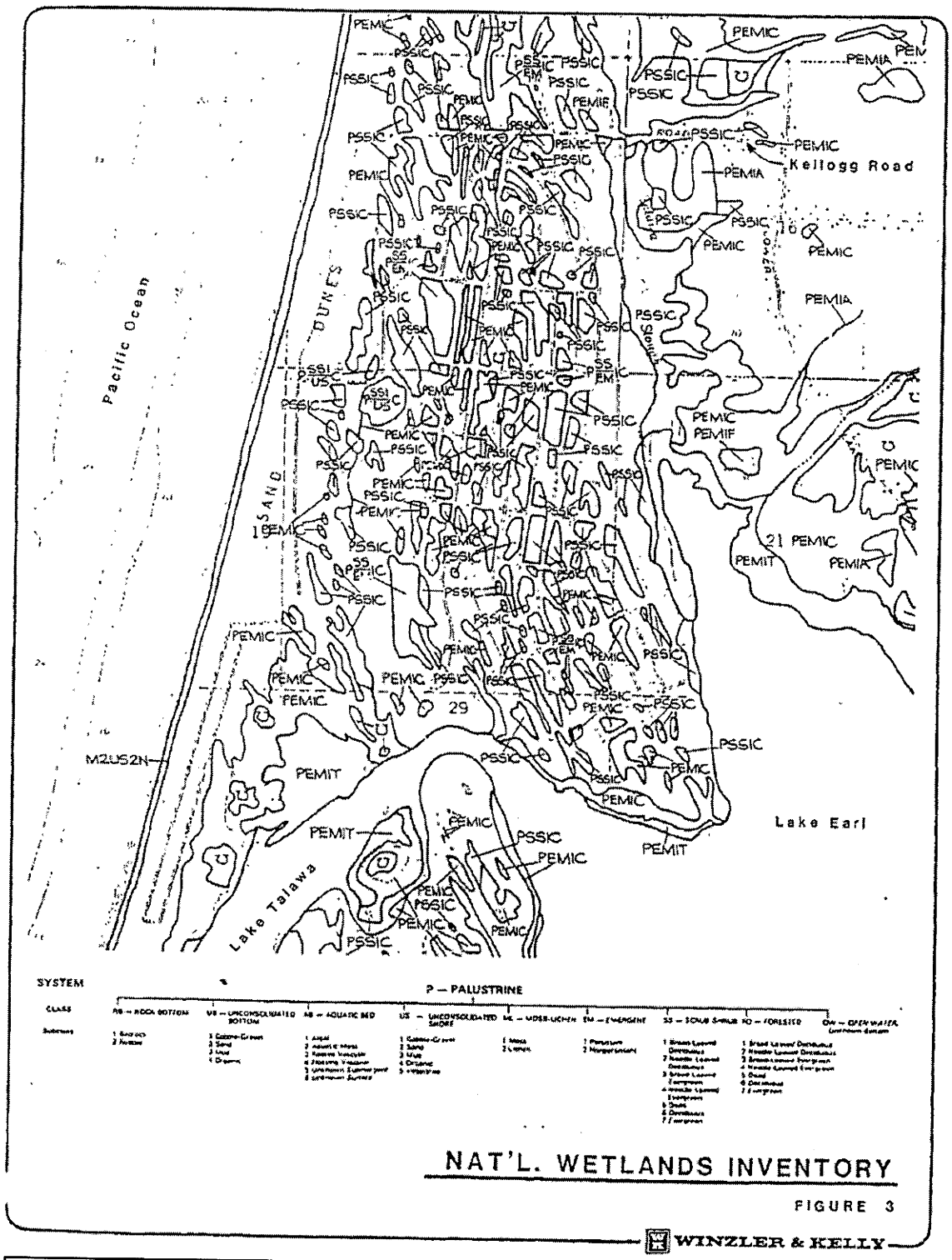

Plate II. *National Wetland Inventory map as reproduced in the 1989 W&K report to representatives of the Pacific Shores Subdivision project. Aerial photo interpretation and on-the-ground evaluations conducted as part of the W&K study resulted in a conclusion by the consultants that the map "could not be contested as to total wetland area" within the project.*

APPENDICES

I

NATIONAL WETLAND INVENTORY
NOTES TO USERS

Northern California Coast-Oil Creek to Oregon Border 1983 Update

II

ROBERTS RESUME
WETLANDS AND RIPARIAN AREAS

NATIONAL WETLAND INVENTORY

NOTES TO USERS

Northern California Coast-Oil Creek to Oregon Border
1983 Update

INTRODUCTION

The U.S. Fish and Wildlife Service, Office of Habitat Resources, is conducting an inventory of the wetlands of the United States. The National Wetlands Inventory (NWI) is establishing a wetland data base in both map and computer forms for the entire country. The NWI information will serve to identify the current status of U. S. wetlands and can be used as a reference point from which future changes in wetlands can be evaluated.

PURPOSE

The purpose of Notes to Users is to provide general information regarding the production of NWI maps and wetlands found within a relatively similar geographic area. Notes to Users are not intended to include complete description of all wetlands found in the area nor provide complete plant species information.

AREA COVERED

The area covered is defined by the Crescent City NE, SE, and Eureka NE intermediate-scale USGS maps (1:100,000). The area falls within the Humid Temperate Domain, Marine Division, Pacific Forest Province of Bailey's Ecoregions.

PHYSIOGRAPHY

The subject area falls within the Coast Range geomorphic province. The Coast Range consists of a narrow belt of mountains separating the Klamath Mountain province (to the east) from the coastal alluvial plain. Low lying alluvial valleys and tidal plains are at the mouths of principal streams which empty into the Pacific Ocean. Adjacent to the valleys along the coast are high terraces of limited extent. Coastal mountains are highly dissected by numerous streams and steep, narrow valleys.

CLIMATE

The climate is typified by mild, moist winters and cool, foggy summers. A narrow range of temperatures results from the

maritime influence. Temperatures along the coast vary only 10° from summer to winter, with a greater range exhibited inland where fog is less prominent. Rainfall is light to nonexistent in summer and heavy in winter. Average annual precipitation varies over the region from 30" to 40" in the Humboldt Bay area to 80" at Crescent City and East of Fort Dick. Snowfall is light and infrequent (with substantial snowfall occurring further inland). Freezing temperatures occur over most of the area every year. the first freeze in fall is usually during November along the coast, resulting in a frost-free growing season of approximately 250 days.

Wetlands in the area are largely associated with the major waterbodies including estuaries, lakes, and rivers. River mouth estuaries are similar in that tidal effect and saltwater influence are restricted to short stretches (a few miles or less). They are greatly affected by river flow and tidal stage such that during high flow and low tides the salt water wedge may be forced completely out of the estuary. Commonly the mouths of the estuaries close off completely during low flows.

Humboldt Bay, the dominant hydrologic feature of the area, is the fourth largest estuary in the Pacific Northwest and is characterized by a small freshwater input and a large volume of exchange with the ocean during each tidal cycle.

Big Lagoon and Stone Lagoon (located north of Patrick's Point) are considered estuaries because they are periodically open to tidal exchange. During most of the year saltwater exchange is restricted by the presence of barrier bars (except by seepage). In Big Lagoon, fall flows from Maple Creek raise the water level above that of the ocean and breaching occurs. The lagoon may remain open for days or weeks, and breaching may occur a number of times between December and April. During summer months the lagoon is highly stratified, but becomes partially mixed after breaching. Stone Lagoon has a similar seasonal pattern, although breaching is less frequent and less prolonged due to a lower freshwater input. Freshwater Lagoon, situated between Big and Stone Lagoons, is not subject to tidal exchange and is not considered an estuary.

Lake Earl, north of Crescent City, has the properties of an estuary in its western reaches although the main body of the Lake is freshwater.

HYDROLOGY

Due to the climatic characteristics of the areas, the majority of inland wetlands in the region occur as the result of seasonally high groundwater tables in low-lying areas, or seasonally high river flows. Because the rainy season normally persists through the month of April, the early portions of the growing season are characterized by heavy rainfall with accompanying high water tables. Surface and groundwater tables rapidly drop following

cessation of rains, although heavy snow cover in the mountains may prolong high flows in rivers. Major rivers in the region are characterized by widely disparate summer and winter flow.

Flooding frequently occurs along streamcourses throughout the area whenever severe rainstorms coincide with a period of snow-melt in the mountain regions. The December 1964 flood was considered the most severe in over 100 years and constituted a 1,000-year flood event. In 1955 a 100-year flood affected all the streamcourses in the region.

SOILS AND SURFACE DEPOSITS

Coastal terrace soils range from well drained to poorly drained alluvial soils formed from old marine terrace and coastal mountain parent material. Wet soils are associated with depressed poorly drained dissections of terraces, bottoms, river floodplains and reclaimed tidal marsh.

Surface deposits which are strongly associated with wetlands include dune sands, river deposits and mud bays. Wetlands are abundant in the low lying dune hollows north of Crescent City and adjacent to Humboldt Bay. River bars of sand and gravel are common along all major rivers in the area. Humboldt Bay and the Eel River delta contain large expanses of intertidal mudflats.

MAP PREPARATION

Wetland classification for the NWI maps is in accordance with "Classification of Wetlands and Deep-Water Habitats of the United States " Cowardin, et al, 1979, and mapping conventions developed for the purposes of the Inventory.

Wetland classification and delineations were produced by air photointerpretation of high level aerial photography. The aerial photography used was 1983 color infared at a scale of 1:58,000. The area covered encompassed three flightlines photographed during the months of July and August.

Photographs were stereoscopically viewed under magnification and wetland boundaries were delineated directly on overlays which were labelled according to the classification system. Delineations were enlarged to a scale of 1:24,000 using a zoom-transfer scope and fitted to USGS 7 1/2' topographic maps. Large scale (1:24,000) are available for the USGS 7 1/2' topographic sheets indicated on the attached index map.

The Project Officer for production of the wetland maps was Dennis Peters, Regional Wetlands Coordinator, U. S. Fish and Wildlife Service, Region 1, Lloyd 500 Building, 500 NE Multnomah Street, Portland, Oregon 97232, telephone (503) 231-6154. Aerial photo interpretation was completed by Andrea Pickart, U. S. Fish and Wildlife Service. Maps were prepared by Martel Laboratories, Inc., and the NWI National Team in St. Petersburg, Florida.

USER CAUTION

The map documents were prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography. The aerial photographs typically reflected conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of aerial photographs. Thus a detailed on-the-ground and historical analysis of a single site may result in revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included in the map document.

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define limits of proprietary jurisdiction of any federal, state, or local government or to establish the geographical scope of regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specific agency regulatory programs and proprietary jurisdictions that may affect such activities.

WETLAND COMMUNITIES AND DEEPWATER HABITATS

All five wetland systems; Marine, Estuarine, Riverine, Lacustrine, and Palustrine are represented in the subject area. In terms of total acreage, the majority of wetlands are located within the coastal alluvial plains and are associated with estuaries, lakes and rivers. Interior wetlands are mainly associated with stream corridors.

Deepwater habitats are areas that are permanently flooded at a depth of more than 2 m. (6.6 ft) in the Lacustrine and Riverine systems, or lie below Extreme Low Water in the Marine and Estuarine systems. Deepwater habitats appear as open water on the aerial photographs, however not all open water areas constitute deepwater habitat. These habitats are present within the Marine system as subtidal areas underlain by unknown bottom (M1OW) and in the Estuarine system as subtidal areas underlain by unknown bottom (E1OW), unconsolidated bottom of sand (E1UB2) or

mud (E1UB3), or vegetated with eelgrass (Zostera marina) (E1AB3). Bottom sediments of deepwater habitats for Humboldt Bay were classified with the aid of collatoral data. Oyster beds used for aquaculture were not classified due to inadequate data. Deepwater habitats of the subject area within the Lacustrine system are limited to open water underlain by unknown bottom (L1OW) and aquatic bed of rooted vascular plants (L1AB3). In the Riverine system deepwater habitats include unknown bottom and unconsolidated bottom of the tidal, lower perennial and upper perennial subsystems (R1OWV, R2OWH, R3OWH, R1UBV, R2UBH, R3UBH). Unconsolidated bottom was not classified to subclass in the Riverine system due to lack of collatoral data and the limitations of aerial photography.

Non-vegetated wetlands in the study area are confined to the Riverine, Marine, and Estuarine systems and consist of unconsolidated and rocky shore. In the intertidal Marine subsystem, unconsolidated shore wetland types fall predominantly within the subclass sand (M2US2 subclasses). In the Estuarine intertidal both sand and mud are present (E2US2 and E2US3). Unconsolidated shore subclasses were delineated with the aid of collatoral data in Humboldt Bay. In the Riverine system seasonally flooded sand and gravel unconsolidated shores are common; however, due to the limitations of photography, these were not classified to subclass.

A second non-vegetated wetland type present in the Riverine system is the class streambed (SB), which occurs in association with intermittent streams (R4SBC). This wetland type was not classified to subclass due to limitations of photography.

Many stream banks are lined with persistent emergent or woody wetland vegetation. In cases where Palustrine wetland vegetation cannot be separately delineated from the Riverine system, then the area is mapped as a linear Palustrine wetland feature.

The aquatic bed (AB) class is represented in the Estuarine and Palustine systems of the area. The majority of Estuarine aquatic beds consist of algae (E2AB1) and eelgrass (Zostera spp.) (E1AB3, E2AB3). In the Palustrine system, aquatic bed consists of floating vascular plants, principally yellow pond lily (Nuphar polysepalum). A single occurrence of a moss/lichen (PML1) wetland (Sphagnum spp.) was mapped in the southwest corner of Big Lagoon.

Emergent wetlands (EM) are common within the Estuarine and Pe2alustrine systems throughout the area. Within the Estuarine system (E2EM) they occur most commonly as salt marsh dominated by cordgrass (Spartina spp) and pickleweed (Salicornia virginica). Pickleweed dominates at lower elevations, often in association with saltgrass (Distichlis spicata). Diversity increases with elevation, and species such as arrowgrass (Triglochin maritimum),

Jaumea (Jaumea carnosa), sea lavendar (Limonium californicum) and orache (Atriplex patula) become increasingly common. Cordgrass occurs in middle and high elevation marshes and may comprise 75% or more of the cover. Cordgrass-dominated salt marshes within the subject area are restricted to the Humboldt Bay region.

Brackish marshes within the Estuarine system (E2EM1P) occur at the upper fringes of salt marshes or in former salt marsh in which tidal exchange is inhibited but not entirely prevented by poorly functioning tide gates. These marshes support brackish species [various fresh water and salt-tolerant hydrophytes] such as hairgrass (Deschampsia caespitosa), slough sedge (Carex obnupta), brass buttons (Cotula coronopifolia), and alkali grass (Puccinellia spp.).

Farmed wetland (Pf) comprises the largest emergent wetland type in the area, encompassing approximately 7500 acres in the Humboldt Bay region. Farmed wetland is primarily historic salt marsh that has been diked and converted to pasture. Seasonally high water tables cause these areas to function as seasonal wetlands, although grazing and other disturbances may preclude the establishment of hydrophytes. The farmed wetland boundary for the area was determined following analysis of historic maps, vegetation and soil surveys, and other date for indications of historic tideland boundaries. The resulting boundary closely coincides with the 5-foot contour, a tide-land boundary indicator used elsewhere in California (and arrived at independently).

Farmed wetlands often contain scattered or dense patches of soft rush (Juncus effusus) or other hydrophytes which are not palatable to grazing animals. Where these hydrophytes dominate, Palustrine emergent wetlands (PEM1C) were differentiated from farmed wetland in recognition of the fact that they also occur as a distinct wetland type above the 5-foot contour. In addition, relict sloughs within farmed wetlands were delineated as Palustrine emergent wetlands or open water areas (PEM1C, PEM1F, POWH). Larger sloughs which have been diked but retain their tidal nature fall within the Estuarine system.

In addition to seasonal Juncus-dominated wet pasture, there are abundant persistent emergent wetlands throughout the area which are seasonal, semipermanent, or permanent in nature. Semipermanent and permanent emergent wetlands are less common in the area due to seasonal fluctuations of groundwater. The great majority of emergent wetlands are seasonal in nature; ponding water into the first few months of the growing season. Seasonally flooded emergent wetlands commonly include such species as bulrush (Scirpus microcarpus), buttercup (Ranunculus repens), silverweed (Potentilla anserina) and water parsley (Oenanthe sarmentosa). More permanent marshes contain cattail (Typha latifolia), marsh pennywort (Hydrocotyle ranunculoides) Veronica (Veronica americana), mare's tail (Hippuris vulgaris), water parsley and a variety of other species.

Within the dune fields of Humboldt Bay and north of Crescent City a distinctive type of seasonal emergent wetland occurs. These wetlands develop in low-lying interdune swales which become inundated by high groundwater tables during winter and spring months and are dominated by hydrophytes such as Juncus leseureii, and spike rush (Eleocharis palustris).

The scrub/shrub class (SS) is less common in the subject area than emergent. Scrub/shrub wetlands are generally seasonally wet. Willows (Salix spp.) are the dominant constituent of scrub/shrub wetlands throughout the area. Other species include red alder (Alnus rubra), blackberry (Rubus spp), and California myrtle (Myrica californica).

Wetlands dominated by woody vegetation greater than 6m are classified as forested (FO). Forested wetlands in the subject area are typically temporarily or seasonally wet broad-leaved deciduous stands dominated by red alder, willows, and big leaf maple (Acer macrophyllum). Understories of these forested wetlands commonly consist of sedges (Carex spp.), buttercup (Ranunculus spp.), rushes (Juncus spp.), and skunk cabbage (Lysichiton americanum). These wetlands are concentrated in the Crescent City area and, to a lesser extent, the Humboldt Bay area.

A needle-leaved evergreen forested wetland (PFO4C) was mapped at only one location in the redwood forest east of Gold Bluffs Beach (Prairie Creek State Park). The wetland canopy consisted of redwood (Sequoia sempirvirens) with an understory of sedge (Carex sp.), and was associated with a stream course.

MODIFIERS

Hydrologic characteristics are an important aspect of wetlands. The water regime modifiers describe in general terms the duration and timing of surface inundation, as well as groundwater fluctuations. Mapping codes for these modifiers are indicated in parentheses in the discussion that follows. These modifiers are grouped under two major headings: Tidal and Nontidal.

Tidal

SUBTIDAL (L): The substrate is permanently flooded with tidal water.

IRREGULARLY EXPOSED (M): The land surface is exposed by tides less often than daily.

REGULARLY FLOODED (N): Tidal water alternately floods and exposes the land surface at least once daily.

IRREGULARLY FLOODED (P): Tidal water floods the land surface less often than daily.

In the Tidal Riverine, Lacustrine, and Palustrine areas, a nontidal modifier is used with a tidal suffix to describe a water regime more appropriately: Temporarily Flooded-Tidal (S), Seasonally Flooded-Tidal (R), Semi-Permanently Flooded-Tidal (T), or Permanently Flooded-Tidal (V). The exception is regularly flooded fresh tidal areas (flooded at least once daily) which retain the Regularly Flooded modifier (N).

Nontidal

TEMPORARY (A): Surface water present for brief periods during the growing season, but water table usually lies well below soil surface.

SATURATED (B): Surface water is seldom present, but substrate is saturated to the surface for extended periods during the growing season.

SEASONAL (C): Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years.

SEMIPERMANENT (F): Surface water persists throughout the growing season in most years.

PERMANENT (H): Water covers the land surface throughout the year in all years.

Special Modifiers

Special modifiers utilized in the subject area include:

f: farmed
h: diked/impounded
r: artificial
s: spoil
x: excavated

The farmed wetland modifier was used only in delineating diked former tidelands. The diked/impounded modifier was used primarily for log ponds and impoundments along streamcourses, though in many instances, log ponds are also excavated. The excavated modifier was assigned to non-diked artificially created wetlands including drainage channels. The "s" modifier was used to denote wetlands occurring on dredge spoil (the only mapped occurrence of this was in the Eureka area). Artificial (r) was assigned to jetties (classified as rocky shore) in Humboldt Bay and Crescent City harbors.

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SENIOR ECOLOGIST (ESA), PROFESSIONAL WETLAND SCIENTIST (SWS)

RIPARIAN AREA AND WETLAND SCIENCE

Dr. Roberts has had more than thirty years of professional engagement in developing and applying information relating to wetlands and riparian areas.

EDUCATION AND PROFESSIONAL CERTIFICATION

Bachelor of Arts (honors) in zoology; December 1969. Humboldt State College, Arcata, California.

Doctor of Philosophy in ecology; September 1976. University of California, Davis, California.

Senior Ecologist; Ecological Society of America Board of Professional Certification. Certified 1982; recertified 1987; recertified 1992; recertified 1997; recertified 2002; recertified 2007; recertified 2012.

Professional Wetland Scientist (No. 268); certified by the Society of Wetland Scientists Professional Certification Program 1995; recertified 2007; recertified 2012.

PROFESSIONAL EXPERIENCE

ORGANIZATIONAL ENGAGEMENT

Member, *Technical Analysis Team (TAT), State Water Board Wetland Policy Development.* Workgroup for developing scientific elements (technical memoranda) supporting the Water Board's Policy Development Team pursuant to Resolution 2008-0026 (wetland definition, identification, and delineation procedures; wetland classification; riparian definition; and other elements). November 2008 to present.

Member, *Technical Advisory Group for Aquatic Assessment (L2 Committee), California Wetland Monitoring Workgroup.* Scientific advisory team for the interagency workgroup, a committee of the SB 1070 Water Quality Monitoring Council. Workgroup purview includes wetland monitoring, assessment, classification and mapping, and data presentation at statewide, regional, and local scales. July 2008 to present.

Planner, *Humboldt Bay Harbor, Recreation and Conservation District.* The District Planner is an appointed officer of the District, responsible to the Board of Commissioners and the Executive Director for selected environmental and procedural elements of District business. September 2006 to June 2012.

President, Western Chapter, *Society of Wetland Scientists* (SWS); and *ex officio* voting member, SWS Board of Directors. January 2001 to June 2007.

Chair, California Steering Committee, *Pacific Coast Joint Venture*, North American Waterfowl Management Plan. May 1991 to July 1999.

Instructor, Resources Planning, *Humboldt State University*, Arcata, California. Instructed courses covered (a) the application of landscape and conservation ecology to resources planning and (b) environmental documentation practices. January 1997 to May 1998 (previously also September 1982 to June 1983).

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REPORTS, ENVIRONMENTAL DOCUMENTS, AND SERVICES

Training in the California Rapid Assessment Method. Provided training to agency staff and consultant personnel in the CRAM assessment methodology; tasks included preparatory fieldwork, revising or developing presentation materials, and classroom and field training. Example courses include:

- 5-day course emphasizing Riverine and Depressional modules (May 2013, Eureka, CA).
- 3-day specialized training in Riverine CRAM for LSA Associates (September 2012; Point Richmond and Santa Rosa, CA);
- 5-day course emphasizing Riverine and Depressional modules (June 2012, Santa Rosa, CA);

- 3-day course emphasizing Vernal Pool modules (April 2012, Sacramento, CA);
- 3-day course emphasizing Riverine module (May 2011, Sacramento, CA);
- 5-day course emphasizing Riverine and Wet Meadow modules (March 2011, Sacramento and Willits, CA);

CRAM Coordinator, Bakersfield-Fresno Section, California High Speed Train Project. Planned and executed wetland condition (CRAM) assessment for a segment of the planned HST Project alignment (field assessments conducted in September 2011 and March 2012); provided technical oversight for CRAM Report and Watershed Evaluation Report (completed in August 2012); trained project segment consultant personnel in CRAM methodology and applications. Services provided for *URS*, Oakland, CA, and for *California High Speed Rail Authority*. September 2011 to December 2012.

Field Evaluation of Depressional CRAM Module. Research project addressing the metric structure in the CRAM Depressional Module across California. Field sites were assessed in in 28 Northern and Central California counties, from the coast to the Great Basin. Services provided for *Aquatic Science Center*, Richmond, CA, on behalf of the L2 Committee of the California Wetland Monitoring Workgroup. April-May 2013; March-September 2012.

Expert Witness Services – Dwayne B. Smith et al v. California Department of Fish and Game et al. Services, provided for the *California Department of Justice* (representing multiple state defendants), included research, field studies, deposition, and trial testimony, related to a "takings" claim involving wetland management. August 2010 through January 2011.

Field Tests, USA-RAM *(a Rapid Assessment Method included in the 2011 National Wetland Condition Assessment).* Services provided for the *US Environmental Protection Agency*. Field tests of the evolving methodology were conducted at the following sites:

- Cosumnes River, Sacramento County (October 2009),
- Coyote Hills Slough (Alameda Creek), Alameda County (July 2010),
- Huichica Creek, Napa County (November 2010).

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Reconnaissance-level biological report – *Recycled-Water Seasonal Storage Project*. Preliminary biological screening studies for approximately 1200 acres in seven potential recycled-water reservoir locations and connecting pipeline routes, in a landscape region covering approximately 50 square miles in western El Dorado and eastern Sacramento counties. Sensitive environmental features addressed included oak woodlands, riparian areas, and vernal pools. Prepared for *El Dorado Irrigation District*. November 2004.

Environmental document – *Martin Slough Interceptor Project*. Project with approximately 16,000 feet of new collector line connecting 16 existing lift stations to a new 11,100-foot gravity interceptor, a new lift station, and approximately 10,000 feet of new force main. The majority of the new pipeline will be located in wetlands in the Martin Slough valley and near Humboldt Bay. Prepared for *City of Eureka* Community Development and Engineering Departments. May 2004.

Environmental document – *Lake Earl Management Plan*. Programmatic environmental document covering the Management Plan's implementation, which proposed formally adopting a "managed" elevation of eight feet (8') for the lagoon surface for the 5,600-acre Lake Earl Wildlife Area. Prepared for the *California Department of Fish & Game*. June 2003.

Wetland delineation and Section 404 ***nationwide permit preconstruction notification*** to the U.S. Army Corps of Engineers, *Elk Valley Road Reconstruction Project*, Crescent City. Prepared for the *County of Del Norte*. January 2003.

Environmental document – *Mad River Water Pipeline Rehabilitation Project.* Project with approximately seven miles of new pipeline in parallel with an existing pipeline in seasonal wetlands adjacent to Humboldt Bay, approximately three miles of new pipeline in uplands, and approximately two miles of pipeline lining in uplands. Services included USACE Section 404 application (May 2002) for approximately 26,000 linear feet of new pipeline in diked former tidelands east of Humboldt Bay. Prepared for *City of Eureka* Community Development and Engineering Departments. December 2001.

Biological report, *Sutter Ranch Subdivision project*, McKinleyville. Comprehensive evaluation of ***cumulative ecological and hydrological effects*** from major land development project in two coastal stream basins. Prepared for the *Humboldt County Planning Department*. October 1998.

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Report on hydrology and aquatic/floodplain ecology in the Mill Creek watershed, McKinleyville. Hydrological assessments for the basin, natural community descriptions, wetland identifications, and recommendations for maintaining these features. Prepared for the *California Department of Fish & Game*. March 1995.

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Environmental document – *Sonoma Vineyards Residential Subdivision Project*, Valley of the Moon, Sonoma County; included separate *Biological Resources Study*. Topics addressed included effects on remnant valley oak riparian forest and hydrological effects for Sonoma Creek and for Malone Creek, a smaller onsite stream. Prepared for the *Sonoma County Planning Department*. March 1988.

Habitat Suitability Index (HSI) models, wetland bird guilds: (i) wintering shorebird guild, (ii) breeding waterfowl guild, (iii) egret guild, (iv) rail guild, (v) riparian songbird guild, and (vi) marshland songbird guild. Prepared under contract to the *California State Coastal Conservancy* and the *Humboldt County Department of Public Works*. Accessible through the U.S. Fish & Wildlife Service, Sacramento, California. August 1986.

Humboldt Bay wetland mitigation bank design report and enhancement plan, 540-acre Ford Ranch site. Included recommended process for mitigation credit transactions. Prepared for the *Humboldt County Department of Public Works* and the *California State Coastal Conservancy*. December 1985.

Environmental Document – *Forks of Butte Hydroelectric Project,* Butte County. Included extensive coverage was included of riparian forest issues and public trust concerns. Prepared for the Division of Water Rights, *State Water Resources Control Board*. Also included expert witness services for a formal hearing (March 1986), Sacramento. October 1985.

Wildlife and Botanical Resources Reports – Field studies and report preparation for applications to the *Federal Energy Regulatory Commission* for License or Exemption from Licensing for 11 small hydroelectric projects located in forested mountain regions in northern California. September 1981 to May 1985

Friends of Del Norte

Committed to our environment since 1973

A nonprofit, membership based conservation group
advocating sound environmental policies for our region.
PO Box 229, Gasquet, CA 95543

Jan 2, 2015

ATT: California Coastal Commission, North Coast District Office, Bob Merrill, Bob.Merrill@coastal.ca.gov

Item NO. W12b, Permit 1-14-0820, Border Coast Regional Airport Authority, Runway Safety Area

Mitigation at Pacific Shores and Bay Meadows

We urge you to adopt the staff recommendation for mitigation in the Pacific Shores subdivision. Your staff has done an excellent job in analysis and presentation. With the Bay Meadows mitigation plans, which have been more recently developed, we must raise some substantive issues, as follow. We attach a Google earth aerial photo with our notations in color to illustrate the following points.

Bay Meadows

In general this mitigation is likely to be degraded by unrestricted public access and domestic animals, especially illegal Off-Highway Vehicles (OHVs) and free-roaming domestic and feral cats and dogs, all of which are very commonly encountered in Del Norte County. This is because the mitigation area is surrounded on two sides (south and north) by approved intense suburban development, which mostly hasn't yet been built, like the filling in a sandwich is embraced by two slices of bread. The development which will eventually embrace the mitigation area is approved to be nearly 100 single family houses. In future there may also be efforts to build multi-family housing. The mitigation area is also near other similar, already built out suburban development along both sides of Lake Earl Drive.

Findings suggest that free-ranging cats cause substantially greater wildlife mortality than previously thought and are likely the single greatest source of anthropogenic mortality for US birds and mammals.[1]

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[1] Scott R. Loss, Tom Will, Peter P. Marra, Smithsonian Conservation Biology Institute, Washington, D.C., February 2013, *The impact of free-ranging domestic cats on wildlife of the United States.*

The north east access

Provide formal fencing or closely spaced boulders along the proposed mitigation boundary (shown in red on Coastal Staff Report exhibit 4, figure 3-6) that separates the northeast corner subdivision and the mitigation area. It is our understanding that there is an arrangement between the subdivision property owner and the county for this entire northeast corner outside the mitigation boundary to be deeded back to the subdivision property owner for an expansion of the residential development. It is also our understanding that the property owner would not object to a barrier along the mitigation boundary.

The north east access, shown in orange, parallels the paved access road to the adjacent subdivision, with numerous gaps in vegetation and gentle terrain between the two accesses. OHVs could easily cut across from the paved subdivision road, accessing and damaging restored wetlands, as has happened throughout the Lake Earl Basin.[2] Please condition the project to prevent this from happening.

The Coastal Commission approved a large development on the south side of the mitigation area, the Harbor Center Tract, where Coastal set a precedent and required 5ft chain link fencing and 3ft "attractive rustic style" wooden fencing to prevent and discourage unwanted access. All the wetlands in the center of the Harbor Center Tract were to be surrounded by a barrier of low wooden fencing to discourage access. The lagoon arms or sloughs with surface drainage directly to Lake Earl were protected more definitively by chain link. (Harbor Center Tract decision 2009).

Also, the limited new subdivision at the northeast corner agreed to and constructed a 5ft chain link fencing protecting the log pond when granted a County permit for the north end subdivision where the two houses are now. This was agreed to because Coastal had already set the precedent, and the property owner wanted to avoid an appeal by the Friends.

These two instances provide ample precedent for protecting wetlands on the Bay Meadows macro-site, whether it be boulders or low fencing. Back in 2009 the Commission decision recognized that suburban development of the macro-site would have impacts on any wetlands unless directly prevented or discouraged by fencing.

Provide gating at the dedicated easement at the western end of the paved subdivision road, to prevent OHV access and damage to restored wetland areas. This should have a sturdy locked gate to prevent access to all of the remaining roadways and gentle undulating topography. Personnel needing access can be given an access code to the lock. Coded locks seem to work better as the code can occasionally be changed. In this county keys are readily copied and distributed. The roadways would still be open to pedestrians. *In spite of all the confusion, we have verified that there is no gate at this road juncture. There is only a gate at Lake Earl Drive across the road indicated in orange on the aerial photo.*

Road Removal

Criteria are needed for Road Removal that leaves a natural landscape. Strategy is needed to minimize the need for new roads.

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[2] Please note as evidence of ongoing extensive OHV damage throughout the basin, the *Tolowa Coast Beach Use Study 2009-2011* which is part of the record for this permit and listed in the Commission Staff Report, Appendix A, Substantive File Documents.

To what degree will roads be removed? Will the compaction of soils be remedied as well as revegetated? Many new temporary roads will be located within wetlands or adjacent to wetlands. Del Norte LCP requires 100 foot buffers to wetlands to exclude development. Therefore, the quality of road removal is important. And reducing the need for roads is also important.

An accurate baseline map of existing unimproved roadways is absent. Such a roadmap would be useful to allow for strategizing access to avoid creating redundant access and minimize the need for road creation.

Delete the new road shown in pink squiggles, the Northwest branch of Y intersection, and avoid disturbance of this area.

The north branching road at the Y intersection traverses along numerous wetland pockets and passes through mature vegetation including a redwood grove with some good sized second growth. Creating this very long path will have significant disturbance impacts to valuable uplands and pocket wetlands. The quantity of wetland gains in this western corner are small and could be accomplished with much less negative impacts by expanding the large southern wetland area.

Additional wetland enhancement opportunity exists on the agricultural parcel

There is an existing roadway that leads to the agricultural parcel, shown in yellow. The large wetland on the agricultural parcel is easily accessed from this existing road. This wetland could easily be expanded and enhanced, shown in blue, without creating significant access impacts. The vegetation of this wetland is currently degraded, with mowing suppressing the development of surrounding structure. By simply prohibiting mowing surrounding this wetland, a willow and riparian buffer will form.

Regarding habitat values, there is a variety of relationships between habitat structure and value to wildlife. These represent a subject area often covered in environmental documents, for which a standardized assessment technique has long existed called the Wildlife Habitat Relationships system (in California add the state name in front), or CWHR (see https://www.dfg.ca.gov/biogeodata/cwhr/).

Generally there are two sort of basic relationships. The first is a correlation between structure and the number of species that find habitat value in an area. More structurally complex habitats meet the needs of more species. A shrubby area, unless totally uniform with no understory, generally provides more habitat value than does a grassland. A forest, unless completely closed-canopied with no understory, generally provides habitat value for more species than will a grassland/prairie or shrub land.

One Parameter Wetlands with Hydrologic conditions should be investigated for accurate wetland credit

All maps indicate where 2 and 3 parameter wetlands are located, without evaluation of 1 parameter wetlands. It is our understanding that this has occurred because last winter there was almost no rain throughout a serious winter drought. Del Norte received only 3" in December 2013 and 3" in January 2014. The usual is more like 10 or 12 inches. The current year has been a normal wet year, and hydrologic information can and should be provided to check the true extent of wetlands. We should be certain not to give wetland credits for already existing wetlands.

Invasive plants should be removed from areas directly adjacent to wetlands within a standard buffer zone of 100 feet

The quality of upland habitats surrounding wetlands is very important to amphibious frog species, and enhancement of frog habitat is a goal of this mitigation project. Currently the Lake Earl Drive boundary of the mitigation area is heavily infested with exotic invasives Pampas grass and Cotoneaster which are spreading and will continue to spread into the mitigation. See attached photo.

Before deposition of soil, require the removal of scotch broom from the deposition areas.

In conversation with invasive species control and restoration personnel from the Smith River National Recreation Area, Melissa McDowell, scotch broom re-emerged with a vengeance after being deeply buried by sediments within a deposition area adjacent to a mitigation project on the SRNRA. Therefore, it is advisable to remove it from deposition areas.

Thank you,

Eileen Cooper

Eileen Cooper

Vice President, Friends of Del Norte

Attachment: Google earth photo with illustrative markings

Photo shows the existing northwest Bay Meadows Subdivision road and the mitigation area access road. The terrain is gentle, allowing for OHV intrusion from the paved road on the left.

Photo shows the agricultural parcel looking south. Willows can be seen at both ends of a wetland area where water flows between the two willow patches (at the blue water tub). For mitigation credit, allow riparian vegetation to reclaim the wetland buffers and provide structural value to the wetland area. Remove the tub!

Photo shows Lake Earl road frontage at the mitigation site. Invasive Pampas Grass is out of control and invading the mitigation area from this vector. Invasive vegetation is easily accessed here and should be removed.

Existing Road is easily accessed from adjacent subdivision. This mitigation boundary needs boulders or fencing.

X Do not create this long access, disturbing this remote sensitive habitat, consisting of pocket wetlands and mature vegetation.

Existing road should be used to easily access a degraded wetland area ( ) that can easily be expanded and/or enhanced.

the Northcoast Environmental Center

1385 8th Street, Suite 226
Arcata, CA 95521

P.O. Box 4259
Arcata, CA 95518
(707) 822-6918
nec@yournec.org
www.yournec.org

January 2, 2015

California Coastal Commission
Attn. Robert Merrill or Melissa Kraemer
1385 8th St #130
Arcata, CA 95521

Re: In Support of Staff Recommendation with regards to Mitigation in Pacific Shores Subdivision, Application No. 1-14-0820, Border Coast Regional Airport Authority

Dear Commissioners:

The Northcoast Environmental Center (Center) is a regional conservation organization based in Arcata, California, that works to sustain physically, economically and culturally healthy communities. The Center owns a lot within the Pacific Shores Subdivision (Subdivision) in Del Norte County and within the now dissolved Pacific Shores Subdivision California Water District (Water District). The Center has been paying county property taxes on this lot.

The Center supports this Coastal Development Permit with respect to the Pacific Shores Subdivision mitigation. In federal court last year the Center and other lot owners successfully defended the Del Norte County Regional Airport's runway safety project and proposed mitigation against a lawsuit by the Pacific Shores Property Owners Association (Association). The Center (along with other current and former lot owners) also filed an Amicus brief in the Sacramento Appeals court last year, which I attach for the record. I couldn't possibly depict the sad story of this 50-year-old "swampland scam" paper Subdivision any better than we did in the brief.

The Center is convinced that the Subdivision has been undevelopable for decades and is to this day undevelopable. The proposed mitigation will not change that status. It will make absolutely no difference, except perhaps to improve existing drainage and create a more orderly, less-trashed, park-like setting. Why do we say this?

The history of the Subdivision and why it is virtually impossible to develop are contained in our attached brief. I will touch on some of these points here:

1. There is no water or sewer. The Regional Water Quality Control Board will not allow septic systems because typically the groundwater table is within 1-3 feet of the surface. Nor will they allow sewage holding tanks. The Subdivision Water District struggled for many years to produce environmental studies and provide water and sewer services but came up with *nothing*, and was dissolved in 2008.
2. The Subdivision is virtually *all* Environmentally Sensitive Habitat Area (ESHA) under the Coastal Act, either wetlands, or sand dunes, or Coastal Pine/Sitka Spruce Series forest.

3. Moreover it has been recognized for decades that the Subdivision is virtually all ESHA. Engineers and scientists warned the Association and Water District about these obstacles to development more than 25 years ago. [1]
4. As we can see from reviewing the documents submitted to support this permit application, the Airport's GHD consultants have more recently defined more closely a few of these obstacles. For example GHD notes "Considerably more than half of the Pacific Shores Subdivision consists of jurisdictional wetlands; on the 180 delineated parcels, 61 percent of the total area consisted of jurisdictional wetlands."[2] Further "Much of the remaining upland area would qualify as ESHA," according to GHD.[3] Again this is not surprising, as in 1989 their own consultants warned the Association and Water District about the occurrence of protected special status species, and that Del Norte County's Local Coastal Plan defines "Coastal Sand Dunes" as a "Sensitive Habitat Type" and designates *all* of the Subdivision as such "Sand Dunes." [4]
5. Special status species have existed throughout the Subdivision for decades. They are not new, and this mitigation will not introduce them or spread them. For example, it is well documented that a federally listed endangered butterfly was discovered in the Subdivision more than 20 years ago,[5] and prior to that scientists had already identified extensive populations of the Sand Dune or Silvery Phacelia plant (Phacelia argentea) in large areas of the Subdivision.[6] Recently environmental groups have petitioned the federal government to list the Silvery Phacelia as threatened or endangered. [7]

Arguments Made by Pacific Shores Property Owners Association

Frankly we are perplexed by the arguments of the Association regarding this mitigation.

Mitigation will not introduce new special status species or sensitive environmental conditions to the Subdivision because these have existed throughout the Subdivision for many decades, and most likely since "time immemorial" as the Tolowa people say. Nor will it spread such conditions to remaining private lots. For example frogs and butterflies do, or may, inhabit any lot in the Subdivision if the conditions are right, which absent a specific survey of each lot, we can only speculate that conditions are in fact very good on most of the lots, public or private. Figure 2-4 in the MMP illustrates that diverse attractive habitats for sensitive plants and wildlife are currently widespread, as all parts of the Subdivision that were surveyed are shown as sensitive habitats.[8] Although GHD was not able to survey for wildlife and conducted only very limited surveys for protected plant species (only on easily accessible roadways), they still found a considerable density of these as shown in Figure 2-7.[9] One can

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[1] For example: Winzler & Kelly Engineers. July 1989. "Pacific Shores Subdivision Special Study" prepared for the PSS Water District. Excerpts.

[2] GHD. December 2014. Volume 2 MMP at Pacific Shores Subdivision for Del Norte Regional Airport, Jack McNamara Field (CEC) – Runway Safety Area (RSA) Improvement Project Crescent City, California, at pg. 11-12.

[3] Ken Mierzwa, personal communication, December 31, 2014.

[4] Winzler & Kelly Engineers. July 1989. "Pacific Shores Subdivision Special Study" prepared for the PSS Water District. Excerpts.

[5] Winzler & Kelly Engineers. Letters dated Dec. 15, 1992; March 24, 1993; April 16, 1993; May 11, 1993, to Pacific Shores Subdivision Water District and Pacific Shores Property Owners Association.

[6] Winzler & Kelly Engineers. July 1989. "Pacific Shores Subdivision Special Study" prepared for the PSS Water District. Excerpts.

[7] Center for Biological Diversity and others. PETITION TO LIST SILVERY PHACELIA (*PHACELIA ARGENTEA)* AS THREATENED OR ENDANGERED UNDER THE ENDANGERED SPECIES ACT, filed with Secretary of Interior, March 7, 2014.

[8] GHD. December 2014. Volume 2 MMP at Pacific Shores Subdivision for Del Norte Regional Airport, Jack McNamara Field (CEC) – Runway Safety Area (RSA) Improvement Project Crescent City, California, Figure 2-4 Existing Habitat.

[9] Ibid. Figure 2-7.

make an educated projection that such species are well distributed throughout the Subdivision lots, which GHD did not survey at all. Therefore the mitigation does not introduce new or greater obstacles to development because these have existed for decades, and have in fact been well documented and reported by many different scientists for at least 25 years now.

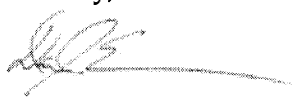
The bulk of Subdivision lots are in a state of disrepair, with degraded roads and persistent rainy season flooding due to the high groundwater table. The lots are prone to illegal trespass and encampment and dumping, which threaten human health and safety and harm the sensitive coastal environment. In addition, Center members feel unsafe visiting the Center's property given these conditions.

How the Northcoast Environmental Center became a Pacific Shores lot owner

The Center received its property within the Subdivision as a charitable donation from a family who had inherited the lot. The family's Aunt had originally purchased the lot in 1976. A member of the donor family actually visited the Subdivision and decided it was useful only for wildlife habitat. As it was apparent that there was no ability to develop the property as advertised, the family began protesting the continued collection of taxes by the Subdivision's Water District. Disappointed and frustrated by the Water District's continued demand for special taxes, as well as by the ongoing waste of these tax receipts on uncompleted studies and unauthorized legal services, the family eventually donated the property to the Center.

The Center has been advocating in the spirit of the donor family for many years. We know they too would want to support this permit.

Sincerely,



Dan Ehresman
Executive Director

ATTACHMENTS:

- **BRIEF OF *AMICI CURIAE* EARL MCGREW, MAXINE CURTIS, LYNDA SCHOONOVER, NICOLE SOLOVSKOY, and NORTHCOAST ENVIRONMENTAL CENTER IN SUPPORT OF APPELLANTS.** (Case No. C070201 IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA THIRD APPELLATE DISTRICT PACIFIC SHORES PROPERTY OWNERS ASSOCIATION, et al., Plaintiffs, Respondents, and Cross-Appellants, v. DEPARTMENT OF FISH AND GAME, et al., Defendants and Appellants. Appeal from a Judgment of Sacramento Superior Court Case No. 07AS01615)

- Winzler & Kelly Engineers. July 1989. *Pacific Shores Subdivision Special Study* prepared for the PSS Water District. Excerpts.

- Winzler & Kelly Engineers. Letters dated Dec. 15, 1992; March 24, 1993; April 16, 1993; May 11, 1993, to Pacific Shores Subdivision Water District and Pacific Shores Property Owners Association.

- Sherman L. Stacey. July 2, 1993. Letter to Thomas Resch, Pacific Shores Property Owners Association.

W12b
1-14-0820
Dolores Howard
Opposed

California Coastal Commission
North Coast District Office
1385 Eighth Street, Suite 130
Arcata, CA 95521

Commissioners:

My husband and I own several parcels in the Pacific Shores Subdivision as the Howard Family Trust. We are the Trustees.

We are opposed to further destruction of this subdivision as we have already experienced illegal flooding and over regulation. No mention was given in the staff report of the Court's decision that our properties were flooded by government agencies on purpose. This case has been appealed by the State of California but has not yet reached the courts.

No mention in the staff report was made of private property rights. No concern was written for the human beings that own the remaining Pacific Shores properties. Instead a rat, frog or butterfly earned respect and protection. In a Press-Telegram article on May 21, 1996, California Farm Bureau Federation President, Bob L. Vice, voiced a quote regarding the listing of the red-legged frog as threatened : "This listing is another nail in the coffin of California farmers' property rights and symptomatic of an act gone wrong." The Environmental Species Act has truly gone too far.

The staff report states that adjacent properties will not be impacted in any way. How can that be? We all have seen heavy equipment in action. There is no finesse involved. Area beauty will be impacted with the removal of trees that were not already killed by the flooding. When we look from our properties we will see piles of debris that will look like the aftermath of war minus fallen buildings. When we endeavor to travel from one parcel to another we will run into dead end after dead end because the interior roads have been removed. We will have to exit the subdivision and go from there if in fact we can access the other parcels at all. Dust during the dry season will be blowing everywhere. These ponds you propose to create by removing roads will create permanent breeding grounds for mosquitos—DISEASE CARRYING MOSQUITOS! There will be no fresh water intake or movement of water—only stagnant ponds that no doubt at certain times will stink.

Agricultural conversion issues are considered by your staff report but no consideration has been given to Pacific Shores property rights or restoring our properties to the 60's conditions when Lake Earl was maintained at the 4' level. Restoring roads and maintaining them would be an enhancement.

Interesting that the Commission approved a 94-lot residential subdivision (A-1-DNC-06-037) (approved 8-8-08) in the Bay Meadows Project LLC with a special condition that it allow for restricted open space of .2-acre of wetland restoration. You allow a developer permits that you have denied Pacific Shores since the 60's. Yes, infrastructure could be brought into Pacific Shores, though more complicated than that of

the Bay Meadows Project. Again, purposeful actions such as over-regulation and flooding have deteriorated our current position.

Questions remain unanswered:

Who is J.H.P., L.L.C.?

Will all the soil removed from Pacific Shores be piled around the "ponds" or will the soil be transported to Bay Meadows to enhance that project? Or both?

What is the relationship between the Airport Authority and the developer of the Bay Meadows Project? I understand that the Airport Authority owns the land, but is it in the business of developing residential property, too?

David Finigan's name keeps resurfacing. He is the Chairman of the Airport Authority Board, I believe owner of a real estate company in Crescent City, a supervisor, and was a member of the LAFCO Board and instrumental in dissolving our water district. Why is he connected so often to the destruction of the Pacific Shores subdivision?

Why isn't the cost of such an extensive project brought into the staff report? Yes, we know it is supported by grants, government (the peoples' money) and only "insiders" really know. We need to know. Are the Bay Meadows Project proceeds from selling new homes helping to pay for this project or are the Bay Meadows residential sales strictly for profit? Is the Airport Authority selling its interest to defray costs?

We have traveled the Coast. There are other properties for mitigation purposes. Leave Pacific Shores out of this bulldozer mess.

Sincerely,

Dolores Howard

Dolores Howard for the
Howard Family Trust

December 31, 2014

P.O. Box 20
Lewiston, CA 96052

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January 5, 2015

Chair and Commissioners
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

RE: Agenda item W12b, January 7 agenda, BCRAA permit

Dear Commissioners:

I write representing the Pacific Shores Property Owners Association (PSPOA), to oppose the approval of agenda item W12B, the permit application of the Border Coast Regional Airport Authority, on the Commission's January 7, 2015 agenda.

As it pertains to the Pacific Shores subdivision, the item is, at its essence, a project to tear up county roads and call them wetlands—a patently ludicrous notion, especially so in that its broader consequences and environmental impacts have not been given half a grain of thought. The project description and MMPs were not provided until 2014 and the 2011 environmental impact report for the project is being challenged by PSPOA in Del Norte Superior Court under the California Environmental Quality Act (CEQA) for its failure to describe and analyze the project and its impacts on Pacific Shores. As noted (page 24), a hydrological analysis wasn't even done until March, 2014.

"The purpose of the proposed project is to increase the wetland hydrology in these degraded wetlands and in surrounding degraded upland areas by lowering the ground surface to 'raise' the groundwater level." Staff report, page 26.

Seriously? The staff report provides no substantial evidence whatsoever that the project will "lead to a persistent, resilient system integrated within its landscape."

Nor does the staff report include any substantial evidence that the "several hundred" Oregon spotted butterfly will actually find habitat at Pacific Shores. The DFW has been trying unsuccessfully for years, with the Commission, to institute such habitat there. That information should be provided to the Commission. And any honest look at the other species "around" Pacific Shores mentioned as justifying the project reveals that they are either not that rare, or found at alternative sites around the project.

Indeed there are plenty of alternatives to the project. Clearly the alternative of restoration on land already owned by the state should be considered. Yet, the proposed project refuses to consider that alternative, without any finding of substantial evidence that it is infeasible. On the contrary, as noted in the report, the state DFW owns most of the land around Lake Earl, and it is patently just as suitable for restoration as private land. It should be described and analyzed. Other off-site alternatives were dismissed out of hand. (See the 2011EIR record for a list.)

The failure to do so unveils the real purpose of the project—a grab for private lands. The proposed "restorations" are in reality requisitions of private land into the domain of game wardens bent on excluding the public (see the barriers required around the sites). The project is nothing more than another state government shakedown of private ownership, like the recent Moonshine Fire extortion.

Moreover, rather than improve the environment, the proposed project will degrade it. Clearly landforms will be modified by the grading, ponding, tailings and brush pilings resulting from the project. Furthermore, according to County of Del Norte records, the roads to be torn up were sealed with an asbestos composite. That very significant threat to health and safety is not considered or analyzed.

In the end, the project serves only to mark another advance in the ambitions of DFW and the Commission to acquire all the lands around Lake Earl—an objective set in 1974, when Richard Nixon was still president, and pursued despite the marginal benefits that have entailed to the public or the environment.

Thank you for your attention to this matter.

Sincerely,

KELLY T. SMITH

cc: Client

Tolowa Dunes Stewards

Citizen volunteers who love and care for the public trust lands of the Lake Earl Wildlife Area and Tolowa Dunes State Park

P.O. Box 1148 Crescent City, California 95531

January 5, 2015

California Coastal Commission
Attn. Robert Merrill and Melissa Kraemer
North Coast District Office
1385 8th Street, Suite 130
Arcata, California 95521

Dear Commissioners:

Re: In Support of Staff Recommendation for Mitigation in Pacific Shores Subdivision, Application No. 1-14-0820, Border Coast Regional Airport Authority.

We are writing to support this Coastal Development Permit with respect to the Pacific Shores Subdivision mitigation. Tolowa Dunes Stewards (TDS) is an association committed to education, protection and restoration of the 11,000 acres of state public lands we call the Tolowa Coast, i.e. Lake Earl Wildlife Area and Tolowa Dunes State Park.

We all look forward to this limited mitigation work putting more eyes on the Subdivision and increasing its value by restoring its important natural environment, and perhaps improving its overall ambiance.

In 2013 the Pacific Shores Property Owners Association wrote a letter or two complaining that this proposed mitigation would somehow adversely affect the value of the Subdivision lots and specifically of their private properties. Yet the Subdivision

contains approximately 20 illegal and unpermitted encampments without sewer, water or any visible sanitation, and trash dumping and other unsavory activities are typical. We attach here photos showing what a few of the illegal encampments look like on the ground.

This trashed and lawless atmosphere can be frightening for lot owners or visitors driving the public county roads. The main streets in fact provide public access to a wonderful boat launch on Lake Earl and the mouth of the lagoon. After viewing these photos, I think you will agree that no mitigation project could possibly lower the property values any more than they have already been lowered by the trash dumping, illegal housing, and other conditions which the Property Owners Association is willing to ignore. Of course we do not believe that the mitigation will adversely affect the Subdivision in any way, and as stated we fully support these enhancements.

With respect to some unusual baseline conditions in the Pacific Shores Subdivision, here are a few photos which I believe you will find to be worth more than words.

Sincerely,

Sandra E. Jerabek

Sandra E. Jerabek
Program Director

On the LEFT:

Encampment on lots between Marish and Landis Streets in the Pacific Shores Subdivision.

On the LEFT:

Relatively new illegal dwelling on Prigmore Street in the Pacific Shores Subdivision.

On the LEFT:

More scenes from Prigmore Street in the Pacific Shores Subdivision.

On the LEFT:

An illegal resident has effectively closed off Nita Drive to the public, which is a county road in the Pacific Shores Subdivision. Nita Drive is actually a through road but who would go there?

On the LEFT:

South end of Landis Street in the Pacific Shores Subdivision.

On the LEFT:

These illegal squatters chose a lot on Placone Street in the Pacific Shores Subdivision.

CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
1385 8TH STREET • SUITE 130
ARCATA, CA 95521
VOICE (707) 826-8950
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W12b

Filed:	12/10/14
180th day:	6/8/15
Staff:	M. Kraemer-A
Staff Report:	12/19/14
Hearing Date:	1/7/15

STAFF REPORT: REGULAR CALENDAR

Application No.:	**1-14-0820**
Applicant:	**Border Coast Regional Airport Authority**
Agent:	GHD Inc.
Location:	At three locations in Del Norte County: (1) on existing paved roads owned by the Applicant within the Pacific Shores Subdivision at the north end of Lake Earl, (2) on the Applicant's approximately 80-acre property known as Bay Meadows located south of Lake Earl, and (3) on a portion of a property adjacent to Bay Meadows owned by Bay Meadows Project, LLC.
Project Description:	Restore and enhance approximately 26 acres of wetland, dune, and prairie habitats, including approximately 10.9 acres at Pacific Shores, 15.9 acres at Bay Meadows, and 0.2-acre on the Bay Meadows Project LLC property.
Staff Recommendation:	Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Commission staff recommends approval with special conditions of the proposed wetland, dune, and prairie habitat restoration project. The impetus for the proposed habitat restoration at Pacific Shores and the Bay Meadows sites is to satisfy, in part, the special condition requirements of the

CDP issued for the Del Norte County Regional Airport Runway Safety Area (RSA) Improvement Project in September of 2013 (CDP 1-13-009), which requires mitigation for impacts on wetlands and dune habitats. At the time the RSA permit was approved, the specific locations and plans for some of the proposed mitigation had not been determined yet, and thus one of the conditions of approval of the RSA permit required the applicant to obtain all necessary permits, including CDPs for proposed mitigation, once specific locations had been chosen and specific plans for the development of the mitigation sites had been prepared. The current application seeks authorization for the development of the proposed mitigation sites. While the Commission is reviewing the development of the proposed habitat restoration for consistency with the Coastal Act, Commission staff is separately reviewing it for compliance with the mitigation requirements of the RSA permit approval.

At Pacific Shores, approximately 10 acres of wetlands and 0.5-acre of dune habitats would be restored by removing existing 24-foot-wide paved road segments ranging in length from approximately 160 feet to 1,850 feet, and reestablishing wetland and dune habitats within former roadway areas adjacent to existing wetland and dune habitats. Road removal would occur entirely on land owned by the Applicant and only where adjacent parcels also are in the Applicant's ownership (having been recently acquired from willing sellers) or where adjacent areas already are owned by the State. Proposed road removal activities would not interfere with the ability of the surrounding private property owners to physically access their properties. In addition, the road removal associated with wetland restoration activities would not modify existing drainage channels along roadways. Staff believes that the proposed restoration activities at Pacific Shores, involving existing paved roadway segments and limited areas outside of wetlands and other ESHA on the Applicant's properties, will not increase flooding risks and will be sited and designed to prevent impacts to adjacent and nearby ESHA, including the habitat of the federally threatened Oregon silverspot butterfly.

At Bay Meadows, the Applicant would restore and enhance approximately 16 acres of wetland habitats primarily by excavating existing disturbed uplands and seasonal wetlands in areas where groundwater is seasonally relatively shallow, which would expand and establish wetlands in these areas. At the Bay Meadows Project LLC property adjacent to Bay Meadows, the Applicant would remove a portion of an unimproved access road crossing through a wetland and riparian corridor to restore about 0.2-acre of freshwater wetlands. Staff believes that the proposed restoration activities at Bay Meadows, which involve dredging in existing seasonal wetlands, are for an allowable use (restoration purposes), involve the least environmentally damaging feasible alternative, include feasible mitigation measures to minimize adverse environmental effects, and will maintain and enhance the biological productivity and functional capacity of the existing wetland habitat, consistent with Sections 30230, 30231, and 30233 of the Coastal Act.

The motion to adopt the staff recommendation of approval with special conditions is on page 4.

TABLE OF CONTENTS

APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve coastal development permit 1-14-0820 pursuant to the staff recommendation.

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

Resolution:

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

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**: The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**: If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable amount of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**: Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**: The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

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

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Construction Responsibilities & BMPs.** The Permittee shall adhere to various construction-related responsibilities and best management practices (BMPs) during proposed restoration activities at all project sites (Pacific Shores, Bay Meadows, and the Bay Meadows Project LLC property):

A. Pre-construction contractor training: PRIOR TO COMMENCEMENT OF ANY DEVELOPMENT AUTHORIZED BY THIS CDP, the Permittee shall ensure that all on-site workers and contractors understand and agree to observe the standards for work outlined in this permit and in the detailed project description included as part of the application submittal and as revised by these conditions. A biological monitor shall be present on all project sites during periods when work may occur adjacent to environmentally sensitive habitat areas.

B. Timing of work:

i. Earth-disturbing activities shall be limited to the latter part of the dry season, May 1 through October 31. The Executive Director may grant an extension of the work windows through November 30th for good cause upon written request, provided evidence is submitted that continued dry weather is forecast by the National Weather Service during the requested extension period.

ii. Woody vegetation removal activities shall avoid the bird nesting season: March 15 through August 15. Vegetation removal during the nesting season may only occur if (a) a qualified biologist has surveyed the area according to the approved Sensitive Bird Nesting Habitat Protection Plan required by **Special Condition 2** of this CDP, and (b) the survey results indicate that no sensitive bird nesting habitat is present in the area. Authorized vegetation removal may occur without these restrictions between August 15 and March 15.

C. Limits of disturbance: PRIOR TO COMMENCEMENT OF ANY DEVELOPMENT AUTHORIZED BY THIS CDP, the limits of disturbance areas shall be delineated with conspicuous flagging or fencing in cooperation with a qualified biologist, limiting the potential area affected by construction and ensuring that (i) all existing wetlands outside of the project footprint, (ii) habitat features such as trees and snags and other vegetation to be retained within or adjacent to work areas for wildlife habitat, and (iii) property boundaries with all adjoining privately owned lots at Pacific Shores shall be flagged and/or fenced for avoidance and protection. All construction vehicles and equipment shall be restricted to pre-established work areas and haul routes and to established or designated staging areas.

D. Protection of sensitive plants: PRIOR TO COMMENCEMENT OF DEVELOPMENT IN ANY GIVEN YEAR IN WHICH DEVELOPMENT IS AUTHORIZED, the Permittee shall complete updated pre-construction surveys for sensitive species of plants pursuant to

Special Condition 6 of this CDP. A qualified botanist shall flag and/or fence for avoidance and protection any environmentally sensitive plant habitat located adjacent to the project area.

E. Protection of sensitive amphibians and reptiles: NO MORE THAN ONE WEEK PRIOR TO COMMENCEMENT OF GROUND DISTURBANCE IN A PARTICULAR WORK AREA AT ALL RESTORATION SITES, a qualified biologist shall survey the ground-disturbance area for northern red-legged frogs and western pond turtles and shall coordinate with the California Department of Fish and Wildlife staff to relocate any animals that occur within the work impact zone to nearby suitable habitats.

F. Protection of archaeological resources: The authorized development shall protect archaeological resources consistent with **Special Condition 9** of this CDP.

G. Salvaging of plant material: At Bay Meadows, appropriate woody material suitable for reuse as habitat features in the restored habitats, such as root wads and large woody debris, shall be salvaged and stockpiled on site for relocation to restored habitat areas.

H. Water quality protection: (i) No construction materials, debris, or waste shall be placed or stored where it may be subject to entering coastal waters or wetlands; (ii) any and all debris resulting from construction activities shall be removed from the project site and disposed of properly; (iii) during the course of construction, all trash shall be properly contained, removed from the work site on a regular basis, and properly disposed of to avoid dispersal of litter and contamination of habitat; (iv) any on-site stockpiles of construction materials, debris, soil or other earthen materials shall be covered and contained whenever there is a potential for rainfall, to prevent polluted water runoff from the development site; (v) appropriate BMPs, as detailed in the proposed erosion, sediment, runoff, and pollution control plans and SWPPPs for each restoration site, shall be used to control runoff and to prevent the entry of polluted stormwater runoff into coastal waters and wetlands during construction and post-construction; (vi) heavy equipment maintenance and fueling shall not occur within 100 feet of coastal wetlands, waters, and drainages; and (vii) hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call, and any accidental spill shall be rapidly contained and cleaned up.

I. Dewatering: Excess ground water shall not be pumped or discharged into surrounding wetlands outside of the project area footprint to prevent sediment-laden water from entering coastal waters or wetlands.

J. Straw mulch: Only certified weed-free straw mulch shall be used for erosion, sediment, and runoff control purposes to avoid the inadvertent introduction of nonnative plant species to surrounding environmentally sensitive areas.

K. Plastic netting prohibition: To minimize wildlife entanglement and plastic debris pollution, the use of temporary rolled erosion and sediment control products with plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers used in fiber rolls, erosion control blankets, and mulch control netting) is prohibited. Any erosion-control associated netting shall be made of natural fibers and constructed in a loose-weave design with movable joints between the horizontal and vertical twines.

L. Debris, soil, and spoils disposal: All construction debris, including demolished road material, culverts, vegetative spoils, soil spoils not authorized to be deposited at the on-site

soil disposal areas at Bay Meadows, debris, waste, and other excess material generated by the proposed project, shall be removed from project sites and disposed of in an upland location outside of the coastal zone or at an approved disposal facility pursuant to the final debris disposal plans approved pursuant to **Special Condition 3** of this CDP.

2. Bird Nesting Habitat Protection Plan for Pacific Shores and Bay Meadows Properties.

A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-14-0820, the Permittee shall submit, for the review and approval of the Executive Director, a Sensitive Bird Nesting Habitat Protection Plan, prepared by a qualified biologist, for conducting seasonally appropriate pre-construction surveys for sensitive bird nesting habitat in the project area prior to commencement of construction in any given year in which construction activities are proposed, and for protecting such habitat from construction impacts. The plan shall include, at a minimum, the following:

i. Provisions for surveying project areas for the presence of active nesting habitat in any given year in which construction activities are proposed during the bird nesting season (March 15-August 15) by a qualified biologist according to current California Department of Fish and Wildlife protocols no more than one week prior to commencement of construction activities;

ii. Provisions for avoiding construction activities during the nesting season(s) within 300 feet of an occupied nest of any special-status bird species and within 500 feet of an occupied nest of any raptor species. No-disturbance buffers around active nests shall be maintained until completion of nesting; and

iii. Provisions for submittal of the surveys required above for the review and approval of the Executive Director prior to the commencement of authorized work during the bird nesting season that includes a map that locates any sensitive nesting habitat identified by the surveys and a narrative that describes proposed sensitive habitat avoidance measures.

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

3. Final Debris Disposal Plans.

A. PRIOR TO COMMENCEMENT OF DEVELOPMENT at Pacific Shores, Bay Meadows, and Bay Meadows Project LLC, the Permittee shall submit, for the review and approval of the Executive Director, final plans for the disposal of all construction debris, including demolished road material, culverts, vegetative spoils, soil spoils not authorized to be deposited at the on-site soil disposal areas at Bay Meadows, vegetative spoils, and any other debris, waste, and other excess material expected to be generated by the authorized work at each site.

i. The plans shall demonstrate that:

a. All temporary stockpiles created during construction of construction debris, excess soils beyond those proposed for reuse within the project footprint as shown on the final approved plans required by **Special Condition 4**, excess vegetative spoils, and any other debris, waste, and other excess material associated with the

authorized work shall be restricted to areas within the proposed project footprint as depicted on the final approved construction plans required by Special Condition 4 and where they can feasibly be contained with appropriate BMPs to prevent any discharge of contaminants to coastal waters and wetlands;

b. Upon completion of construction, all construction debris, excess soils beyond those proposed for reuse within the project footprint as shown on the final approved plans, excess vegetative spoils, and any other debris, waste, and other excess material generated by the authorized work shall be lawfully disposed of outside of the coastal zone at an authorized disposal site(s) capable of receiving such materials; and

c. Side casting or placing any construction debris, excess soils beyond those proposed for reuse within the project footprint as shown on the final approved plans, excess vegetative spoils, and any other debris, waste, and other excess material generated by the authorized work within any wetland or environmentally sensitive habitat area is prohibited.

ii. The plans shall include, at a minimum, the following:

a. A site plan showing all proposed locations for the temporary stockpiling of construction debris, excess sediments, vegetative spoils, and any other debris, waste, and other excess material associated with the authorized work during construction operations;

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

c. A schedule for the removal of all construction debris, excess sediments, vegetative spoils, and any other debris and waste associated with the authorized work.

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

4. Construction According to Approved Final Plans.

A. PRIOR TO COMMENCEMENT OF DEVELOPMENT AT BAY MEADOWS AND BAY MEADOWS PROJECT LLC, the Permittee shall submit, for the Executive Director's review and approval, final plans for contractor construction, which are consistent with all special conditions of CDP 1-14-0820, and which substantially conform with the plans by GHD dated November 2014, including (1) the Mitigation and Monitoring Plan Volume 3, and (2) the 90% plans and technical specifications for Bay Meadows, as revised by the supplemental project description materials submitted after that submittal date.

B. PRIOR TO COMMENCEMENT OF DEVELOPMENT AT PACIFIC SHORES, the Permittee shall submit, for the Executive Director's review and approval, final plans for contractor construction, which are consistent with all special conditions of CDP 1-14-0820, and which substantially conform with the plans by GHD dated November 2014, including (1) the Mitigation and Monitoring Plan Volume 2, and (2) the 100% plans and technical

specifications for Pacific Shores, as revised by the supplemental project description materials submitted after that submittal date.

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

5. Revegetation Requirements and Restrictions for Bay Meadows Properties.

A. Revegetation of restoration sites shall be implemented according to the approved final revegetation plans for each proposed restoration site. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

B. Only native plant species shall be planted in the proposed restoration areas. All proposed plantings shall be obtained from local genetic stocks within the North Coast region (Mendocino to southern Oregon coast, within approximately 30 miles of the coastline). If documentation is provided to the Executive Director that demonstrates that native vegetation from local genetic stock is not available, native vegetation obtained from genetic stock outside of the local area may be used. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as a "noxious weed" by the governments of the State of California or the United States shall be utilized within the project area.

C. All proposed planting shall be completed as soon as possible and by no later than the end of the first full optimal planting season that occurs after completion of grading;

D. The use of rodenticides containing any anticoagulant compounds including, but not limited to, Bromadiolone, Brodifacoum or Diphacinone is prohibited.

6. Measures to Protect Against Significant Disruption of ESHA Habitat Values and to Protect Adjacent ESHA at Pacific Shores.

A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-14-0820, the Permittee shall submit a plan for the review and approval of the Executive Director that (1) ensures that protective measures are undertaken during invasive species removal activities and enhancement planting activities at Pacific Shores to protect environmentally sensitive Oregon silverspot butterfly habitat, environmentally sensitive coastal dune habitat, and environmentally sensitive coastal prairie habitat from disruption of habitat values, and (2) protects sensitive plants, host plants for the Oregon silverspot butterfly larvae, and known butterfly nectar plants adjacent to paved roadways proposed for removal:

i. The plan shall demonstrate that:

a. Updated botanical surveys of the project area, adjacent road right-of-way areas, and all construction staging and stockpile areas shall be conducted by a qualified botanist prior to commencement of construction in any given year in which construction activities are proposed;

b. Any target plants, including sensitive plants and host plants for Oregon silverspot butterfly larvae, located outside of paved roadway areas proposed for restoration or located in the vicinity of proposed invasive species removal areas and habitat enhancement planting areas shall be flagged and/or fenced for avoidance and protection with temporary flagging/exclusion fencing prior to commencement of construction/development;

c. Invasive plant removal activities shall be restricted to hand removal methods only and shall minimize ground disturbance;

d. Vegetative spoils shall be disposed of consistent with the approved final debris disposal plan required by **Special Condition 3**;

e. Provisions are included for submittal of restoration updated final revegetation plans to the Executive Director for review and approval prior to commencement. The updated final revegetation plans shall depict where on the Applicant's property additional butterfly nectar resources are proposed to be planted; and

f. No plants shall be relocated onto or planted on private properties outside of the Applicant's ownership.

ii. The plan shall include at a minimum the following components:

a. Provisions for submittal of the botanical survey results and updated maps to the Executive Director for review prior to commencement of restoration construction;

b. Provisions for submittal of maps depicting the proposed salvaged nectar plant transplant locations to the Executive Director for review and approval prior to commencement of restoration construction, which shall demonstrate that no plants will be relocated to lands within Pacific Shores other than lands owned by the Applicant; and

c. A schedule for botanical surveys, plant salvaging, transplantation, and planting of nectar resource areas on the Applicant's property.

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.

7. Updated Final Revegetation Plans for Pacific Shores.

A. PRIOR TO COMMENCEMENT OF DEVELOPMENT AT PACIFIC SHORES, the Permittee shall submit, for the review and approval of the Executive Director, updated final revegetation plans for the proposed restoration sites and other proposed areas of planting or revegetation on the Applicant's property. The plans shall substantially conform to the plans prepared by GHD dated November 2014, except they shall (i) identify proposed nectar resource enhancement areas, (ii) include provisions for monitoring the invasive species removal areas for a minimum of 5 years to ensure the areas remain free of invasive plants during at least that time period, and (iii) be consistent with the additional revegetation restrictions and requirements of **Special Condition 5**.

B. The Permittee shall implement the project in accordance with the approved final plans. Any proposed changes from the approved monitoring program shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a

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

8. Soil Disposal Area Restoration Plans for Bay Meadows.

A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-14-0820, the Permittee shall submit for the review and approval of the Executive Director final plans for restoration and revegetation of the two authorized on-site soil disposal areas at Bay Meadows, including "Area A" within the agriculturally zoned portion of the Bay Meadows site and "Area B" within the portion of the Bay Meadows site zoned Planned Community.

i. The plans shall demonstrate that:

a. The soil disposal areas shall be revegetated as proposed with a diversity of regionally appropriate native species similar in coverage and density to the existing plant species diversity on the sites;

b. Final contouring of each spoils disposal area shall conform with the natural topography of the site and blend with the adjacent landscape to minimize landform alteration;

c. Existing top soils and native plants growing in the soil disposal areas shall be salvaged and replaced as the top layer/replanted in the restored soil disposal sites to the maximum extent feasible;

d. The final plan for soil disposal "Area B" shall include placement of scattered large woody debris in the area to maximize wildlife habitat value and, if needed, appropriate soil amendment/conditioning elements (e.g., mulch) to promote successful growth of vegetation on the subsoil spoils to be placed in the area;

e. Both soil disposal areas shall be managed for at least a 5-year period to ensure successful revegetation of the areas and to remove target invasive species on at least an annual basis. Target invasives shall include, at a minimum, English holly (*Ilex aquifolium*), cotoneaster (*Cotoneaster* spp.), thistle (*Cirsium* spp.), Portuguese heather (*Erica lusitanica*), and any species rated as "priority," "red alert," "high," or "watch list" by the California Invasive Plant Council (Cal-IPC) and/or by the Del Norte County Weed Management Area; and

f. The revegetation planting in the soil disposal areas shall be monitored for success for a minimum of 5 years.

ii. The plans shall include at a minimum the following components:

a. Revised final grading plans for soil disposal areas, including plans showing 1-foot contours, typical side-slopes (fill edges), and cross sections, which shall demonstrate that the areas will be contoured and gently sloped to blend with the adjacent landscape to minimize landform alteration;

b. A planting plan for each soil disposal area depicting the species and array of plants to be planted, with evidence demonstrating that the proposed planting plan will be similar to the existing plant species diversity on the sites;

c. A schedule for the construction, revegetation (initial planting and any necessary replacement planting), and maintenance of the soil disposal areas;

d. Provisions for replacing in kind for the duration of the 5-year monitoring period any plantings that die, appear rotten, decayed, or diseased, or are removed for any reason;

e. A plan for monitoring and maintenance of the soil disposal areas including (1) a schedule for monitoring, maintenance, weeding, and replacement planting; (2) interim performance standards; (3) a description of field activities, including weeding methods; (4) a minimum 5-year monitoring period after completion of initial planting; and (5) final success criteria for the areas for planting survival rate within each vegetation stratum (trees, shrubs, and herbaceous plants); minimum native plant cover in the area; and maximum cover of target invasive plant species, which shall be less than 5% by year 5; and

f. A reporting plan that includes provisions for submittal of (1) "as-built" plans for the soil disposal sites within 30 days of completion of planting of the areas; (2) submittal of annual reports of monitoring results to the Executive Director for the duration of the required monitoring period, beginning the first year after submittal of the "as-built" report; and submittal of a final monitoring report to the Executive Director at the end of the ten-year reporting period. The final report must be prepared in conjunction with a qualified botanist. The report must evaluate whether the revegetation site(s) conforms to the goals, objectives, and performance standards set forth in the approved final revegetation program. The report must address all of the monitoring data collected over the 5-year period.

B. If the final report indicates that the revegetation of the soil disposal areas has been unsuccessful, in part, or in whole, based on the approved performance standards, the permittee shall submit a revised or supplemental mitigation program to compensate for those portions of the original program which did not meet the approved performance standards. The revised revegetation program shall be processed as an amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

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

9. Protection of Archaeological Resources at Pacific Shores and Bay Meadows Properties.

A. AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF GROUND-DISTURBING ACTIVITIES AT BOTH BAY MEADOWS AND PACIFIC SHORES, the Permittee shall notify the Smith River Rancheria THPO and the Elk Valley Rancheria THPO of the construction schedule and arrange for tribal representative(s) to be present to observe ground-disturbing activities if deemed necessary by the THPO(s).

B. No ground-disturbing invasive plant removal or other ground-disturbing activities shall occur at Pacific Shores in the vicinity of the documented archaeological sites as recommended in the archaeological report prepared by Roscoe and Associates Cultural Resources Consultants dated March 2013.

C. If an area of historic or prehistoric cultural resources, such as chipped or ground stone, historic debris, building foundations, or bone, or human remains are discovered during the course of the project, all construction shall cease and shall not recommence except as provided in subsection (D) hereof, and a qualified cultural resource specialist shall analyze

the significance of the find. If human remains are discovered, the County Coroner must also be notified immediately.

D. A Permittee seeking to recommence construction following discovery of cultural deposits shall submit an archaeological plan for the review and approval of the Executive Director, prepared in consultation with the Smith River Rancheria and the Elk Valley Rancheria.

i. If the Executive Director approves the Archaeological Plan and determines that the Archaeological Plan's recommended changes to the proposed development or mitigation measures are *de minimis* in nature and scope, construction may recommence after this determination is made by the Executive Director.

ii. If the Executive Director approves the Archaeological 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.

10. Evidence of sufficient property interest. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-14-0820, the Permittee shall submit, for the review and approval of the Executive Director, all of the following:

i. A copy of an access agreement for project activities on the Bay Meadows Project LLC property that clearly demonstrates that the property owner grants permission to the BCRAA to undertake development on the property pursuant to CDP 1-14-0820 as conditioned by the Commission;

ii. For each road segment at Pacific Shores where restoration activities will occur, copies of the recorded Resolutions of Vacation and recorded deeds transferring ownership of the vacated street segments from the County of Del Norte to the BCRAA; and

iii. A copy of an access agreement for project activities on the California Department of Parks and Recreation property that clearly demonstrates that the property owner grants permission to the BCRAA to undertake development on the property pursuant to CDP 1-14-0820 as conditioned by the Commission.

11. Liability for Costs and Attorneys' Fees. By acceptance of this coastal development permit (CDP), the Permittee agrees to reimburse the California Coastal Commission ("Commission") in full for all Commission costs and attorneys' fees [including (1) those charged by the Office of the Attorney General, and (2) any court costs and attorneys' fees that the Commission may be required by a court to pay] that the Commission incurs in connection with the defense of any action brought by a party other than the Permittee against the Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this CDP. The Commission retains complete authority to conduct and direct the defense of any such action against the Commission.

12. Del Norte County Grading Permit. PRIOR TO COMMENCEMENT OF DEVELOPMENT AT BAY MEADOWS, the Permittee shall provide to the Executive Director a copy of a grading permit issued by Del Norte County or evidence that no grading permit or other County permission is required for the grading associated with any of the approved restoration activities or the disposal of soil on the Bay Meadows site. The permittee shall inform the Executive Director of any changes to the project required by the County. Such changes shall not be incorporated into the project until the Applicant obtains

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

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

A. PROPOSED PROJECT DESCRIPTION

The BCRAA ("Applicant") proposes to implement habitat restoration projects on property that it owns at two locations: (1) within the Pacific Shores Subdivision located at the north end of Lake Earl; and (2) an approximately 80-acre property referred to as Bay Meadows located south of Lake Earl. It also proposes to implement about 0.2-acre of wetland restoration on a portion of property immediately adjacent to Bay Meadows owned by Bay Meadows Project LLC. The impetus for the proposed habitat restoration projects is to satisfy in part special conditions of the coastal development permit (CDP) issued for the Del Norte County Regional Airport Runway Safety Area (RSA) Improvement Project in September of 2013 (CDP 1-13-009), which require mitigation for impacts of the RSA project on wetlands and dune habitat as explained in Finding IV-B below. Each proposed restoration project is discussed separately below.

(1) PROPOSED RESTORATION ACTIVITIES AT PACIFIC SHORES

The Applicant proposes to restore/reestablish approximately 10.5 acres of palustrine emergent wetlands and 0.5-acre of coastal dune habitats in a variety of locations throughout Pacific Shores (see Table 1 below and **Exhibit 3**). The Applicant also proposes to enhance and restore coastal prairie habitat through the removal of invasive species and planting of native dune and prairie species at a number of locations on the Applicant's property in the subdivision. In general, wetlands would be restored by removing a total of 44 discrete segments of existing 24-foot-wide paved road segments ranging in length from approximately 160 feet to 1,850 feet, and reestablishing wetland and dune habitats within these former roadway areas adjacent to existing wetland and dune habitats. Road removal would occur entirely on land owned by the Applicant[1] and only where adjacent parcels also are in the Applicant's ownership (having been recently acquired from willing sellers) or where adjacent areas already are owned by the State (Lake Earl Wildlife Area or Tolowa Dunes State Park). As stated in the adopted Environmental Impact Report (EIR) completed for the project,[2] the proposed restoration design is based on habitat surveys and hydrology studies[3] verifying that the proposed project would provide the best opportunities for re-establishment of wetlands as well as rehabilitation and preservation of existing wetlands and uplands. As further stated in the EIR, the proposed road removal segments meet one or more of the following criteria: (1) they are in close proximity to existing wetlands, (2) they create larger contiguous habitat blocks, (3) removal of the road segments would result in

[1] On December 9, 2014 the County of Del Norte approved resolutions authorizing the vacation of each road segment proposed to be removed and restored by the Applicant and agreeing to transfer the road segments to the Applicant.

[2] BCRAA and URS. February 2011 (Appendix I) and September 2011.

[3] For example, see GHD November 2014a, March 2014c, March 2014d, March 2014e, May 2013a, May 2013b, and April 19, 2013.

connectivity of existing preserved habitats, and (4) the road segment removal would re-establish/rehabilitate existing wetlands. Proposed road removal activities would not interfere with the ability of the surrounding private property owners to physically access their properties (see page 2 of **Exhibit 3**). One existing culvert would be removed as a part of the removal of one of the road segments near Lake Earl. With removal of the road and its conversion to wetland, the culvert is no longer needed to serve its intended purpose of preventing the ponding of water on the road segment (since the road segment will be removed and the area reverted to wetland habitat). In addition, road removal and wetland restoration activities would not modify existing drainage channels along roadways.[4]

Proposed restoration methods, as described in the proposed Mitigation and Monitoring Plan[5] and 100% construction plans and technical specifications,[6] would include (1) implementing traffic control to avoid conflicts between restoration activities and vehicular traffic on nearby public roads, (2) removing and disposing of existing dumped garbage and debris from designated areas associated with road removal segments, (3) salvaging target native plant species from proposed work areas for replanting in restored sites, (4) removing target invasive plants, such as Scotch broom and European beach grass, from acquired properties adjacent to proposed restoration sites (primarily from acquired road right-of-way areas), (5) clearing of trees, shrubs, and herbaceous vegetation and debris from the existing surfaces as part of the proposed road removal and from adjacent acquired areas, (6) removing asphalt and concrete road surface and base from proposed restoration segments, (7) grading to excavate roadbed rock, create frog ponds, re-connect dunes, and provide topographic variation in road removal areas, (8) scarifying soils beneath removed roads to a depth of at least 10 inches to loosen compacted material, (9) planting restored areas with a mix of regionally appropriate native species (including planting species used as nectar resources by the Oregon silverspot butterfly across areas of the Applicant's property), and (10) creating barriers, using pine saplings and willow branches stockpiled during clearing and grubbing, at end points of select restoration segments to deter access through restored sites by all-terrain vehicles. Trees proposed for removal are scattered along an approximately 17,000 lineal feet of proposed restoration segments 18, 20, 22-25, 27-34, 37, 42, and 44. The restoration activities proposed at each road segment are summarized in Table 1.

Table 1. Proposed restoration activities at Pacific Shores. Exhibit 3 includes maps of the overall proposed restoration area. All restoration site sizes are approximations.

Restoration Segment No.	Approx. Size (SF)	Proposed Habitat	Restoration Segment No.	Approx. Size (SF)	Proposed Habitat
1	2,614	Wetland[7]	25	9,583	Wetland
2	2,718	Wetland	26	9,583	Wetland
3	1,307	Dune[8]	27	3,049	Wetland

[4] GHD November 2014c and GHD March 2014d.

[5] GHD November 2014a.

[6] GHD November 2014c.

[7] All proposed wetlands are proposed to be restored palustrine emergent (freshwater) wetlands. Approximately 0.35-acre of the proposed wetland habitats are proposed to be designed as suitable breeding habitat for Northern red-legged frog (i.e., designed with the capacity to hold water (inundation) for at least 15 weeks, except during drought years).

[8] All proposed dunes are proposed to be restored dune mat habitat.

Restoration Segment No.	Approx. Size (SF)	Proposed Habitat	Restoration Segment No.	Approx. Size (SF)	Proposed Habitat
No segment 4			28	3,049	Wetland
5	3,049	Wetland	29	2,614	Dune
6	10,019	Wetland		39,204	Wetland
7	13,504	Wetland	*No segment 30*		
No segment 8			31	11,761	Wetland
9	47,045	Wetland	32	4,792	Dune
10	3,920	Wetland		31,363	Wetland
No segment 11			33	23,522	Wetland
12	3,485	Wetland	34	8,276	Wetland
13	3,049	Dune	35	19,166	Wetland
14	9,583	Wetland	36	3,485	Wetland
15	23,087	Wetland	37	1,742	Dune
16	16,553	Wetland		37,462	Wetland
17	9,148	Wetland	38	13,939	Wetland
18	7,841	Wetland	*No segment 39*		
19	4,356	Wetland	40	3,485	Wetland
20	1,742	Dune	41	6,534	Wetland
	5,663	Wetland	42	2,178	Dune
21	5,227	Wetland		9,148	Wetland
22	13,068	Wetland	43	2,178	Wetland
23	16,117	Wetland	44	8,276	Wetland
24	17,424	Wetland			
TOTAL PROPOSED RESTORATION ACREAGE (approx.): 10.90					
Total proposed restored palustrine emergent wetlands: approx. 10.50 acres					
Total proposed restored dune mat habitat: approx. 0.40 acres					

(2) PROPOSED RESTORATION ACTIVITIES ON BAY MEADOWS PROPERTIES

The Applicant proposes to restore/establish a total of 13.9 acres of palustrine emergent wetland habitats, including establishing 13.7 acres of new wetlands on its Bay Meadows property and restoring 0.2-acre of restored wetlands on the adjacent Bay Meadows Project LLC property (referred to as the Harbor Center Tract). The Applicant also proposes to enhance approximately 2 acres of existing seasonal wetland habitats at Bay Meadows as summarized in Table 2 below and conceptually depicted in **Exhibit 4**. The primary method proposed for wetland habitat creation and enhancement is excavation of existing disturbed (by past logging or grazing) uplands and seasonal wetlands in areas where groundwater is seasonally relatively shallow, which, based on groundwater data and hydrology modeling, will result in wetland establishment in these areas. At proposed restoration area G, located on the Bay Meadows Project LLC property, shown on **Exhibit 4**), the Applicant would remove four existing culverts and associated fill material that forms an approximately 300-foot-long segment of an unimproved access road crossing through a wetland and riparian corridor. Over 3 acres of the proposed restoration area at Bay Meadows would be designed to support breeding habitat for Northern red-legged frog (*Rana aurora*), a state-listed species of special concern.

Proposed wetland creation and enhancement methods, as described in the proposed Mitigation and Monitoring Plan[9] and 90% construction plans and technical specifications,[10] would include (1) collecting seed and salvaging target native plant species from proposed work areas for replanting in proposed wetland areas, (2) removing target invasive plants from areas adjacent to proposed wetland sites, (3) clearing of trees, shrubs, and herbaceous vegetation and debris from proposed wetland creation/enhancement sites, including over 100 saplings and young conifers, ranging in size from approximately an inch or less in diameter to 18-inches in diameter at breast height, (4) reusing some of the cleared woody material as habitat features in the proposed restored/enhanced habitat areas, (5) excavating the segment of existing gravel/cobble road fill (in proposed restoration segment G that crosses an existing stream and riparian corridor) and removing a total of four existing culverts associated with the existing unimproved property road to restore historic wetlands and remove barriers to stream flow, (6) ripping/scarifying soils after excavation to a depth of at least 10 inches to loosen compacted material (7) spreading excess soil spoils generated from the proposed habitat creation/enhancement work in two locations on existing disturbed upland habitats on the property and reseeding these areas with appropriate native species, (8) final grading of proposed habitat areas, and (9) planting restored/enhanced habitat areas with a mix of regionally appropriate native species. The Applicant proposes to add log/rock barriers at the two property access entry points to restrict vehicular access to the restored habitat areas following completion of construction.

Table 2. Proposed wetland creation and enhancement areas on Bay Meadows and JHP properties. Exhibit 4 includes maps of the overall project area. All acreages are approximate.

Proposed Habitat Area	Approx. Size (Acreage)	Proposed Habitat(s)
B	6.8	Palustrine emergent wetlands
	2.3	Northern red-legged frog breeding wetlands[11]
	1.6	Enhancement of existing seasonal wetlands
C	1.5	Palustrine emergent wetlands
	0.8	Northern red-legged frog breeding wetlands
	0.1	Enhancement of existing seasonal wetlands
D	0.8	Palustrine emergent wetlands
	0.2	Northern red-legged frog breeding wetlands
	0.02	Enhancement of existing seasonal wetlands
E	1.0	Palustrine emergent wetlands
	0.3	Enhancement of existing seasonal wetlands
F	0.3	Palustrine emergent wetlands
G[12]	0.2	Palustrine emergent wetlands

[9] GHD November 2014b.
[10] GHD November 2014d.
[11] Northern red-legged frog breeding wetlands are proposed to be palustrine emergent wetlands designed with the capacity to hold water (inundation) for at least 15 weeks (except during drought years).
[12] Proposed restoration area G is located on property owned by Bay Meadows Project LLC adjacent to Bay Meadows.

Proposed Habitat Area	Approx. Size (Acreage)	Proposed Habitat(s)
TOTAL PROPOSED PALUSTRINE EMERGENT WETLANDS (approx.): 13.9 (including 3.3 acres of Northern red-legged frog breeding wetlands)		
ADDITIONAL PROPOSED ENHANCEMENT ACREAGE (approx.): 2.0		

B. PROJECT BACKGROUND

The Runway Safety Area Improvement Project (CDP 1-13-009)

On September 12, 2013, the Coastal Commission approved coastal development permit (CDP) 1-13-009, which authorized the Border Coast Regional Airport Authority (Applicant) to maintain Jack McNamara Field (Del Norte County Regional Airport) in compliance with Federal Aviation Administration standards by constructing Runway Safety Areas (RSAs) and replacing non-compliant perimeter security fencing.[13] The CDP was issued on September 19, 2013, and Phase 1 construction involving preparing construction access roads, repainting runway markings, installing new lighting and signage, re-grading runway 35, relocating a wind cone, and constructing the electrical vault commenced in November of 2014. Phase 2 construction involving construction of RSAs, which will result in impacts to 16.9 acres of coastal wetlands and 4.5 acres of environmentally sensitive upland dune and prairie habitats has not yet commenced. The federally mandated deadline for construction of RSA improvements is December 31, 2015.

The airport is located approximately two miles northwest of Crescent City on a prominent headland landform known as Point Saint George, an uplifted marine terrace that protrudes into the Pacific Ocean southwest of the coastal water bodies known as Dead Lake, Lake Earl, and Lake Talawa. The existing airport facility contains forested, lacustrine, and emergent wetlands, riparian vegetation, and coastal dune and prairie habitats on the periphery of the actively used portions of the airfield. Phase 2 of the approved RSA improvement project will result in adverse impacts to 16.9 acres of coastal wetlands, 4.5 acres of non-wetland dune mat and coastal prairie habitats, and approximately 0.5-acre of rare plant habitat within the project footprint at the airfield. In its approval of CDP 1-13-009, the Commission found that as conditioned, it was feasible for the Applicant to provide sufficient mitigation to achieve the required performance standards as conditioned by the CDP, and the project as conditioned would minimize the adverse environmental effects of the extensive wetland and ESHA impacts associated with construction of the federally mandated airport repair and maintenance project.

The Commission granted its approval of CDP 1-13-009 subject to 15 special conditions. Special Conditions 3, 4, 5, 7, 8, 9, and 13 (among others) relate to mitigation requirements. At the time the RSA permit was approved, the specific locations and plans for some of the proposed mitigation had not been determined, and thus the conditions of approval of the RSA permit required the applicant to obtain all necessary permits, including coastal development permits for the proposed mitigation, once specific locations had been chosen and specific plans for the

[13] See http://documents.coastal.ca.gov/reports/2013/9/Th9b-9-2013.pdf for a copy of the approved staff recommendation of approval with special conditions.

development of the mitigation sites had been prepared, and prior to commencement of any of the authorized RSA improvements that would result in wetland or ESHA impacts (i.e., prior to Phase 2 development).

At the completion of the proposed five years of monitoring and upon determination of restoration success at the various proposed restoration sites, the Applicant proposes to convey all acquired parcels and restored habitat areas at Pacific Shores to the State of California (California Department of Fish and Wildlife). On December 11, 2013, the California Fish and Game Commission approved the CDFW's ultimate acquisition in fee title of the acquired properties and restoration areas to add to the Lake Earl Wildlife Area for long-term management and protection under Section 1525(b) of the Fish and Game Code. Prior to completion of restoration activities, the Applicant is planning on recording an "irrevocable offer to dedicate open space conservation easement and declaration of restrictions" against the newly acquired properties and proposed restoration areas at Pacific Shores, which would restrict future development of the easement areas to natural open space for habitat protection and resource conservation uses consistent with the CDP. The Applicant is planning on recording a similar "irrevocable offer to dedicate open space conservation easement and declaration of restrictions" against the acquired property and proposed restoration areas area at Bay Meadows. It is anticipated that the dedication of the land will be accepted by Del Norte County.

CDP A-1-DNC-06-037-A1

The Bay Meadows Project LLC property is the site of an approved, but not yet developed, 94-lot residential subdivision authorized by the Commission on appeal by CDP No. A-1-DNC-06-037 (approved 8-8-08). The approximately 0.2-acre of wetland restoration proposed on the site by the BCRAA would occur within an area required by the special conditions of CDP A-1-DNC-06-037 to be restricted and offered for dedication as open space. The prior-to-issuance conditions of CDP No. A-1-DNC-06-037 have not yet been satisfied, and the subdivision project has not yet moved forward. At the January 7, 2015 Commission meeting, the Commission will also be considering an immaterial amendment to the special conditions of CDP A-1-DNC-06-037 to allow wetland restoration of a 0.2-acre upland open space area within the approved residential subdivision project.

Scope of CDP 1-14-0820

CDP Application No. 1-14-0820 seeks approval for the development of wetland and dune restoration projects at Pacific Shores, Bay Meadows, and a small portion of the property owned by Bay Meadows Project LLC. As described in Finding IV-A above, the Commission is reviewing the development of the proposed habitat restoration for consistency with the Coastal Act. Commission staff is separately reviewing the proposed habitat restoration for compliance with the mitigation requirements of the RSA project.

C. ENVIRONMENTAL SETTING

(1) PACIFIC SHORES

The Pacific Shores Subdivision (PSS), located on the northern shores of Lakes Earl and Talawa, comprises a total of 1,524 roughly half-acre lots platted over a 1,486-acre area in the early 1960s.

Shortly after the subdivision was approved in 1963, approximately 27 lineal miles of roadway was offered for dedication and subsequently accepted by the County and constructed with paved, chip-sealed, and/or gravel surfaces. However, except for the road system, the subdivision remains essentially undeveloped (**Exhibit 5** shows oblique aerials of the subdivision from 1972 and 2013). Since 1963, infrastructure improvements within Pacific Shores have been minimal, consisting primarily of a system of roadways and an electrical power line corridor. Only the main north-to-south access road, Tell Boulevard, and several other cross streets has been maintained (i.e., vegetation clearing, minor drainage improvements). No water or sewage treatment systems exist. One permanent residence has been developed within the bounds of the subdivision. The residence was developed prior to the 1972 Coastal Initiative (Proposition 20) and therefore did not require a CDP. Most of the lots within the subdivision contain wetlands and/or other types of ESHA, such as wetland habitat, rare plant habitat, sensitive dune habitats, habitat for the federally threatened Oregon silverspot butterfly (*Speyeria zerene hippolyta*), and/or other types of ESHA. The subdivision is identified as an Area of Deferred Certification (ADC) in the County's LCP.

Both the PSS and the Del Norte County Regional Airport are located within a coastal dune/prairie/wetland complex that is part of an 11-mile-long ecoregion extending from the mouth of the Smith River to Point Saint George. In the midst of this stretch is the largest coastal lagoon complex on the Pacific coast south of Alaska – Lake Earl, a primarily freshwater lagoon, and its western, smaller, brackish lobe, Lake Talawa. The ~5,000-acre (60-mile perimeter) lagoon system with its associated freshwater and brackish aquatic habitat and marshlands and surrounding dune habitats support numerous rare, threatened, and endangered plant and animal species.[14,15] The region's vast expanses of wetland vegetation play a special role in the ecosystem in making this stretch of the Del Norte coastline a particularly important resting and wintering area of the Pacific Flyway. Visited by or home to over 300 species of birds, this region is considered a "globally important bird area" by the National Audubon Society,[16] hosting as many as 100,000 birds during seasonal migrations. Because of the extremely high fish and wildlife values of the lagoons and adjacent wetlands, the California Department of Fish and Wildlife (formerly Department of Fish and Game) included Lake Earl as one of the 19 coastal wetlands identified in the 1974 report entitled "Acquisition Priorities for Coastal Wetlands of California."

There are numerous rare, threatened, and endangered species on state and/or federal lists known to occur within the Pacific Shores Subdivision and on surrounding lands or waters immediately adjacent to the subdivision.[17] These include, but are not limited to, Oregon silverspot butterfly, Northern red-legged frog, western snowy plover (*Charadrius alexandrinus nivosus*), tidewater goby (*Eucyclogobius newberryi*), Coho salmon (*Oncorhynchus kisutch*), Yontocket satyr (*Coenonympha tullia yontockett*), Northern harrier (*Circus cyaneus*), Sharp-shinned hawk (*Accipiter striatus*), Coopers hawk (*Accipiter cooperii*), Bald eagle (*Haliaeetus leucocephalus*), Osprey (Pandion *haliaetus*), Merlin (*Falco columbarius*), Prairie falcon (*Falco mexicanus*), American peregrine falcon (*Falco peregrinus anatum*), White-tailed kite (*Elanus leucurus*),

[14] Bauer et al. 1974.

[15] http://www.smithriveralliance.org/watershedprotection/landacq/landacq_lakeearl.html

[16] See http://netapp.audubon.org/iba/site/42.

[17] See CNDDB 2014; CNPS 2014; GHD May 2013a; and Consortium of California Herbaria.

Short-eared owl (*Asio flammeus*), Burrowing owl (*Athene cunicularia*), Great egret (*Ardea alba*), Great blue heron (*Ardea herodias*), Snowy egret (*Egretta thula*), California brown pelican (*Pelecanus occidentalis californicus*), Black-crowned night heron (*Nycticorax nycticorax*), Black-capped chickadee (*Poecile atricapillus*), Bank swallow (*Riparia riparia*), Purple martin (*Progne subis*), Willow flycatcher (*Empidonax traillii*), Yellow Warbler (*Setophaga petechia*), Yellow-breasted chat (*Icteria virens*), Oregon vesper sparrow (*Pooecetes gramineus*), Vaux's swift (*Chaetura vauxi*), Rocky coast Pacific sideband snail (*Monaderia fidelis pronotis*), Seaside hoary elfin (*Incisalia polia maritima*), Coastal greenish blue (*Plebejus saepiolus littoralis*), Aleutian violet (*Viola langsdorffii*), Pink sand verbena (*Abronia umbellata* ssp. *brevifolia*), Marsh pea (*Lathyrus palustris*), Thurber's reedgrass (*Calamagrostis crassiglumis*), Western lily (*Lilium occidentale*), Wolf's evening primrose (*Oenothera wolfii*), Sand dune phacelia (*Phacelia argentea*), Great burnet (*Sanguisorba officinalis* ssp. *microcephala*), Pacific gilia (*Gilia capitata* ssp. *pacifica*), and Arctic starflower (*Trientalis arctica*).

The CDFW and the California Department of Parks and Recreation (CDPR) own and manage more than 5,000 acres of land within or adjacent to Lake Earl and Lake Talawa. An additional 2,600+ acres of land is leased from the State Lands Commission by the CDFW. Today, over 5,600 acres of land and water area under management by CDFW lies within the boundaries of the Lake Earl Wildlife Area (LEWA). To better manage the wildlife and fisheries resources in and around the lagoon, CDFW has for at least two decades purchased property within the PSS and elsewhere around Lake Earl from willing sellers who own land around the lagoon that is below 10 feet mean sea level (and therefore subject to periodic flood hazards). To date the CDFW's Wildlife Conservation Board (WCB), through the Smith River Alliance serving as its outreach intermediary, and in coordination with the Coastal Conservancy, has purchased 779 of the 1,524 half-acre lots within Pacific Shores. Less than 300 acres of land below the 10-foot contour remain in private hands, about a third of it within Pacific Shores.

(2) BAY MEADOWS AND BAY MEADOWS PROJECT LLC

Bay Meadows is an approximately 80-acre undeveloped property located off of Lake Earl Drive about two miles east of the Del Norte County Regional Airport in the southeastern corner of the Lake Earl basin, immediately adjacent to CDFW's LEWA. The site occupies an upland marine terrace between two water courses and is dissected by smaller drainages and has a lightly undulating topography with elevations ranging from about 20 to 45 feet. Most of the site historically was dominated by redwood and Sitka spruce forests before being logged and then used for grazing for some years. Redwood forest and Sitka spruce forest communities still occur on the northern, southern, and eastern peripheries and in isolated stands on the property. The western portion of the property consists mostly of Beach pine forest with deciduous and herbaceous inclusions.[18] Wooden communities include mostly even-aged stands of trees with localized areas of mature habitat structure including snags and large downed woody debris.

Like Pacific Shores, Bay Meadows (and the portion of Bay Meadows Project LLC where proposed work will occur) also is located within the coastal dune/prairie/wetland complex that is part of an 11-mile-long ecoregion extending from the mouth of the Smith River to Point Saint

[18] GHD August 13, 2014.

George. Bay Meadows, however, is part of a geologically older dune complex with more well-developed soils than the younger dune complex of the Pacific Shores area.[19] Based on wetland delineations prepared for the site, in addition to the forest habitats described above, there also are over 6.5 acres of delineated coastal wetlands scattered across the property, including palustrine emergent, palustrine forested broad-leaved deciduous, and palustrine forested needle-leaved evergreen wetlands; slough sedge wetlands; and riparian wetlands (dominated by Hooker willow and red alder).[20]

The majority of proposed development on the Applicant's property will occur within upland habitats described as "*Picea sitchensis* Forest Alliance with *Holcus lanatus-Anthoxanthum odoratum* semi-natural herbaceous stand inclusions" and "*Sequoia sempervirens* Forest Alliance.[21] These upland habitat types are essentially previously logged and managed land that is no longer closed-canopy forest but instead is characterized by a dominance of native and nonnative perennial and annual grasses and herbs, with some evident natural recruitment of woody species (young spruce and redwood trees). Some proposed activities will also occur within the understory of existing Sitka spruce and redwood forests, along the forest edges, including the removal of numerous (over 100) saplings and young conifers, ranging in size from approximately an inch or less in diameter to 18-inches in diameter at breast height. The project as proposed will avoid the removal of large, more mature trees and important wildlife habitat (e.g., snags).

The biological resources report completed for the project in March of 2014 notes that "In general, habitat is complex and diverse enough to support common and widespread wildlife species and a few more sensitive species; however the mature and complex habitat structure required by some locally rare or unusual species is either absent or not abundant…"[22] The biological survey located Northern red-legged frog in the western riparian area on the property as well as potential "occasional" habitat (i.e., during periods of sufficient flow/depth) for Coastal cutthroat trout (*Oncorhynchus clarki clarki*) and potentially other sensitive salmonids in the western drainage. It also noted the potential for several sensitive bird species to nest on the property, including Purple martin (*Progne subis*), Vaux's swift (*Chaetura vauxi*), and various species of raptors.[23]

D. STANDARD OF REVIEW

The project area includes sites within the retained CDP jurisdiction of the Commission and the CDP jurisdiction delegated to Del Norte County by the Commission through the County's LCP. The portions of the project area within the Commission's retained jurisdiction include the proposed restoration areas at Pacific Shores. The remainder of the project area, including the proposed work site on the Bay Meadows and JHP properties, is within the CDP jurisdiction of Del Norte County.

[19] Chad Roberts, PhD. September 6, 2013.
[20] GHD March 2014a.
[21] GHD August 13, 2014.
[22] GHD March 2014b.
[23] These species all are listed as rare in the CDFW's CNDDB.

Section 30601.3 of the Coastal Act authorizes the Commission to process a consolidated coastal development permit application when requested by the local government and the applicant and approved by the Executive Director for projects that would otherwise require coastal development permits from both the Commission and from a local government with a certified LCP. In this case, the Del Norte County Board of Supervisors adopted a resolution, and both the Applicants and the County submitted letters requesting consolidated processing of the CDP application by the Commission for the subject project, which was approved by the Executive Director.

The policies of Chapter 3 of the Coastal Act provide the legal standard of review for a consolidated coastal development permit application submitted pursuant to Section 30601.3. The local government's certified LCP may be used as guidance.

E. OTHER AGENCY APPROVALS

U.S. Army Corps of Engineers. The Corps issued a permit for the proposed project on September 17, 2014 (File No. 2006-301420). The Corps permit covered the proposed RSA improvements at the Del Norte County Regional Airport (which the Commission permitted in September of 2013 under CDP 1-13-009) as well as the activities proposed under this coastal development permit.

U.S. Fish and Wildlife Service (FWS). The FWS prepared a formal consultation for the proposed activities at Pacific Shores (dated June 5, 2013) due to their potential effects on the Oregon silverspot butterfly, which is listed as a threatened species under the federal Endangered Special Act (AFWO-12B0132-13F0047). The BO also informally addressed the project's potential effects (though not likely adverse effects) on western snowy plover and tidewater goby (and western lily, for proposed activities on Point Saint George, which the Commission permitted in September of 2013 under CDP 1-13-009). The document identifies various conservation measures and recommendations that must be incorporated into the project to avoid adverse effects to listed species.

California Department of Fish and Wildlife. The Department issued a Streambed Alteration Agreement (SAA) pursuant to Section 1603 of the California Fish and Game Code for the proposed work at Pacific Shores and for proposed work at Bay Meadows (SAA No. 1600-2013-0051-R1 issued July 1, 2013).

North Coast Regional Water Quality Control Board. The RWQCB issued a water quality certification for the proposed project on July 3, 2014 (WDID No. 1A13028WNDN). The RWQCB also is responsible for ensuring that the project complies with the state's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ. The applicant has prepared a Stormwater Pollution Prevention Plan (SWPPP, dated March 2014) to comply with the state general permit. The SWPPP addresses pollutants and their sources, all non-stormwater discharges, and site BMPs effective to result in the reduction or elimination of pollutants in stormwater and authorized non-stormwater discharges.

Del Norte County. As discussed above, the project area in part is located within the CDP jurisdiction of the County, but as the Executive Director has agreed to the permit consolidation requests received from the County and the applicant, the coastal development permit is being process by the Commission. **Special Condition 12** is attached to require that the Applicant obtain any necessary local approvals for the project prior to commencement of construction.

F. PROTECTION OF WETLANDS AND WATER QUALITY

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 30233 of the Coastal Act provides, in applicable 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:*
>
> …
>
> *(6) Restoration purposes*
>
> …
>
> *(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary…*
>
> …

Most of the habitat restoration and enhancement activities will occur in areas that are currently upland roadways at Pacific Shores or in degraded uplands at Bay Meadows. Development of these upland areas will not result in the diking dredging or filling of wetlands. However, as part of the proposed ~16 acres of wetland creation and enhancement at Bay Meadows, the Applicant proposes to dredge (excavate) approximately 2 acres of existing coastal wetlands. Therefore, the proposed dredging in coastal wetlands associated with the proposed restoration activities at Bay

Meadows must be evaluated for its consistency with Coastal Act section 30233. These wetlands are scattered mostly within the upland grassy areas where most of the wetland creation is proposed to occur. While these existing coastal wetlands meet the definition of wetlands under the Coastal Act[24] based on their documented predominance of wetland-oriented vegetation (such as Hooker willow, red alder, cascara, Sitka spruce, and beach pine),[25] these presumed wetlands[26] lack field indicators of hydric soils and wetland hydrology. Essentially, these coastal wetlands are seasonal wetlands at the drier end of the hydrology scale. The Applicant proposes to increase the wetland hydrology in these areas and adjacent upland areas (i.e., make the areas "wetter") by lowering (via proposed excavation) the ground surface to "raise" the relative groundwater level closer to the surface. Higher groundwater will lead to more prolonged periods of inundation and soil saturation in the upper soil layer, which in turn will create habitat conditions supportive of wetland-oriented plants and animals.

The above-cited Coastal Act policies set forth a number of different limitations on what development projects may be allowed in coastal wetlands. For analysis purposes, the limitations can be grouped into four general categories or tests, which in combination must demonstrate that (1) the purpose of the filling, diking, or in this case dredging is for one of the seven uses allowed under Section 30233(a); (2) the project has no feasible less environmentally damaging alternative; (3) feasible mitigation measures have been provided to minimize adverse environmental effects; and (4) the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible. Each category is discussed separately below.

(1) ALLOWABLE USE

The first test set forth above is that any proposed filling, diking, or dredging in wetlands must be for an allowable purpose as specified under Section 30233 of the Coastal Act. The relevant category of use listed under Section 30233(a) that relates to the proposed project is subcategory (6), "restoration purposes."

Neither the Coastal Act nor the Commission's administrative regulations contain a precise definition of "restoration." The dictionary defines "restoration" in terms of actions that result in returning an article "back to a former position or condition," especially to "an unimpaired or improved condition."[27] The particular restorative methods and outcomes vary depending upon the subject being restored. For example, the Society for Ecological Restoration defines "ecological restoration" as "the process of intentionally altering a site to establish a defined indigenous, historical ecosystem. The goal of the process is to emulate the structure, function, diversity, and dynamics of the specified ecosystem."[28] However, within the field of "wetland restoration," the term also applies to actions taken "in a converted or degraded natural wetland that result in the reestablishment of ecological processes, functions, and biotic/abiotic linkages

[24] Coastal Act Section 30121 and CCR Title 14 § 13577.

[25] GHD March 2014a.

[26] In past actions the Commission has found that species designated OBL, FACW, or FAC (i.e., wetland-oriented) are presumptive hydrophytes, and a preponderance of such species is presumptive evidence of a wetland (e.g., Cease & Desist and Restoration Orders CCC-09-CD-03 and CCC-09-RO-02).

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

[28] "Definitions," *Society of Ecological Restoration News*, Society for Ecological Restoration; Fall, 1994

and lead to a persistent, resilient system integrated within its landscape"[29] that may not necessarily result in a return to historic locations or conditions within the subject wetland area.

Implicit in all of these varying definitions and distinctions is the understanding that the restoration entails returning something to a prior state. Wetlands are extremely dynamic systems in which specific physical functions such as nutrient cycles, succession, water levels and flow patterns directly affect biological composition and productivity. Consequently "restoration," as contrasted with "enhancement," encompasses not only reestablishing certain prior conditions but also reestablishing the processes that create those conditions. In addition, most of the varying definitions of restoration imply that the reestablished conditions will persist to some degree, reflecting the homeostatic natural forces that formed and sustained the original conditions before being artificially altered or degraded. Moreover, finding that proposed dredging constitutes "restoration purposes" must be based, in part, on evidence that the proposed project will be successful in improving habitat values. Should the project be unsuccessful at increasing and/or enhancing habitat values, or worse, if the proposed dredging impacts of the project actually result in long term degradation of the habitat, the proposed dredging would not be for "restoration purposes."

Thus, to ensure that the project achieves its stated habitat enhancement objectives, and therefore can be recognized as being for "restoration purposes," the project must demonstrate that: (1) it either entails (a) a return to or re-establishment of former habitat conditions, or (b) entails actions taken in a converted or degraded natural wetland that will result in the reestablishment of landscape-integrated ecological processes and/or abiotic/biotic linkages associated with wetland habitats; and (2) there is a reasonable likelihood that the identified improvements in habitat value and diversity will result; and (3) once re-established, it has been designed to provide the desired habitat characteristics in a self-sustaining, persistent fashion independent of the need for repeated maintenance or manipulation to uphold the habitat function.

As noted above, the purpose of the proposed dredging within existing coastal wetlands at Bay Meadows is to restore the functionality of the wetland habitat by enhancing its hydrologic regime. The goals of the project, as stated in the proposed Mitigation and Monitoring Plan (MMP), include increasing the amount of palustrine emergent (freshwater) wetlands on the property, particularly those wetlands suitable as breeding habitat for Northern red-legged frog (which requires wetlands that maintain inundation for approximately 15 weeks). The existing "marginal" wetlands on the property where dredging is proposed, unlike the other approximately 6.5 acres of 2-parameter and 3-parameter wetlands delineated on the property (which will be protected and are not a part of the proposed project) occur in a converted landscape that has been subject to repeated logging and grazing disturbance over the years. Very little woody debris or habitat features useful to wildlife exists on the property. The purpose of the proposed project is to increase the wetland hydrology in these degraded wetlands and in surrounding degraded upland areas by lowering the ground surface to "raise" the groundwater level. Higher groundwater will lead to more prolonged periods of inundation and soil saturation in the upper soil layer, which in turn will create habitat conditions supportive of wetland-oriented plants and animals such as the Northern red-legged frog. The project also proposes to enhance the wetland habitat through the retention of, and introduction of, habitat features important for wildlife. The

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

project as proposed will avoid the removal of large, more mature trees and important wildlife habitat (e.g., snags). By design, the proposed new areas of wetlands will be created adjacent to the existing 2- and 3-parameter wetlands to create larger wetland areas of higher functionality and value and to significantly increase the overall area of freshwater wetlands on the property. Thus, the Commission finds that the proposed enhancements of freshwater wetlands entail actions taken in converted or degraded natural wetlands that will result in the reestablishment of landscape-integrated ecological processes and abiotic/biotic linkages associated with wetland habitats. Therefore, the Commission finds that the proposed wetland enhancements are consistent with the definition of restoration and constitute filling and dredging for restoration purposes consistent with Section 30233(a)(6).

(2) ALTERNATIVES

The second test set forth by the Commission's dredging and fill policies is that the proposed dredging or fill project must have no feasible less environmentally damaging alternative. Coastal Act Section 30108 defines "feasible" as …*capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors*. In this case, two alternatives to the proposed wetland dredging project at Bay Meadows are considered: (1) the no-project alternative; and (2) implementing the project at an alternative site. As explained below, each of these alternatives are infeasible and/or would not result in a project that is less environmentally damaging than the proposed project

The "no project" alternative would maintain the status quo of the existing wetlands on the site and would not enhance and restore 2 acres of freshwater wetland habitat as proposed. Existing conditions in these areas consist of previously logged and managed land that is lacking in mature or complex habitat structure and high wetland functionality. Under the "no project" alternative, the existing low-functioning wetlands would continue to provide marginal habitat for common and widespread wildlife species, but there would be no improved habitat for Northern red-legged frog or other wetland-associated wildlife in these areas. Moreover, there would be less connectivity in some areas between proposed wetlands (i.e., in existing degraded uplands proposed to be converted to wetland habitat) and existing higher functioning 2-parameter and 3-parameter wetlands on the property. Accordingly, the no project option is not a feasible less environmentally damaging alternative than the proposed project as conditioned.

A second alternative to the proposed dredging in existing Bay Meadows wetlands would be to implement the project elsewhere, such as on another portion of the 80-acre property, elsewhere on the Bay Meadows Project LLC property, or on another property altogether. Due to land use and topographic constraints, there are no other sites on Bay Meadows available for restoration. The northern portion of the property is planned and zoned for agricultural uses, and to implement a wetland restoration project on the agricultural land would raise agricultural conversion issues inconsistent with Sections 30241 and 30242 of the Coastal Act. Within the residentially zoned portion of the property where wetland restoration is proposed, the property is bisected by a relatively high ridge with relatively deep groundwater that would not support wetland creation, at least not without major alteration to the natural landform. The proposed wetland design for the property is based on the results of hydrology and soil moisture studies, which dictated the

wetland design on the hydrologic feasibility.[30] Other than the 0.2-acre proposed wetland restoration site on the adjacent Bay Meadows Project LLC property, the remainder of that property is either authorized by CDP for subdivision and residential development under CDP (A-1-DNC-06-037) or encumbered by existing high-functioning wetlands, which aren't in need of restoration and which are restricted to habitat conservation and open space uses by the permit conditions.

Regarding the use of alternative sites other than the Bay Meadows properties, mitigation must be both in kind and located within the same ecoregion as the Airport (the coastal dune/wetland/ prairie complex extending from the Smith River to Point Saint George). Within this area, limited opportunities for restoration are available, since much of the region already is in public ownership. At this time, no other known sites are available for acquiring and implementing enhancement and restoration work. Accordingly, the use of alternative sites other than the Bay Meadows properties is not a feasible less environmentally damaging alternative to the proposed development as conditioned.

For all of the reasons discussed above, the Commission finds that there is no feasible less environmentally damaging alternative to the development as conditioned, as required by Section 30233(a).

(3) FEASIBLE MITIGATION MEASURES

The third test set forth by Section 30233 is whether feasible mitigation measures have been provided to minimize adverse environmental impacts. The proposed development would be located within and around coastal wetlands. Depending on the manner in which the proposed project is conducted, the significant adverse impacts of the project on wetlands may include (1) water pollution in the form of sedimentation or debris entering adjacent and nearby coastal waters and wetlands; (2) encroachment into surrounding wetland habitats by construction activities; (3) impacts to sensitive bird nesting habitat in the project area; (4) poisoning of raptors and other wildlife from the use of rodenticides; and (5) displacement of native plant habitat by planting non-natives and/or facilitating the invasion of disturbed areas by invasive nonnative species. Overall, the project would enhance wetland habitat values and would produce generally only beneficial environmental effects. However, the proposed project has been conditioned to achieve habitat enhancement results and to minimize potentially significant adverse impacts. The potential impacts and their mitigation are discussed below.

Water quality protection. In the proposed 90% plans and technical specifications, the project proposes various measures related to erosion, sediment, and pollution control. For example, excavation and grading will be restricted to the latter part of the dry season (May 1-October 31), temporary sediment fences and barriers will be installed between work areas and existing wetlands and waters, heavy equipment maintenance and fueling will be performed at least 100 feet away from any drainage or wetland, and various other proposed measures. The Commission includes **Special Condition 1** to ensure that the project implements these and other appropriate water quality protection measures. Required water quality protection measures include, but are not limited to, proper containment and disposal of trash, covering stockpiles, and the use of

[30] GHD March 2014g and GHD February 2014.

appropriate BMPs for erosion and sediment control. In addition the Commission includes **Special Condition 3**, requiring preparation and submittal of a final debris disposal plan, to ensure that no debris, excess soils, vegetative spoils, or other waste is either temporarily stored or disposed of within any wetland where it would impair water quality. The Applicant proposes to dispose of over 100,000 cubic yards of soil excavated from the wetland restoration and enhancement activities at Bay Meadows on site, within two upland locations on higher areas of the property totaling around 13 acres in area. However, the Applicant has not prepared a debris disposal plan for disposing of any excess excavated material that cannot be accommodated at the on-site soil disposal locations or for disposal other kinds of project debris. Rather, the Applicant is relying on the contractor to prepare such a plan prior to commencement of construction. **Special Condition 3** requires preparation and submittal of a debris disposal plan for the Executive Director's review and approval prior to commencement of any development at Bay Meadows. The plan must demonstrate that all temporary stockpiles of construction debris, excess soils beyond those proposed for reuse within the project footprint as shown on the approved final plans required by **Special Condition 4**, excess vegetative spoils beyond those proposed for protecting restored habitats, and any other debris and waste associated with the authorized work shall be restricted to areas within the proposed project footprint as depicted on the approved final construction plans. Upon completion of restoration and enhancement activities, all excess debris and materials shall be disposed of outside of the coastal zone at an authorized disposal site capable of receiving such materials and not within any wetland or environmentally sensitive habitat area.

*Construction impacts to surrounding wetland habitats***.** To ensure that no aspects of the proposed restoration work at Bay Meadows encroach into the adjacent wetland habitat that is not proposed for restoration, the Commission attaches **Special Condition 1-C**. This special condition requires the limits of the disturbance areas to be delineated with conspicuous flagging or fencing in cooperation with a qualified biologist prior to commencement of construction, limiting the potential area affected by construction and ensuring protection of all wetlands outside of the project footprint.

Protecting sensitive bird nesting habitat. The project plans propose certain measures to protect nesting bird habitats, including protecting existing wildlife snags and trees with avoidance fencing and protecting sensitive bird nesting habitat by limiting vegetation removal to the non-nesting season. To ensure that the project implements these protective measures, the Commission includes Special Conditions 1-B, 1-C, and 2. **Special Condition 2** requires preparation and submittal of a nesting bird habitat protection plan for the Executive Director's review and approval prior to permit issuance. The plan requirements include surveying project areas prior to commencement of construction during the bird nesting season (March 15-August 15) for the presence of active nesting habitat, and avoiding construction activities within 300 feet of an occupied nest of any special-status bird species and within 500 feet of an occupied nest of any raptor species. **Special Condition 1-B** restricts the timing of tree removal work to the off-season for bird nesting, which will avoid disturbance to any nesting bird habitat that might be present in the area. Vegetation removal during the nesting season may only occur if (a) a qualified biologist has surveyed the area according to the approved Sensitive Bird Nesting Habitat Protection Plan required by Special Condition 3, and (b) the survey results indicate that no sensitive bird nesting habitat is present in the area. In addition, **Special Condition 1-C** requires that habitat features

such as trees and snags and other vegetation to be retained for wildlife habitat within or adjacent to work areas shall be flagged and/or fenced for avoidance and protection by a qualified biologist prior to commencement of any development.

Impacts to raptors from the use of rodenticides. The Applicant has prepared planting plans for the proposed wetland restoration sites, which propose to plant a suite of regionally appropriate native plant species in restored habitat areas. To help in the establishment of vegetation/ plantings, rodenticides are sometimes used to prevent rats, moles, voles, and other similar small animals from eating the newly planted saplings. Certain rodenticides, particularly those utilizing blood anticoagulant compounds such as brodifacoum, bromadiolone and diphacinone, have been found to pose significant primary and secondary risks to non-target wildlife present in urban and urban/wildland areas. As the target species are preyed upon by raptors or other environmentally sensitive predators and scavengers, these compounds can bio-accumulate in the animals that have consumed the rodents to concentrations toxic to the ingesting non-target species. To avoid this potential cumulative impact to environmentally sensitive wildlife species, **Special Condition 5** contains a prohibition on the use of such anticoagulant-based rodenticides.

Protection of surrounding native habitats. To ensure that the planting is implemented as proposed, is successful, and minimizes the displacement of native plant habitat by invasive non-native plants known to occur in the area, **Special Condition 5** requires the use of native plant material of local genetic stock to avoid the potential for genetic degradation of native plants on site and avoidance of the use of invasive plant species. In addition, the Commission attaches **Special Condition 8** to require submittal of a Spoils Disposal Area Restoration Plan for the Executive Director's review and approval prior to permit issuance. The Applicant proposes the onsite disposal of over 116,000 cubic yards of excess soil spoils generated by the proposed wetland restoration activities in two separate disposal areas. The northern disposal area on the agricultural land will accommodate approximately 39,000 cubic yards of topsoil spread across about 4.3 acres with an average compacted height of approximately 4.5 feet. The southern disposal area on the non-agricultural (suburban residential) land will accommodate disposing of approximately 77,000 cubic yards of subsoil spread across about 8.5 acres with an average compacted height of approximately 5.6 feet across this acreage. While these disposal areas are proposed to be revegetated with appropriate native species, if the revegetation is not successful, and if the areas were to be colonized by invasive weeds known to occur in the surrounding area, this could lead to degradation of surrounding restored wetland habitats. Thus, the plan required by Special Condition 8 shall demonstrate that the soil disposal areas shall be revegetated as proposed with a diversity of native species similar in coverage and density to the existing plant species diversity on the sites, that final success criteria shall include less than 5% cover of target invasives by year 5, and that the sites shall be monitored for a minimum of five years to ensure revegetation success. If the sites have not been successful, in part or in whole, by year 5, the Applicant is required to submit a revised or supplemental mitigation program to compensate for those portions of the original program which did not meet the approved performance standards. The revised revegetation program shall be processed as an amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

Therefore, the Commission finds that the proposed project, as conditioned, includes feasible mitigation measures to minimize adverse environmental effects consistent with Section 30233 of the Coastal Act.

(4) MAINTENANCE OF BIOLOGICAL PRODUCTIVITY AND HABITAT FUNCTIONAL CAPACITY

The fourth general limitation set by Sections 30233 and 30231 is that any proposed dredging or filling in coastal wetlands must maintain and enhance the biological productivity and functional capacity of the habitat, where feasible.

The purpose of the proposed development in wetlands at Bay Meadows is to restore and enhance the biological productivity of coastal wetlands and waters. In addition, as discussed above, the conditions of the permit will ensure that the project will not have significant adverse impacts on water quality or surrounding habitats and will ensure that the project construction will not adversely affect the biological productivity and functional capacity coastal waters or wetlands. Therefore, the Commission finds that the project, as conditioned, will maintain and enhance the biological productivity and functional capacity of the habitat consistent with the requirements of Sections 30233 and 30231 of the Coastal Act.

Conclusion

The Commission finds that as conditioned, the proposed dredging in coastal wetlands associated with the proposed restoration activities at Bay Meadows is for an allowable use (restoration purposes), is the least environmentally damaging feasible alternative, includes feasible mitigation measures to minimize adverse environmental effects, and will maintain and enhance the biological productivity and functional capacity of the existing wetland habitat. Therefore, the Commission finds the proposed project, as conditioned, is consistent with Sections 30230, 30231, and 30233 of the Coastal Act.

G. ENVIRONMENTALLY SENSITIVE HABITAT AREAS

Section 30240 of the Coastal Act states as follows:

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

Section 30107.5 of the Coastal Act defines "environmentally sensitive area" as follows:

> *'Environmentally sensitive area' means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in the ecosystem and which could be easily disturbed or degraded by human activities and developments.*

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.*

The proposed road removal work at Pacific Shores will not involve the diking, dredging, or filling of coastal wetlands as does the proposed restoration activities at Bay Meadows discussed above. It will, however, occur adjacent to various types of environmentally sensitive habitat areas (ESHA), including wetlands. In addition, as discussed below, some proposed enhancement activities will occur within ESHA.

(1) PROPOSED DEVELOPMENT WITHIN ESHA

Section 30240(a) of the Coastal Act limits development within ESHA to only resource-dependent uses. The Applicant is proposing certain activities within ESHA, including invasive species removal and revegetation activities. As described in the Project Description Finding, the Applicant will remove target invasive plants, such as Scotch broom and European beach grass, from approximately 0.75-acre of the Applicant's acquired properties adjacent to proposed restoration sites (primarily from acquired road right-of-way areas). In addition, the Applicant will plant restored areas and other surrounding areas under the Applicant's ownership with a mix of regionally appropriate native species, including planting species used as nectar resources by the Oregon silverspot butterfly. The total area of proposed plant enhancement is expected to be approximately 0.75-acre. The proposed invasive species removal and revegetation enhancement activities will occur within environmentally sensitive Oregon silverspot butterfly habitat, environmentally sensitive coastal dune habitat, and/or environmentally sensitive coastal prairie habitat (all three ESHA overlap in part, as explained below). As such, the Commission must consider whether or not the proposed activities constitute resource-dependent uses consistent with Section 30240(a).

Oregon silverspot butterfly (*Speyeria zerene hippolyta*) was listed as a threatened species under the federal Endangered Species Act in 1980. Historically, according to the U.S. Fish and Wildlife Service (FWS), the species was distributed along the Washington and Oregon coasts, with a disjunct population located in California north of Crescent City. Currently only five populations are known to exist, including four in Oregon and one in California (FWS 2013). The California population is believed to be comprised of a few hundred individuals occupying approximately 42

acres of habitat in the Lake Earl area and is the second-largest known population of the species (FWS 2011). Central to the life cycle of the butterfly is the abundance of the caterpillar host plant, the early blue violet (*Viola adunca*). Other violets, including Aleutian violet (*Viola langsdorfii*), may serve as secondary host plants (FWS 2013). Both violet species grow scattered throughout the Pacific Shores Subdivision in coastal dune and coastal prairie habitats.

According to the FWS Biological Opinion (BO) prepared for the proposed activities at Pacific Shores, female butterflies select areas with high violet densities for egg-laying and typically lay their eggs on or near the early blue violet. In the wild, a caterpillar would require a clump of approximately 16 violet plants for development, and isolated violets are probably less likely to be used by caterpillars, because the creatures move relatively limited distances in search of food (FWS 2013). In addition, nectar abundance and quality also are important to adult butterflies for survival and fecundity. The FWS BO identifies 16 native and nonnative plant species frequently used as nectar resources by the butterfly, but additional plants with nectar also may be used. Butterfly nectar resources can be found scattered throughout the Pacific Shores Subdivision in coastal dune and coastal prairie habitats.

On the other hand, certain invasive species that lack nectar, such as Scotch broom (*Cytisus scoparius*) and European beach grass (*Ammophila arenaria*), pose a particular threat to butterfly habitat by outcompeting and crowding out plants that do offer nectar resources, including various native plants and noninvasive nonnative plants, thereby forcing butterflies "to spend time and energy reserves searching for nectaring areas, reducing the number of fertilized eggs laid, and at the same time exposing them to predation, winds, and road mortality."[31]

The Applicant's proposed planting plans, both for invasive species removal areas and for various surrounding areas of the Applicant's property where enhancement planting will occur, include a number of nectar species known to be used by the butterfly, including gumplant, sea pink, California aster, pearly everlasting, coastal buckwheat, dune goldenrod, and yarrow. All of these species are native species that currently are known to grow in natural coastal dune and prairie habitats at Pacific Shores. In this case, the Applicant proposes to remove invasive weeds from about 0.75-acre existing degraded dune and prairie habitats that it owns adjacent to proposed road removal segments and to plant nectar resources (various herbaceous plant species) in these areas as well as plant additional nectar resources in other environmentally sensitive coastal dune and coastal prairie habitat areas of the Applicant's property.

The Applicant's proposed planting plans will help enhance and protect natural ecosystem function within the ESHA. Thus, as the project is inherently designed to achieve the enhancement of the ESHA, the Commission finds that the proposed planting and invasive removal activities within the ESHA are designed exclusively for the benefit of the ESHA. The Commission further finds that because the proposed enhancement activities are inherently dependent upon the presence of ESHA, the proposed planting plans constitute a use dependent on the resources of the ESHA consistent with the use requirements of Section 30240(a) of the Coastal Act. The proposed invasive species removal and enhancement planting activities are resource-dependent uses, because they involve habitat enhancement activities that by definition must be undertaken within the habitat that is targeted for enhancement.

[31] U.S. Fish and Wildlife Service June 5, 2013.

To ensure that the proposed invasive species removal and enhancement planting activities are undertaken in a manner that protects against significant disruption of ESHA habitat values, the Commission attaches **Special Condition 6**. This condition requires that the Applicant must submit a plan for the Executive Director's review and approval prior to permit issuance, which contains measures to ensure that various protective measures will be undertaken during proposed invasive species removal and enhancement planting activities to protect butterfly ESHA, dune ESHA, and prairie ESHA from significant disruption of habitat values. The plan shall demonstrate in part that invasive species removal methods will be restricted to hand removal methods only in a manner that minimizes ground disturbance, vegetative spoils will be properly disposed of consistent with he approved final debris disposal plan required by Special Condition 3, and any sensitive plants and host plants for Oregon silverspot butterfly larvae located in the vicinity of proposed invasive species removal areas and habitat enhancement planting areas will be flagged/fenced for avoidance.

Therefore, the Commission finds that the development within ESHA is a resource-dependent use, which, as conditioned will be undertaken in a manner that protects against significant disruption of ESHA habitat values, consistent with Section 30240(a) of the Coastal Act.

(2) PROPOSED DEVELOPMENT ADJACENT TO ESHA

Section 30240(b) of the Coastal Act requires that development in areas adjacent to ESHA and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas. In addition, as cited above, Sections 30230 and 30231 of the Coastal Act require the protection of marine resources and the biological productivity and quality of coastal waters and wetlands appropriate to maintain optimum populations of marine organisms and for the protection of human health. Development in areas adjacent to coastal wetlands and waters, such as the proposed activities at Pacific Shores in the vicinity of Lake Earl and Lake Talawa, shall minimize adverse effects of wastewater discharges and entrainment, control runoff, and prevent depletion of ground water supplies and substantial interference with surface water flow.

As summarized above in Finding IV-C(1), there are numerous rare, threatened, and endangered species on state and/or federal lists known to occur within the Pacific Shores Subdivision and/or on surrounding lands or waters immediately adjacent to the subdivision. There also are extensive coastal wetlands throughout the Pacific Shores Subdivision (GHD delineated over 60 acres of wetland habitats occurring adjacent to the proposed project area on the Applicant's newly acquired lots and road right-of-way areas), as well as Lakes Earl and Talawa around the southern boundaries of the subdivision. Based on the results of recent biological surveys completed by the GHD (2012), there are no environmentally sensitive areas within the proposed road removal footprint. There are, however, environmentally sensitive habitat areas (ESHA) known to occur near and adjacent to the proposed restoration segments, and if appropriate protective measures are not undertaken, proposed restoration activities could impact and degrade adjacent environmentally sensitive areas. The biological study identified the following ESHA near and adjacent to the proposed project area at Pacific Shores:

- **Habitat for Oregon silverspot butterfly larval host plants**. As discussed above, the only population of this species in California occurs in an approximately 42-acre area around Lake Earl, including within the Pacific Shores Subdivision. The species occurs in environmentally sensitive coastal dune and coastal prairie habitat areas (both of which are discussed in more detail below).

- **Habitat for Marsh pea**. Marsh pea (*Lathyrus palustris*) is a perennial herb in the pea family typically found in moist coastal areas. The species is considered rare by the state, with a California Rare Plant Rank (CRPR) of 2B.2 and a state/global rarity ranking of G5/S2S3.[32,33] Marsh pea is "fairly endangered" in California but more common outside of the state. According to the CDFW's California Natural Diversity Database (CNDDB), there are eight documented occurrences of the species in the state, including three in Del Norte County. One of the documented occurrences of Marsh pea is within the Pacific Shores Subdivision. The 2012 rare plant survey by GHD estimated over 7,900 Marsh pea plants covering an approximately 19,457-square-foot cumulative area near or adjacent to proposed restoration segments 9, 15, 34, 36, and 37.

- **Habitat for Pacific gilia**. Pacific gilia (*Gilia capitata* ssp. *pacifica*) is an annual herb in the phlox family typically found in chaparral, coastal bluff scrub, coastal prairie, and valley and foothill grassland habitats. The taxon is considered rare by the state, with a CRPR of 1B.2 and a state/global rarity ranking of G5T3T4/S2.[34] According to the CNDDB, there are 67 documented occurrences of the species in the state, including 12 in Del Norte County. At least two of the documented occurrences of Pacific gilia are from the Pacific Shores Subdivision. The 2012 rare plant survey by GHD estimated 145 Pacific gilia plants covering an approximately 500-square-foot cumulative area near or adjacent to proposed restoration segments 13 and 35.

- **Wetland habitats**. Examples of wetland habitats around the project area include slough sedge (*Carex obnupta*) wetlands, willow thickets (*Salix hookeriana*), forested wetlands (such as Sitka spruce stands) and wet areas dominated by other common species such as California blackberry (*Rubus ursinus*), tufted hairgrass (*Deschampsia caespitosa* ssp. *caespitosa*), and Pacific silverweed (*Potentilla anserina*). The wetlands around the project area typically are seasonally flooded swales in old deflation plains and sand dune complexes, shallowly inundated woods, meadows, and lagoon shoreline. GHD delineated over 60 acres of wetland habitats occurring adjacent to the proposed project area on the Applicant's newly acquired lots and road right-of-way areas. Some of the wetlands in and around Pacific Shores provide breeding habitat for Northern red-legged frog (*Rana*

[32] See CNDDB 2014, CDFW October 2014, and CNPS 2014.

[33] CRPR 2B.2: Fairly endangered in CA, but more common outside of the state. G5: Globally, the plant is secure, considering populations outside California. At the state level: S2 means Imperiled and S3: Vulnerable; the species falls somewhere between these two categories.

[34] CRPR 1B.2: Restricted range outside of CA, and fairly endangered in CA. G5: Globally, the plant is considered secure, but given its limited range outside California, the species falls between the Vulnerable (T3) and Apparently Secure (T4) categories. At the state level the species is considered Imperiled (S2).

aurora), a state-listed Species of Special Concern (SSC) and for western pond turtle (*Emys marmorata*), also a state-listed SSC.[35]

- **Coastal prairie habitat**. This habitat is characterized by areas with an abundance of native grasses such as red fescue, Pacific reed grass, and tufted hairgrass. Coastal prairie habitat generally refers to stands of perennial grasses and forbs[36] with at least 10% native plant relative cover located on cool, foggy coastal bluffs, headlands, and seeps along the central and northern coasts of the state.[37] Much of the coastal prairie habitat in California has been destroyed or significantly degraded over the past 100+ years by various means, including coastal development, habitat fragmentation, invasive weed encroachment (especially by nonnative perennial grasses, such as velvet grass), intensive livestock grazing and other agriculture uses, fire suppression, and colonization by woody vegetation. Even where remaining coastal prairie stands are small and fragmented, the Commission has found this important and vulnerable coastal habitat to meet the definition of ESHA due to its rarity and ongoing risk of degradation.[38] Small stands of coastal prairie habitat are scattered in Pacific Shores, primarily in the western portion of the subdivision. Some of these stands support plant resources used by the Oregon silverspot butterfly, including larval host plants and nectar resources.

- **Other environmentally sensitive dune habitats**. Areas with dune mat, dune scrub (such as Wax myrtle scrub), and forested dunes (such as Beach pine forest and Sitka spruce forest) are common at Pacific Shores. Coastal sand dunes constitute one of the most geographically constrained habitats in California. Dunes only form in certain conditions of sand supply in tandem with wind energy and direction. Dunes are a dynamic habitat subject to extremes of physical disturbance, drying, and salt spray, and support a unique suite of native plant and animal species adapted to such harsh conditions. Dune mat, named for its low-growing mat-like vegetation, consists of characteristic native dune species, many of which are becoming increasingly uncommon. Even where degraded, the Coastal Commission has often found this important and vulnerable habitat to meet the definition of ESHA due to the rarity of the physical habitat and its important ecosystem functions, including that of supporting sensitive species.[39] GHD estimated over 40 acres of various dune habitats occurring on the Applicant's newly acquired lots and road right-of-way areas adjacent to the proposed project area. Some of these dune habitats support plant resources used by the Oregon silverspot butterfly, including larval host plants and nectar resources.

As cited above, Section 30240(b) of the Coastal Act requires that development in areas adjacent to ESHA and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas. The Applicant has proposed various measures to protect adjacent ESHA from significant impacts at Pacific Shores. According to the Mitigation and Monitoring

[35] CDFW September 2014. And see http://www.dfg.ca.gov/wildlife/nongame/ssc/.

[36] A forb is a herbaceous (non-woody) flowering plant other than a grass.

[37] Sawyer et al. 2009.

[38] E.g., see CDPs A-2-MAR-10-022, A-1-MEN-09-023, and 1-13-009.

[39] E.g., see CDPs 3-11-020, 1-09-026, and A-1-HUM-05-040.

Plan prepared for the project, the project has been designed to avoid known ESHA locations (by restricting all restoration activities to paved roadway segments), and the project as proposed includes various measures to protect ESHA adjacent to and near the proposed project area. These include, but are not limited to, the following: (1) installing BMPs to protect surrounding drainages and coastal waters,[40] (2) removing and disposing of existing dumped garbage materials and debris located within the project area footprint, and (3) avoiding and protecting OSB host plants (violets) from project impacts by conducting updated pre-construction surveys to identify and flag for avoidance any host plants growing adjacent to the project area.

While the various measures proposed to protect adjacent ESHA at all restoration sites are appropriate, conditions are needed to ensure that the Applicant follows through on its commitment to implement the various measures. In addition, certain additional measures are needed to ensure that the project as implemented prevents impacts that would significantly degrade surrounding ESHA and is compatible with the continuance of surrounding habitat areas.

Water quality protection. As cited above, Sections 30230 and 30231 of the Coastal Act require the protection of marine resources and the biological productivity and quality of coastal waters and wetlands appropriate to maintain optimum populations of marine organisms and for the protection of human health. Development in areas adjacent to coastal wetlands and waters, such as the proposed activities at Pacific Shores in the vicinity of Lake Earl and Lake Talawa, shall minimize adverse effects of waste water discharges and entrainment, control runoff, and prevent depletion of ground water supplies and substantial interference with surface water flow. As detailed in the hydrology analysis completed by GHD[41] (discussed in more detail in Finding IV-J below), the project as proposed will not change groundwater conditions on the site, will not interfere with surface water flow, and the project could help alleviate storm-related flood conditions in the area. The Commission attaches **Special Condition 1** to ensure that the project implements appropriate water quality and runoff control protection measures as proposed, including (1) restricting excavation and grading to the latter part of the dry season (May 1-October 31), (2) installing temporary sediment fences and barriers between work areas and existing wetlands and waters, performing heavy equipment maintenance and fueling at least 100 feet away from any drainage or wetland, (3) implementing appropriate BMPs, as detailed in the erosion, sediment, runoff, and pollution control plans and SWPPPs for each restoration site, to control runoff and to prevent the entry of polluted stormwater runoff into coastal waters and wetlands during construction and post-construction, and various other measures to minimize the potential adverse effects of waste water discharges and entrainment and to control runoff, consistent with Section 30230 and 30231 of the Coastal Act.

Protecting against encroachment into adjacent ESHA. To ensure that no aspects of the proposed restoration work at Pacific Shores encroach into the adjacent ESHA, the Commission attaches Special Condition 1-C. **Special Condition 1-C** requires the limits of disturbance areas to be delineated with conspicuous flagging or fencing in cooperation with a qualified biologist prior to commencement of construction, limiting the potential area affected by construction and ensuring

[40] The Applicant prepared a Stormwater Pollution Prevention Plan for the project (GHD March 2014f) and also proposes numerous erosion, sediment, and pollution control BMPs in the 100% project plans dated November 2014.
[41] GHD March 2014d.

protection of all wetlands, sensitive plants, butterfly larval host plants, and other ESHA outside of the project footprint.

Butterfly Habitat. **Special Condition 6** requires an updated plant survey for sensitive plants, including butterfly host plants, prior to commencement of construction in any given year in which construction activities are proposed to occur. The pre-construction surveys must be completed in accordance with the final plan required by the condition. The final plan must demonstrate that any target plants, including sensitive plants and host plants for Oregon silverspot butterfly larvae, located adjacent to the paved roadway areas proposed for restoration shall be flagged and/or fenced for avoidance and protection with temporary flagging/exclusion fencing prior to commencement of construction. Furthermore, as the Applicant proposes to remove target invasive plants across approximately 0.75-acre from the Applicant's property, including European beach grass and Scotch broom, neither of which provides nectar resources for the threatened butterfly species, the Commission includes **Special Condition 7** to require implementation of this proposal. As discussed above certain invasive species that lack nectar, such as Scotch broom and European beach grass, pose a particular threat to butterfly habitat by outcompeting and crowding out plants that do offer nectar resources, thereby forcing butterflies to spend time and energy reserves searching for food, which in general can lead to reduced fecundity and increased mortality. Special Condition 7 requires the Applicant to submit update final revegetation plans for Pacific Shores that provide for monitoring the invasive species removal areas for a minimum of 5 years to ensure the areas remain free of invasive plants. Finally, Special Condition 7 also requires the Applicant to implement revegetation of proposed restoration sites according to the approved final revegetation plans, which shall include the locations of the proposed nectar resource enhancement areas on the Applicant's property. The final updated plans also must be consistent with the various revegetation requirements of **Special Condition 5**, including no planting of invasive species, using local genetic plant stock, and prohibiting the use of certain rodenticides. As conditioned, the project's revegetation requirements will provide for the continuance of environmentally sensitive Oregon silverspot butterfly habitat in the surrounding area.

Debris disposal. The Applicant has not prepared a debris disposal plan, but is relying on the contractor to do so prior to commencement of construction. To ensure that excess soil, spoils, debris, and other construction materials are properly stored and disposed of in a manner protective of coastal resources, the Commission attaches **Special Condition 3**. This condition requires preparation and submittal of a debris disposal plan for the Executive Director's review and approval prior to commencement of construction. The plan must demonstrate that all temporary stockpiles of construction debris, excess soils beyond those proposed for reuse within the project footprint as shown on the final approved plans required by **Special Condition 4**, excess vegetative spoils beyond those proposed for protecting restored habitats (as discussed in the project description findings and shown on **Exhibit 3**), and any other debris and waste associated with the authorized work shall be restricted to areas within the proposed project footprint as depicted on the final approved construction plans required by Special Condition 5. All excess debris and materials shall be disposed of at an authorized disposal site outside of the coastal zone.

As conditioned in the manner discussed above, the Commission finds that the proposed project at Pacific Shores (1) is designed to prevent impacts that would significantly degrade adjacent environmentally sensitive habitat areas and park and recreation areas and is compatible with the continuance of those areas, consistent with Section 30240(b) of the Coastal Act, and (2) will protect marine resources and the biological productivity and quality of coastal waters and wetlands, minimize adverse effects of wastewater discharges and entrainment, control runoff, and prevent depletion of ground water supplies and substantial interference with surface water flow, consistent with Sections 30230 and 30231 of the Coastal Act.

H. LANDFORM ALTERATION AND VISUAL COMPATIBILITY

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

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

The proposed project activities at Bay Meadows include the proposed onsite disposal of over 116,000 cubic yards of excess soil spoils generated by the proposed wetland restoration activities in two separate disposal areas. The northern disposal area on the agricultural land will accommodate approximately 39,000 cubic yards of topsoil spread across about 4.3 acres with an average compacted height of approximately 4.5 feet. The southern disposal area on the non-agricultural (suburban residential) land will accommodate disposing of approximately 77,000 cubic yards of subsoil spread across about 8.5 acres with an average compacted height of approximately 5.6 feet across this acreage. Because placement of this volume of material over the disposal sites has the potential to significantly alter the natural topography of the site and be visible from public vantage points such as Lake Earl Drive, the Commission must consider whether the project has been sited and designed to minimize the alteration of natural land forms and to be visually compatible with the character of the surrounding area.

The interior portions of the subject property currently are minimally visible from public vantage points due to the existence of a strip of woody and herbaceous vegetation lining the property boundary that fronts Lake Earl Drive. Little to no topographic relief separates Lake Earl Drive and the highest part of Bay Meadows, where the proposed southern disposal site is located. Lake Earl Drive is at an elevation of about 35 feet, and the existing Bay Meadows ridgetop where the spoils will be placed rises to a maximum of approximately 40 feet in elevation. The final grade of the southern soil disposal area after placement of the ~77,000 cubic yards of subsoil spoils material will be approximately 35-45 feet in elevation, so about 10 feet higher than the roadway. The southern spoil disposal area will potentially be visible to the public, especially if any gaps develop in the frontage vegetation strip in the future.

The placement of material over the landscape to the proposed 4.5 to 5.6 foot depths without regard to the undulations of the natural topography would be noticeable from any public vantage point with a view of the disposal sites, particularly if the sides of the fill area were not tapered to

blend with the surrounding grade. Therefore, the Commission attaches **Special Condition 8**, as discussed above, requiring the submittal of a Soil Disposal Area Restoration Plan that requires, among other things, that the final contouring of both spoils disposal areas conform with the natural topography of the site and be tapered along the edges to blend with the surrounding landscape. By matching the existing contours and feathering the edges of the fill area to blend with the surrounding grade, the finished topography would not appear significantly different than the current topography, thereby minimizing the landform alteration.

The Applicant has proposed to revegetate the spoils disposal areas with regionally appropriate native species. The northern disposal area where the topsoil will be placed on the agricultural parcel will be planted with a native grass seed mix. The southern disposal area that potentially is visible from Lake Earl Drive will be planted with a mix of native trees, shrubs, and herbaceous plants similar to what's found growing on the site now such as young redwoods and spruce trees, salal, coyote brush, iris, and various others native and nonnative species. While the proposed type and number of species to be planted would be compatible with the character of the surrounding area, the Applicant has not proposed any monitoring or success standards for the area or provisions for replacement planting in the event that the initial planting effort is unsuccessful. If the revegetation of the area failed, and the 8.5-acre area remained essentially bare or invaded by weeds such as Pampas grass, Scotch broom, gorse, and others, the development would result in the visual degradation of the area and would not be compatible with the character of the surrounding area, inconsistent with Section 30251. **Special Condition 8** discussed above requires submittal of a Spoils Disposal Area Restoration Plan for the Executive Director's review and approval prior to permit issuance. The plan shall demonstrate, among other requirements, that the soil disposal areas shall be revegetated as proposed with a diversity of regionally appropriate native species similar to the existing plant species diversity on the sites, and the areas shall be managed for at least a 5-year period to ensure successful revegetation of the areas and to remove target invasive species on at least an annual basis. Therefore, the Commission finds that the proposed project, as conditioned, will protect public views, minimize the alteration of natural land forms, and be visually compatible with the character of surrounding area, consistent with Section 30251 of the Coastal Act.

I. AGRICULTURAL LANDS

Coastal Act Section 30241 states as follows:

> *The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the area's agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:*
>
> *(a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.*
>
> *(b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.*

(c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.

(d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.

(e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.

(f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.

Coastal Act Section 30113 defines "prime agricultural land" through incorporation-by-reference of paragraphs (1) through (4) of Section 51201(c) of the California Government Code:

'Prime agricultural land' entails land with any of the follow characteristics: (1) a rating as class I or class II in the Natural Resource Conservation Service land use capability classifications; or (2) a rating 80 through 100 in the Storie Index Rating; or (3) the ability to support livestock used for the production of food and fiber with an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture; or (4) the ability to normally yield in a commercial bearing period on an annual basis not less than two hundred dollars ($200) per acre of unprocessed agricultural plant production of fruit- or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years.

Coastal Act Section 30242 states as follows (emphasis added):

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

As cited above, Coastal Act Sections 30241 and 30242 require the protection of prime agricultural lands and set limits on the conversion of all agricultural lands to non-agricultural uses. The northern portion of the Bay Meadows property, where the proposed northern soil disposal area is located, is planned and zoned for agricultural uses under the Del Norte County LCP. The Applicant proposes to place approximately 39,000 cubic yards of topsoil spread across about 4.3 acres in this area, with an average compacted height of approximately 4.5 feet. There is no evidence that the area proposed for soils disposal meets the definition of prime agricultural land cited above. However, the Commission still must consider whether or not the proposed soil disposal on the agricultural land would result in a conversion of land suitable for agricultural use to a nonagricultural use, inconsistent with Sections 30241 and 30242 of the Coastal Act.

The Commission finds the proposed disposal of soil on the agricultural land would not result in a conversion of land suitable for agricultural use to a nonagricultural use, inconsistent with

Sections 30241 and 30242 of the Coastal Act. First, the soil proposed for disposal in the area is similar to (the same soil type as) the underlying soils of the area (Talawa Fine Sandy Loam, Ta2). Second, only topsoil excavated from proposed wetland restoration activities will be disposed of on the agricultural land (northern soil disposal area). Sub-soils, which may not be as suitable for agricultural uses, will be disposed of in the southern soil disposal field on the non-agricultural portion of the property. Third, the soil placed on the agricultural land will be only slightly compacted and will be reseeded with a mix of regionally appropriate native grasses. Finally, the Applicant proposes to monitor the area to ensure that the proposed seeding is successful in revegetating the site.

If placed as proposed and revegetated as proposed, the soil disposal area would remain suitable for agricultural purposes, as it would support the growth of pasture grasses and other crops to a similar degree as the current site. As discussed in the above findings, **Special Condition 8** requires submittal of a Spoils Disposal Area Restoration Plan for the Executive Director's review and approval prior to permit issuance. The plan shall demonstrate that the soil disposal areas shall be revegetated as proposed with a diversity of native grasses, and final contouring of the site shall conform to the surrounding natural topography to minimize landform alteration.

As conditioned, the proposed soil disposal site within the agricultural area off the property will be established in a manner that will be suitable for agricultural use. Therefore, the Commission finds that the proposed project, as conditioned, will not result in a conversion of agricultural land to non-agricultural uses and is consistent with Sections 30241 and 30242 of the Coastal Act.

J. FLOOD HAZARDS

Section 30253 of the Coastal Act states in applicable part (emphasis added):

> *New development shall do all of the following:*
>
> *(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> …

Some of the proposed project areas, particularly Pacific Shores, are located within areas prone to flooding. As such, Section 30253 of the Coastal Act requires that proposed development at Pacific Shores must minimize risks to life and property in this high flood hazard area.

To assess the potential effects of the proposed removal of roads and restoration of wetlands on surface water hydraulics in Pacific Shores, the Applicant completed a hydrologic analysis.[42] The analysis considers the potential effects on surface water hydraulics at the site under various road removal options. The purpose of the report is to quantify the change in stormwater runoff between existing conditions (pre-project) and post project implementation.

The hydrology report notes that the majority of surface drainage at Pacific Shores presently occurs through man-made drainage ditches along roadsides, which flow to Lake Earl. A major drainage way passes north to south through the western portion of the subdivision, discharging to

[42] GHD March 2014d

Lake Talawa. As noted above in Finding IV-A(1), road removal and wetland restoration activities will not modify existing drainage channels along roadways, and all existing drainage ditches along roadways will be preserved. The hydrology report describes the existing condition of the drainage ditches as follows:

> *…often heavily vegetated with grasses, herbs shrubs, and in some cases with trees. During rain events water can be observed backing up onto paved road surfaces, especially on the east side of the subdivision. This inundation is likely due to a combination of high water tables, the sometimes marginally defined drainages, the low gradient undulating topography, and the unmaintained state of the existing roads and drainage networks.*

The hydrology report further notes that the soils within the project vicinity are predominantly sand, which is characterized by hydrologic soil group A. The Soil Conservation Service defines HSG A as having "…a low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sand or gravel and have a high rate of water transmission (greater than 0.3 in/hr)."

The hydrology analysis modeled stormwater runoff volumes and peak flow rates for various design storms over a range of mitigation options (e.g., removing 8, 10, 12, and 15 acres of road). The results show a reduction in the amount of runoff proportional to the increase in road removal/restoration area size, which the report states "…is to be expected, as impermeable asphalt surfaces are being replaced with vegetated dunes, which allow for more infiltration and evapotranspiration during storm events." The hydrology analysis also modeled flow velocities in drainage channels under different road removal/restoration scenarios, and the model shows that velocity decreases as the road removal/restoration area size increases. The analysis did not find a correlation between groundwater levels and water surface elevations of Lake Earl (GHD March 2014d).

The hydrology report concludes that the existing conditions on the site display more stormwater runoff and higher peak flow rates and velocities of stormwater runoff through existing drainage channels compared to post-project conditions. In other words, the project as proposed will not increase flooding and could help alleviate storm-related flood conditions in the area.

Therefore, the Commission finds that the project as proposed will minimize risks to life and property in an area subject to high flood hazard and is consistent with Section 30253 of the Coastal Act.

K. ARCHAEOLOGICAL RESOURCES

Section 30244 of the Coastal Act states:

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

The project area is located within the traditional territory of the Tolowa Tribe, which currently have two separate federally recognized governments: the Smith River Rancheria and the Elk Valley Rancheria. The native Tolowa people lived in the Lake Earl area prior to European settlement of the region commencing in the 1850s. Previous archaeological surveys conducted in the area have documented Tolowa sites at numerous locations around the lagoon above the +10′ MSL elevation. In particular, there are three documented archaeological sites near or adjacent to the portion of the proposed project area at Pacific Shores, which contain significant archaeological deposits. No known archaeological sites exist at Bay Meadows.

A cultural resources field survey of the proposed project area at Pacific Shores was completed by Roscoe and Associates on December 28 and 31, 2012 and January 1, 2013. The archaeological report recommends that the project avoid the known existing archaeological sites through project conditions that limit heavy equipment access to existing capped roadways only. Any proposed road removal work in proximity to in proximity to known archaeological sites shall be limited to operations on and to the existing road surface only. The report also recommends that proposed invasive plant removal activities avoid areas near known archaeological sites. Further, the report recommends that a Tolowa cultural observer be present to monitor ground disturbing activities within 100 meters of the recorded boundaries of the documented archaeological sites. An archaeologist and tribal monitor should be present to monitor for site avoidance and to properly deal with any buried artifacts or features that may be inadvertently unearthed. The archaeological report notes that the Smith River Rancheria THPO and the Elk Valley Rancheria THPO have requested notification two weeks prior to the start of construction in this area so that tribal representative(s) can be present to observe ground disturbing activities.

Nevertheless, to ensure protection of any archaeological or cultural resources that may be unearthed at the site during construction, the Commission attaches Special Conditions 4 and 9. The project plans for work at Pacific Shores propose to limit heavy equipment access to existing roadways only, and **Special Condition 4** requires that the Applicant undertake construction according to the approved final plans. As recommended by the archaeological report, **Special Condition 9** requires that no ground disturbing activities shall occur at Pacific Shores in the vicinity of documented archaeological sites. In addition, the condition requires that the Applicant arrange for tribal representatives to be present to observe ground-disturbing activities if deemed necessary by the Tribal Historic Preservation Officers. Furthermore, the condition requires that if an area of cultural deposits is discovered during the course of the project, all construction must cease and a qualified cultural resource specialist must analyze the significance of the find. To recommence construction following discovery of cultural deposits, the applicant is required to submit a supplementary archaeological plan for the review and approval of the Executive Director to determine whether the changes are *de minimis* in nature and scope, or whether an amendment to this permit is required.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Coastal Act Section 30244, as the development will include reasonable mitigation measures to ensure that there will be no significant adverse impacts to archaeological resources.

L. PUBLIC ACCESS

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

At Pacific Shores, there is existing public access to the sea, to public beaches, and to Lakes Earl and Talawa via public roads through and adjacent to the subdivision, including Kellogg Rd., Tell Blvd., and various others. Other than temporary traffic control measures to be implemented during construction, the proposed project will not affect public access. Members of the public will continue to have access to multiple existing access points to the sea, to public beaches, and to Lakes Earl and Talawa. The project as proposed will not reduce existing public access to public land. The project proposes no new fencing of any kind which would block existing public access to beach or shoreline areas.

The Bay Meadows and Bay Meadows Project LLC properties are located between the sea and the first public road; however, the sites are more than a mile from the shoreline of Lake Earl and from the ocean. No dedicated public access currently exists on either site, but there are plans for a public trail to be built on Bay Meadows Project LLC for walking, wildlife viewing, and other passive recreational pursuit in conjunction with the development of the subdivision approved under CDP A-1-DNC-06-037. The planned trail will not be affected by the development proposed under CDP 1-14-0820.

Therefore, the Commission finds that the proposed project does not have any significant adverse effect on public access, and that the project as proposed without new public access is consistent with the requirements of Coastal Act Sections 30210, 30211, and 30212.

M. LOCAL COASTAL PLANNING

The project area is located in the County of Del Norte. The wetland restoration and enhancement activities proposed at Bay Meadows (both on the Applicant's parcel and on the Bay Meadows Project LLC parcel) are within an area covered by the certified Del Note County Local Coastal Program (LCP). However, the proposed Pacific Shores restoration sites are located in an area of deferred certification (ADC) where the Coastal Commission retains permit authority. As discussed above in Finding IV-D, the Commission is processing a consolidated permit application for the project and the policies of Chapter 3 of the Coastal Act provide the legal standard of review, with the certified Del Norte County LCP used as guidance. As conditioned, the proposed development is consistent with all applicable Chapter 3 policies of the Coastal Act and does not conflict with the LCP. Approval of the project, as conditioned, will not prejudice

the ability of the County of Del Norte to obtain a fully certified LCP for the Pacific Shores Special Study Area ADC.

N. APPLICANT'S LEGAL INTEREST IN THE PROPERTIES

The proposed road segments to be removed at Pacific Shores are currently owned by Del Norte County. On December 9, 2014, the Board of Supervisors adopted a series of resolutions vacating the road segments and agreeing to transfer the abandoned road segment parcels to the Applicant. As conditions of approval of the Resolutions of Vacation, the County is requiring the Applicant to prepare deeds transferring ownership of the vacated street segments to the Applicant from Del Norte County prior to recordation of the Resolutions of Vacation. In addition, small portions of some of the existing road segments proposed for removal extend onto property owned by the California Department of Parks and Recreation (totaling an approximately 2,000-square foot area). Furthermore, the 0.2-acre wetland restoration site on the Bay Meadows Project LLC property is not within the Applicant's ownership.

As required by Section 30601.5 of the Coastal Act, the Applicant has submitted evidence that (a) the property owners have been notified of the project as proposed in the CDP application, and (b) the property owners have been invited to join the CDP application as a co-applicant, and (c) the property owner grants permission to the Applicant to undertake development on the project as proposed by the Applicant. In addition, as also required by Section 30601.5, the Applicant must demonstrate the authority to comply with all conditions of approval. In the case of the road segments to be removed at Pacific Shores, the Applicant is relying on its pending acquisition of fee ownership of the road segments to demonstrate its authority to comply with the conditions of approval. Therefore, **Special Condition 10** requires that the Applicant submit copies of the recorded Resolution of Vacation and recorded deed transferring ownership of the vacated street segments from the County of Del Norte to the Applicant. In the case of the Bay Meadows Project LLC property proposed for restoration, the Applicant had obtained a temporary access easement granting permission to the Applicant to undertake development as proposed, but the easement does not explicitly grant permission to comply with the various conditions of approval of CDP 1-14-0820. Therefore, Special Condition 10 also requires that the Applicant submit evidence signed by the Bay Meadows Project LLC property owner (such as a Right of Entry agreement) giving the Applicant permission to undertake development on the property pursuant to CDP 1-14-0820 as conditioned by the Commission. Special Condition 10 requires that this evidence be obtained prior to issuance of the CDP. Finally, in the case of the portion of the proposed project that extends onto State Park property, Special Condition 10 requires submittal of or a Right of Entry permit or other evidence giving the Applicant permission to undertake development on the property pursuant to CDP 1-14-0820 as conditioned by the Commission prior to permit issuance.

O. REIMBURSEMENT OF COSTS AND FEES

Coastal Act section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications. See also 14 C.C.R. § 13055(g). Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP application. Therefore, consistent with Section 30620(c), the Commission imposes **Special Condition 11** requiring reimbursement of any costs and attorneys' fees the Commission incurs in connection with the defense of any action brought

by a party other than the Applicants/Permittees challenging the approval or issuance of this permit.

P. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Applicant served as the lead agency for the RSA improvement project for CEQA purposes. The Applicant adopted a final Environmental Impact Report (EIR) for the RSA Improvement Project on December 1, 2011 and a final supplemental EIR in May of 2014 (SCH #2009071019).

The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. As a responsible agency, the Commission conducted its analysis of the potential impacts of the proposed development that the Commission is authorized by the Coastal Act to review. The Commission has reviewed the relevant coastal resource issues associated with the proposed project and has identified appropriate and necessary conditions to assure protection of coastal resources consistent with the requirements of the Coastal Act. The staff report discusses the relevant coastal resource issues with the proposed development. All public comments received to date have been addressed in the staff report, including staff's oral presentation and the findings adopted by the Commission. The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. As conditioned, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects that approval of the proposed project, as modified, would have on the environment consistent with the Coastal Act and CEQA Section 21080.5(d)(2)(A).

APPENDIX A
SUBSTANTIVE FILE DOCUMENTS

Coastal Development Permit Files and Reports:

Application file for CDP Application No. 1-14-0820 (BCRAA).

Adopted findings and application file for CDP Application No. 1-13-009 (BCRAA).

Application file for CDP Application Amendment No. A-1-DNC-06-037-A1 (JHP, LLC.).

Adopted Findings for CDPs: 1-11-031 (CDFG, Del Norte Co.), A-2-MAR-10-022 (Magee and Brader, Marin Co.), A-1-MEN-09-023 (Wernette, Mendocino Co.), 3-11-020 (Goins, Pacific Grove), 1-09-026 (CDPR, Humboldt Co.), A-1-HUM-05-040 (Kable, Humboldt Co.), A-1-DNC-06-037 (JHP, LLC., Del Norte Co.), and for Cease & Desist and Restoration Orders: CCC-09-CD-03 and CCC-09-RO-02 (Mills PCH, LLC).

Reports and Studies:

Bauer, R.D, CDFG and U.S. Bureau of Sport Fisheries and Wildlife. 1974. *Acquisition priorities for the coastal wetlands of California: a joint report*. University of California. 38 pp.

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BCRAA and URS. September 2011. *Comments and Responses, Environmental Impact Report, Runway Safety Area Improvement Project, Jack McNamara Field (CEC), FAA and County of Del Norte*. Prepared for the U.S. Dept. of Transportation, FAA.

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GHD. November 2014b. *Mitigation and Monitoring Plan, Volume 3: Bay Meadows*. Eureka, CA. 51 pp. + figs.

GHD. November 2014c. *Runway Safety Area Mitigation Project Comprised of Pacific Shores Mitigation Project.* 100% plans and technical specifications. Eureka, CA.

GHD. November 2014d. *Bay Meadows Mitigation.* 90% plans and technical specifications. Eureka, CA.

GHD. August 13, 2014. *Bay Meadows Habitat Mapping*. Eureka, CA. 9 pp. + apps.

GHD. August 2014a. *Pacific Shores Subdivision Select Parcels and Road Right-of-Way Segments Updated Delineation of Wetlands*. Eureka, CA. 19 pp. + apps.

GHD. August 2014b. *Pacific Shores Subdivision Updated Characterization of Uplands*. Eureka, CA. 10 pp. + apps.

GHD. March 2014a. *Bay Meadows Delineation of Wetlands*. Eureka, CA. 12 pp. + apps.

GHD. March 2014b. *Biological Resources Report* [for Bay Meadows]. Eureka, CA. 9 pp. + apps.

GHD. March 2014c. *Pacific Shores Subdivision Delineation of Uplands*. Eureka, CA. 8 pp. + apps.
GHD. March 2014d. *Pacific Shores Subdivision – RSA Project Proposed Wetland Reestablishment and Road Removal Hydrology Report*. Eureka, CA. 17 pp. + apps.
GHD. March 2014e. *Pacific Shores Subdivision Select Parcels Delineation of Wetlands*. Eureka, CA. 15 pp. + apps.
GHD. March 2014f. *Stormwater Pollution Prevention Plan Report for Del Norte County Regional Airport Jack McNamara Field (CEC) – Runway Safety Area (RSA) Project – Pacific Shores Subdivision (PSS) Mitigation Project*. Eureka, CA.
GHD. March 2014g. *Sub-Surface Soil Moisture Study Bay Meadows*. Eureka, CA. 10 pp. + apps.
GHD. February 2014. *Bay Meadows Hydrology Report Proposed Bay Meadows Wetlands Mitigation Site*. Eureka, CA. 15 pp. + apps.
GHD. May 2013a. *Biological Resources Evaluation* [for Pacific Shores]. Eureka, CA. 38 pp. + apps.
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Society of Wetland Scientists. August 6, 2000. *Position Paper on the Definition of Wetland Restoration.*

Other websites:

California Coastal Records Project: http://www.californiacoastline.org/

CDFW Species of Special Concern: http://www.dfg.ca.gov/wildlife/nongame/ssc/.

National Audubon Society Important Bird Areas: http://netapp.audubon.org/iba/site/42

Smith River Alliance: http://smithriveralliance.org/lake-earl-wildlife-area/

Other agency approvals:

Department of the Army Permit No. 2006-301420. San Francisco District

North Coast Regional Water Quality Control Board WDID No. 1A13028WNDN. Santa Rosa.

U.S. Fish and Wildlife Service. June 5, 3013. Formal Consultation for Proposed Mitigation Measure Implementation for the Runway Safety Area Improvement Project at Del Norte County Regional Airport, Jack McNamara Field, Crescent City, Del Norte County, California. Arcata, CA (file number AFWO-12B0132-13F0047).

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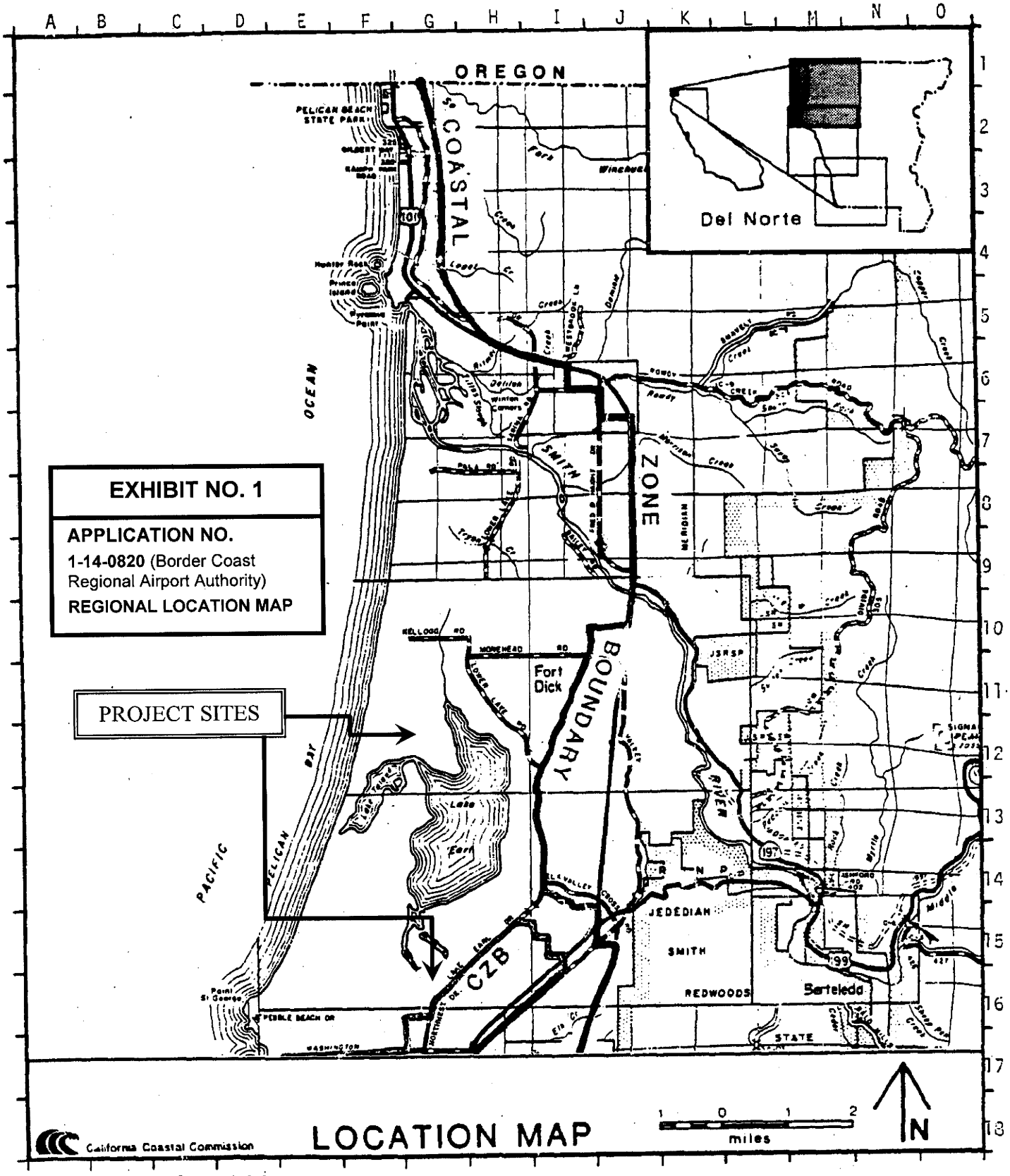
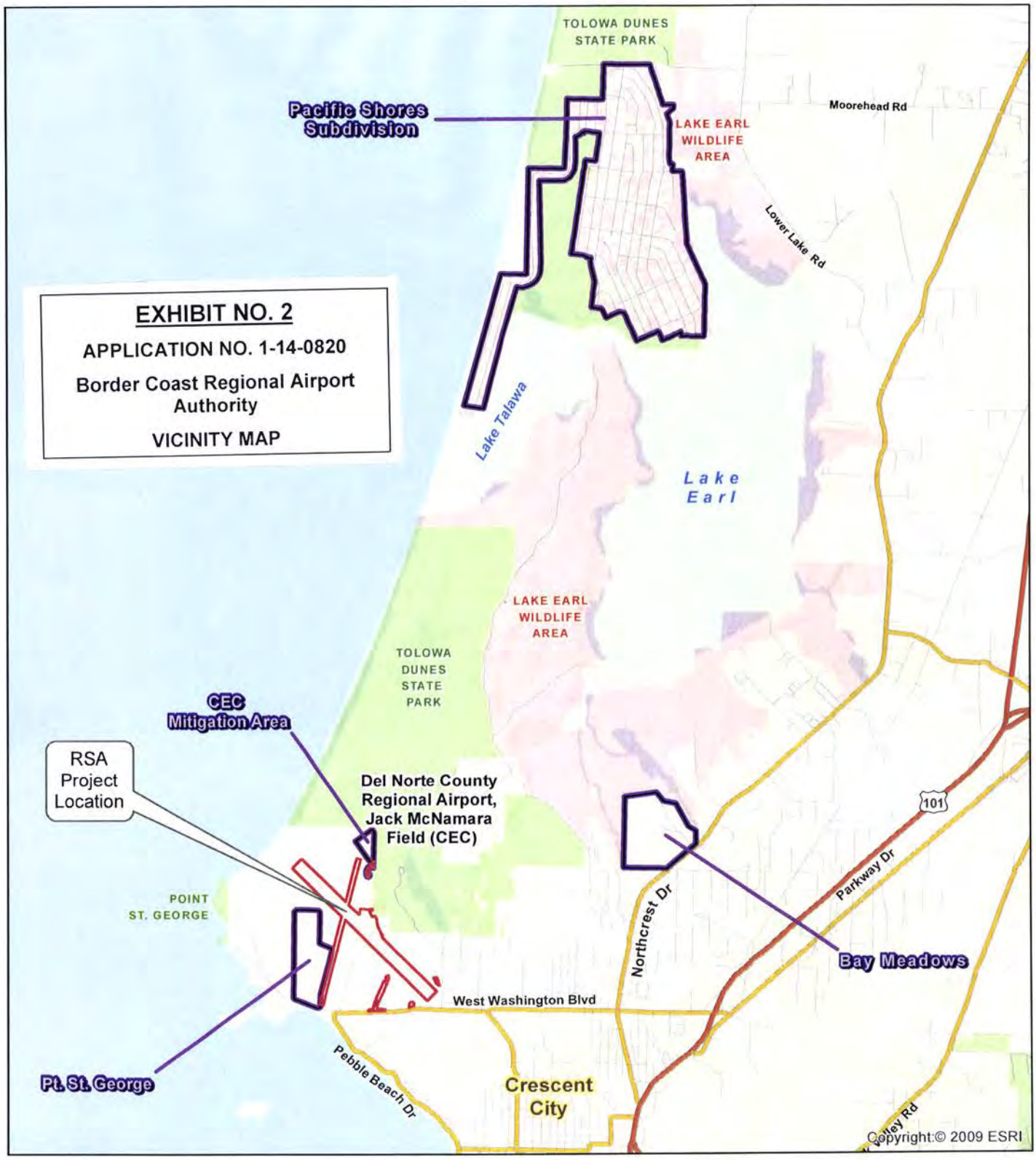


County of Del Norte



Paper Size ANSI A

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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

Border Coast Regional Airport Authority
RSA Improvement Project - Mitigation and Monitoring Plan

Job Number 8411041.03
Revision A
Date 13 Mar 2014

Proposed Mitigation Sites
Proximity to Public Open Space

Figure 2

718 Third Street Eureka, CA 95501 T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

G:\11984 BorderCoastRegionalAirportAuth\BCRAA_GIS\Maps\Figures\MMP_Update\F2_PublicOpenSpace.mxd

Parcel Status
- Acquired or PSA

Ownership
- State of California
- Remaining Parcels

Proposed Road Removal
- Convert to Wetland
- Convert to Dune
- Roads Retained for Access

Paper Size ANSI B
0 125 250 500 750 1,000
Feet
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

GHD

Border Coast Regional Airport Authority
Roadway Segment Selection Methodolc

Pacific Shores Ownership Map

Figure 7

EXHIBIT NO. 3

APPLICATION NO. 1-14-0820
Border Coast Regional Airport Authority
PROPOSED PLANS & MAPS FOR PACIFIC SHORES – 1 of 4

718 Third Street Eureka CA 95501 USA T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

Data source: ESRI Bing Aerial, 2011 (1 foot resolution); GHD Roadway Segments, 2012; GHD Constraints, 2012; County of Del Norte Parcels. Created by: amshines

Approx. Parcel Boundary

Roads Retained for Access

Current Publically Owned Land (Parcels)

Proposed Publically Owned Lands (Parcels, Roads, Road ROWs)

Paper Size ANSI B

0 250 500 1,000 1,500 2,000

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

GHD

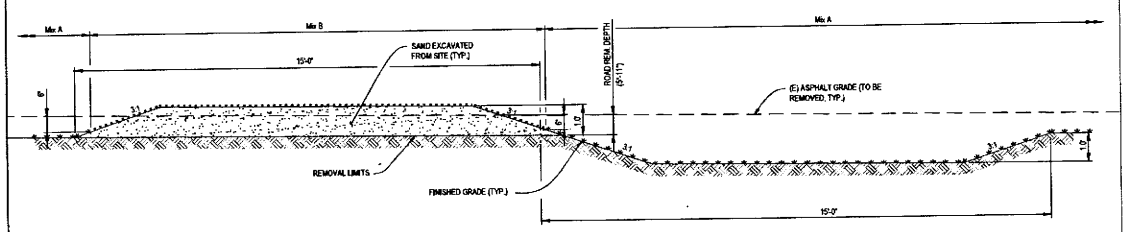
Border Coast Regional Airport Authority
RSA Improvement Project - Mitigation and Monitoring Plan

Job Number	8411041
Revision	A
Date	10 Dec 2014

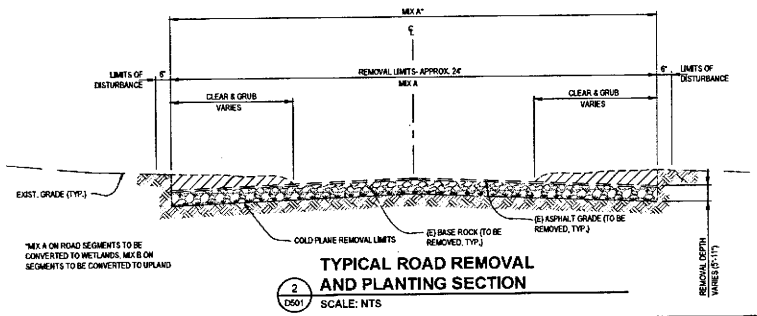
Pacific Shores Subdivision
Proposed Future Conditions - Public Land

Figure 2-9

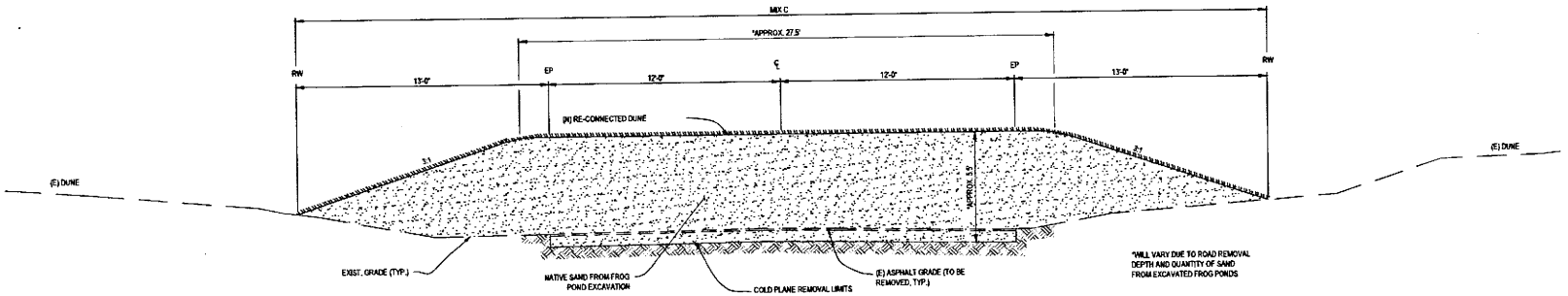
180 Lonsdale Street Melbourne VIC 3000 Australia T 61 3 8687 8000 F 61 3 8687 8111 E melmail@ghd.com W www.ghd.com



1 D501 **TYPICAL GRADE VARIATION DETAIL**
SCALE: NTS

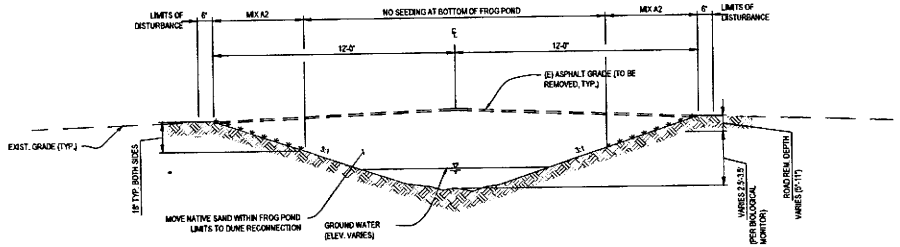


TYPICAL ROAD REMOVAL AND PLANTING SECTION
2 D501 SCALE: NTS



3 D501 **TYPICAL DUNE RE-CONNECTION SECTION**
SCALE: NTS

SEED MIXES	
MIX A	PALUSTRINE EMERGENT WETLAND
MIX A2	FROG POND
MIX B	COASTAL PRAIRIE
MIX C	DUNE MAT



4 D501 **TYPICAL FROG POND SECTION**
SCALE: NTS

No	Revision	Drawn	Job Manager	Project Director	Date
-	-	-	-	-	-

Note: * indicates signatures on original issue of drawing or last revision of drawing

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Drafting Check JJW		Design Check JJW	
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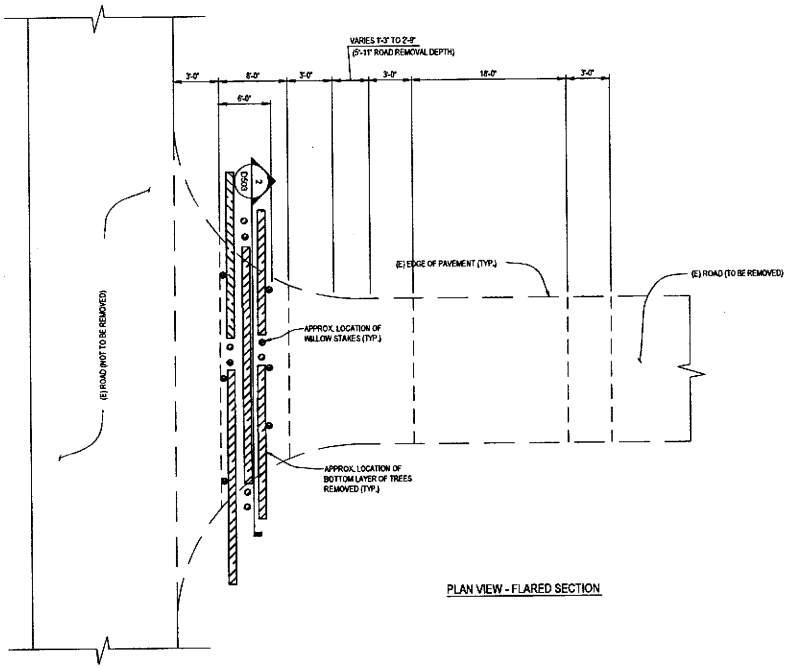
Date			
Scale AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction		

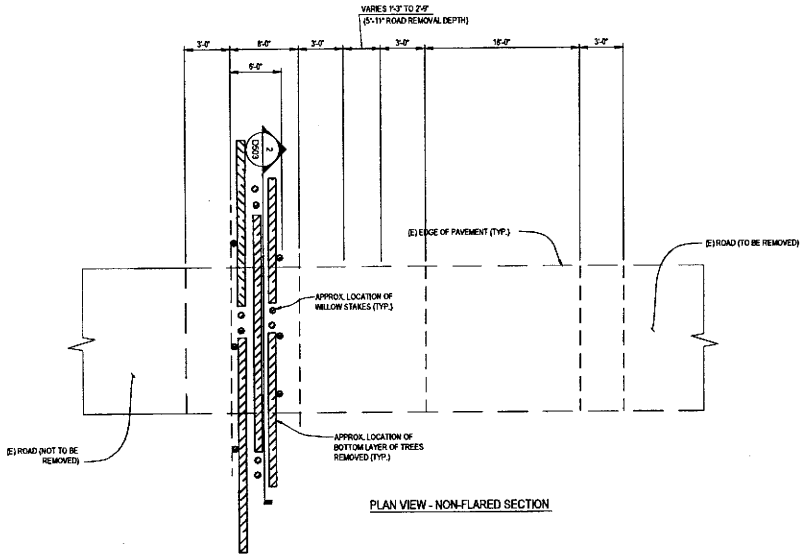
Client BORDER COAST REGIONAL AIRPORT AUTHORITY
Project PACIFIC SHORES MITIGATION PROJECT
Title DETAILS 1 OF 4
Contract No. 8411165
Original size Ansi D Drawing No: D-501
Sht 20 of 23 Rev:

Plot Date: 24 July 2014 - 12:57 PM Plotted by: Stephanie Gould
Cad File No: G:\11964 BorderCoastRegionalAirportAuth\8411165 MitigationDesign WO 2018606-CAD\Sheets\Pac Shores\C-500-Details.dwg

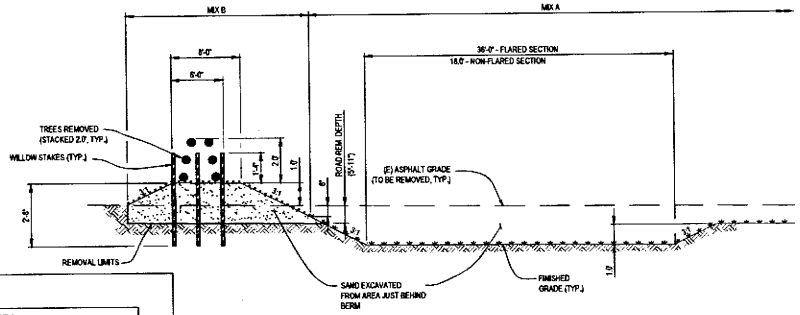
3 of 4



PLAN VIEW - FLARED SECTION

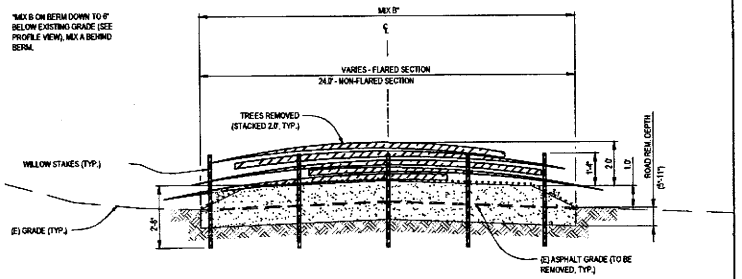


PLAN VIEW - NON-FLARED SECTION



PROFILE VIEW

1 D503 **ROAD BARRIER DETAIL**
SCALE: NTS



2 D503 **ROAD BARRIER SECTION**
SCALE: NTS

SEED MIXES	
MIX A	PALUSTRINE EMERGENT WETLAND
MIX A2	FROG POND
MIX B	COASTAL PRAIRIE
MIX C	DUNE MAT

No	Revision	Drawn	Job Manager	Project Director	Date
-	-	-	-	-	-

Note: * indicates signatures on original issue of drawing or last revision of drawing

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Drafting Check	JJW	Design Check	JJW
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client: BORDER COAST REGIONAL AIRPORT AUTHORITY
Project: PACIFIC SHORES MITIGATION PROJECT
Title: DETAILS 3 OF 4
Contract No. 8411165
Original Size: Ansi D
Drawing No: D-503
Sht 22 of 23
Rev:

Plot Date: 24 July 2014 - 12:57 PM Plotted by: Stephanie Gould
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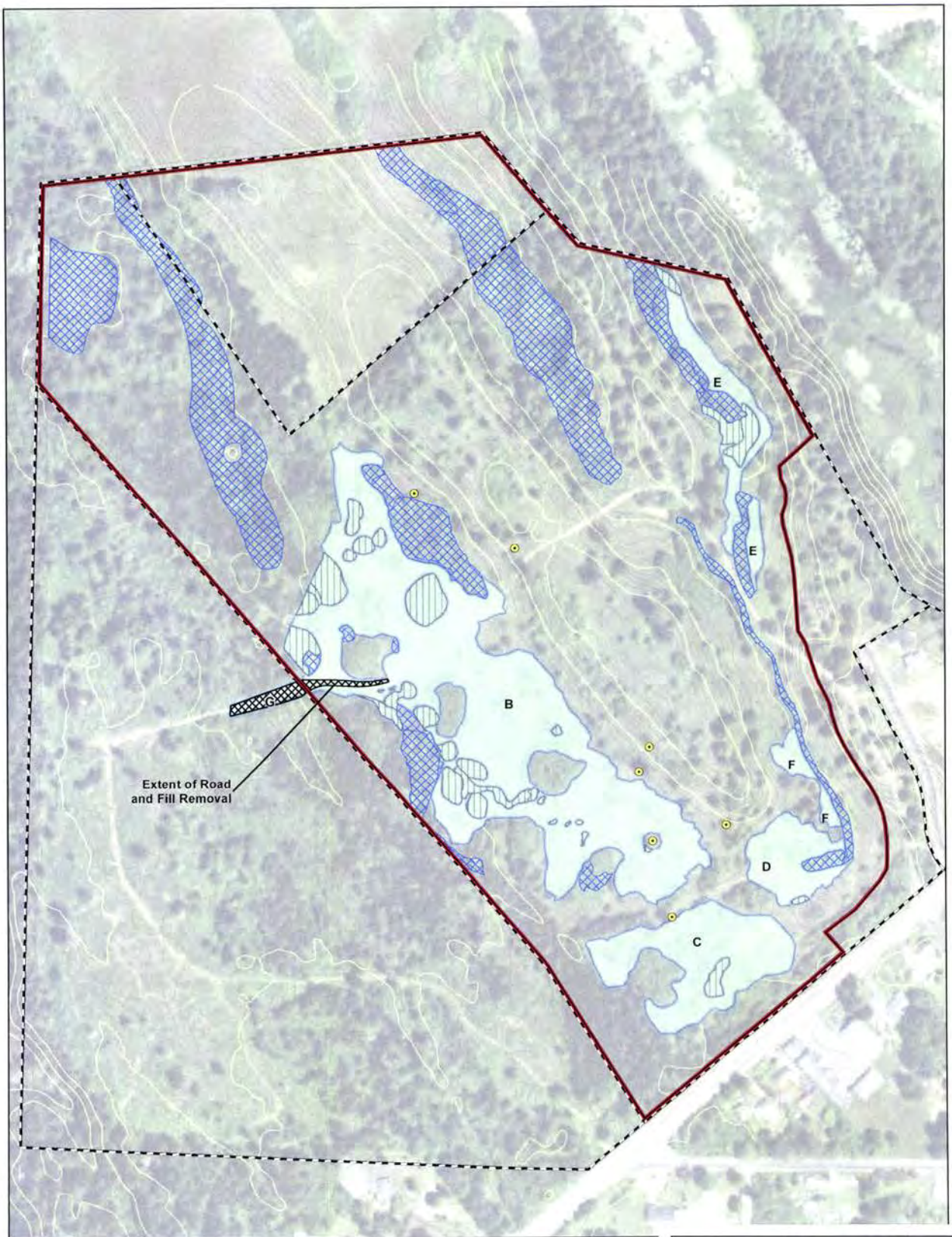
4 of 4



Bay Meadows Mitigation Site
Proposed Seasonal Wetlands (13.9 ac)
Proposed Wetlands that overlap Coastal Vegetation (2.0 ac)
Existing 2-Parameter (CDP) and 3-Parameter (USACE) Wetlands
Existing Snag
Limits of Fill and Road Removal
Bay Meadows Parcels
1 ft Contour
5 ft Contour

Paper Size ANSI B
0 50 100 200 300 400 500
Feet
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

Border Coast Regional Airport Auth
RSA Improvement Project - Mitigati

Bay Meadows
Proposed Wetlands

Figure 3-6

EXHIBIT NO. 4

APPLICATION NO. 1-14-0820
Border Coast Regional Airport Authority
PROPOSED PLANS & MAPS FOR BAY MEADOWS – 1 of 3

G:\11\964 Border Coast Regional Airport Auth\BCRAA_GIS\Maps\Figures\Coastal Commission_Jan2015\F3-6_BM_ProposedMitWetlands.mxd 180 Lonsdale Street Melbourne VIC 3000 Australia T 61 3 8687 8000 F 61 3 8687 8111 E melmail@ghd.com W www.ghd.com

Data source: USDA NAIP Imagery, 2012. 1m resolution. Del Norte County Parcel Boundaries, 2013. GHD, Wetland Delineation, 2014. Created by: jcrockett

Bay Meadows Mitigation Site
Proposed Seasonal Wetlands (12.6 ac)
Proposed Frog Ponds (3.3 ac)
Existing Snag
Limits of Fill and Road Removal
Bay Meadows Parcels
1 ft Contour
5 ft Contour

Paper Size ANSI B
0 50 100 200 300 400 500
Feet
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

Border Coast Regional Airport Authority
RSA Improvement Project - Mitigation and Monitoring Plan

Job Number 8411041
Revision A
Date 10 Dec 2014

Bay Meadows
Proposed Wetlands and Frog Ponds

Figure 3-6

G:\11984 BorderCoastRegionalAirportAuth\BCRAA_GIS\Maps\Figures\CoastalCommission_Jan2015\F3-6_BM_ProposedMitWetlands_WithFrogPonds.mxd
180 Lonsdale Street Melbourne VIC 3000 Australia T 61 3 8687 8000 F 61 3 8687 8111 E melmail@ghd.com W www.ghd.com

Data source: USDA NAIP Imagery, 2012. 1m resolution. Del Norte County Parcel Boundaries, 2013. GHD, Wetland Delineation, 2014. Created by jrousseau

Bay Meadows Parcels (not a product of survey)

Snag (to be preserved in place)

Existing Culvert - to Remain

Proposed Wetlands (15.88 ac)

Existing 2- and 3-Parameter Wetlands (9.10 ac)

Temporary Access Route (to be removed after construction)

Top Soil Disposal Area

Soil Disposal Area

Equipment Staging Area

Existing Dirt/Gravel Roads to Remain

Access Point

Paper Size 8.5" x 11" (ANSI A)

0 100 200 300 400 500

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

Border Coast Regional Airport Authority
RSA Improvement Project - Mitigation and Monitoring Plan

Job Number 8411165.20
Revision C
Date 15 Dec 2014

Bay Meadows
Access, Staging, and Soil Disposal

Figure 3-7

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G:\11984 BorderCoastRegionalAirportAuth\BCRAA_GIS\Maps\Figures\CoastalCommission_MMP\F3-7_BM_ProposedAccess.mxd

Pacific Shores 1972

EXHIBIT NO. 5

APPLICATION NO. 1-14-0820
Border Coast Regional Airport Authority
AERIAL PHOTOS OF PACIFIC SHORES – 1972 & 2013 – 1 of 2

Pacific Shores 2013