

## CALIFORNIA COASTAL COMMISSION

NORTH COAST DISTRICT OFFICE  
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# F 7b

## MEMORANDUM

Date: October 15, 2008

To: Commissioners and Interested Parties

From: Peter Douglas, Executive Director  
Robert S. Merrill, District Manager – North Coast District  
Melissa B. Kraemer, Coastal Program Analyst – North Coast District

Subject: **Addendum to Commission Meeting for Friday, October 17, 2008  
North Coast District Item F 7b, CDP No. 1-08-012  
(Northcoast Regional Land Trust)**

### STAFF NOTE

Staff is proposing to make certain changes to the staff recommendation on Coastal Development Permit Amendment Application No. 1-08-012, the application of the Northcoast Regional Land Trust to restore tidal hydrology and brackish marsh habitat across 23 to 29 acres of diked former tidelands (seasonal freshwater wetlands) and enhance 4,500 square feet of juvenile salmonid summer rearing habitat along Wood Creek. Staff is revising the staff recommendation to recommend approval of the applicant's request to waive the balance of four thousand four hundred dollars (\$4,400) due on the application fee for the permit request. The applicant requests that the fee be reduced to six hundred dollars (\$600.00), which is what the filing fee was at the time that the applicant both applied for the public grant funds that are supporting the proposed project and downloaded the application fee schedule from the Commission's website on February 26, 2008. The applicant was unaware of the increase in permit fees until they subsequently submitted the permit application on March 19, 2008 – five days after the Commission's new fee schedule became effective. Staff believes it is appropriate to reduce the fee in this case because (a) the proposed project would have significant overall habitat restoration benefits for a variety of marine resources, (b) the proposed project is funded entirely by public agency grant funds, and (c) when applying for the subject grant funds, the applicant did not anticipate the significant increase to the Commission's application fee schedule that would affect the total amount of funds needed to finance the project. Staff believes this combination of circumstances is unlikely to reoccur and therefore would not have a significant cumulative effect on the total amount of application fees collected by the Commission or on the Commission's budget. Therefore, staff is modifying the recommendation and resolution for the fee waiver request and the corresponding findings to accommodate the applicant's request. As the applicant

has already submitted \$600.00 for the application fee, staff recommends deleting Special Condition No. 9, which would have required submittal of what would be the balance of the application fee if the fee waiver request is not granted.

Additionally, Special Condition No. 4 of the staff recommendation requires, among other things, that the permittee complete revegetation of the restoration area within 60 days of project completion. The applicant, after reviewing the staff recommendation, requested a change to the condition to allow planting to occur in the optimal season for planting in the restored brackish marsh habitat, which generally is late winter or early spring. As the applicant expects to complete construction activities in late August 2009, the condition as currently written would require planting to be completed in the fall, which is not optimal. If planted in the fall, the plants to be installed in the restoration area would sit dormant until the spring and would be subjected to winter high flows and flooding without the benefit of having any root growth to anchor them. Because of this, the plants could easily be washed out, and additional revegetation would then have to be undertaken. Thus, the applicant suggests that it is better to revegetate the restoration area closer to the time that the installed plants will enter into a growth cycle to allow their roots to become better established. Therefore, staff is modifying Special Condition No. 4-B to accommodate the applicant's request.

Staff continues to recommend that the Commission approve the project with the special conditions included in the staff recommendation of October 3, 2008, as modified by the revisions described below.

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## I. REVISIONS TO STAFF RECOMMENDATION

The revisions to the staff report dated October 3, 2008, including the modification of special condition language and related findings, are shown below. Text to be deleted is shown in ~~strike through~~; text to be added appears in **bold double-underline**.

- *Revise the following text to the Recommendation and Resolution on pages 7-8:*

## B. MOTION, STAFF RECOMMENDATION, & RESOLUTION FOR WAIVER OF APPLICATION FEE

The staff recommends that the Commission adopt the following resolution:

### **Motion:**

*I move that the Commission direct the Executive Director to reduce the permit application fee for Coastal Development Permit No. 1-08-012 from five thousand dollars (\$5,000) to six hundred dollars (\$600).*

**Staff Recommendation of ~~Denial~~ Approval:**

Staff recommends a **NO YES** vote. Following the staff recommendation will result in the **permit application fee being reduced** applicant paying the permit application fee identified in the Commission's regulations ~~without a reduction from five thousand dollars (\$5,000)~~ to six hundred dollars (\$600). The motion passes only by affirmative vote of a majority of the Commissioners present.

**Resolution to ~~Deny~~ Approve a Fee Waiver Request**

The Commission hereby ~~denies~~ **approves** the permit application fee reduction for Coastal Development Permit No. 1-08-012 to six hundred dollars (\$600.00) ~~and directs that the permit application fee remain five thousand dollars (\$5,000).~~

- *Revise the following text to Special Condition No. 4 on page 11:*

**4. Site Revegetation**

The wetland restoration and enhancement sites shall be revegetated as proposed and shall comply with the following standards and limitations:

- A. Only native plant species shall be planted. All proposed plantings shall be obtained from local genetic stocks within Humboldt County. 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 property;
- B. All planting shall be completed ~~within 60 days~~ **by the end of the first full optimal planting season (generally March 1 to May 1) that occurs** after completion of construction;
- C. The use of rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone, Brodifacoum or Diphacinone shall not be used.

- *Delete Special Condition No. 9 on page 12 in its entirety*
- *Modify the corresponding findings (Section IV-J) on pages 47-48 as follows.*

**J. Waiver of Application Fee**

The applicant has requested that the Commission reduce the application fee for the permit request from five thousand dollars (\$5,000) to six hundred dollars (\$600). The applicant states that the proposed project is entirely funded by public grant funds, and at the time that the applicant (1) applied for those funds, and (2) filled out the application for the subject permit request in March of 2008, the Commission's fee schedule posted on the Commission website listed the filing fee for the development as much lower than the fee due at the time the application was received at the Commission's North Coast District Office. The subject permit application was received on March 19, 2008 – five days after the Commission's new filing fee schedule went into effect on March 14, 2008.

Pursuant to Section 13055(a) of the Commission's regulations, the permit application fee in this case is five thousand dollars (\$5,000). Prior to the recent change to the Commission's application fee schedule, which went into effect on March 14, 2008, the application filing fee for the proposed development would have been six hundred dollars (\$600).

As a general rule, the Commission does not support application fee waiver requests. The Commission's fee schedule is not directly structured for "at-cost" recovery of the staff time actually spent on applications and thus tends to charge applicants less than the amount of the Commission resources that are expended in processing an application. In other words, application fees are already generally lower than the amount it costs the Commission to process the application. In part, this is in recognition of the larger public service being provided to the people of the State, including applicants, for a public airing and debate regarding proposed projects in the coastal zone.

~~Due to the current deficiencies of the Commission's budget, it is particularly difficult for the Commission to consider waiving fees and reducing needed revenues to support the coastal program.~~ **In this particular case, however, the Commission finds that as (a) the proposed project would have significant overall habitat restoration benefits for a variety of marine resources; (b) the proposed project is funded entirely by public agency grant funds, and (c) when applying for the subject grant funds the applicant did not anticipate the significant increase to the Commission's application fee schedule.** Therefore, the Commission hereby directs that the permit application fee for CDP No. 1-08-012 ~~not~~ be reduced to six hundred dollars (\$600) and ~~shall remain at five thousand dollars (\$5,000)~~ **which is what the filing fee was at the time that the applicant applied for the public grant funds that are supporting the proposed project.** ~~The Commission attaches Special Condition No. 9 to require that the applicant submit the balance of the application fee prior to permit issuance.~~

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# F 7b

Filed: September 4, 2008  
49<sup>th</sup> Day: October 23, 2008  
180<sup>th</sup> Day: March 3, 2009  
Staff: Melissa B. Kraemer  
Staff Report: October 3, 2008  
Hearing Date: October 17, 2008  
Commission Action:

## **STAFF REPORT: REGULAR CALENDAR**

APPLICATION NO.: **1-08-012**

APPLICANT: **Northcoast Regional Land Trust**

AGENT: Redwood Community Action Agency, Attn: Don Allan

PROJECT LOCATION: Along Wood Creek and Freshwater Slough, on the north side of Myrtle Avenue, approximately 3,500 feet west of the intersection of Freshwater Road and Myrtle Avenue, at 5555 Myrtle Avenue, approximately two miles northeast of Eureka, Humboldt County (APN 402-291-15).

PROJECT DESCRIPTION: Restore tidal hydrology and brackish marsh habitat across 23 to 29 acres of diked former tidelands (seasonal freshwater wetlands) and enhancing 4,500 square feet of juvenile salmonid freshwater rearing habitat along Wood Creek by (1) excavating 2,450 cubic yards of material along 3,900 feet of historic tidal channels within diked former tidelands; (2) excavating 300 cubic yards of berm material along the north bank of Wood Creek; (3) enhancing freshwater habitat on Wood Creek by excavating 380 cubic yards of material to expand and enhance juvenile salmonid freshwater rearing habitat; (4) replacing a culvert crossing on Wood Creek with a "flatcar" bridge; (5) placing approximately 3,200 cubic yards of excavated

material on-site within diked former tidelands to recreate high marsh surfaces and tidal hummocks; (6) removing an existing tidegate on Wood Creek to allow for tidal inundation to the tidal marsh restoration area; (7) sealing a defunct Waterman tidegate located south of the main Wood Creek tidegate in the Freshwater Slough dike; (8) revegetating the tidal marsh restoration area with appropriate native species; and (9) relocating the western alignment of the existing agricultural fence.

GENERAL PLAN DESIGNATION: Agricultural Exclusive (AE), 1 dwelling unit per 20-60 acres.

ZONING DESIGNATION: Agricultural Exclusive, Minimum lot size: 60 acres with Flood Hazard and Transitional Agricultural Lands Combining Zones (AE-60/F,T); and Natural Resources with Coastal Wetlands Combining Zone (NR/W).

APPROVALS RECEIVED:

- (1) Humboldt County Conditional Use Permit No. 07-22
- (2) U.S. Army Corps of Engineers Clean Water Act Section 404 and Rivers and Harbors Act Section 10 Nationwide Permit (NWP) Nos. 3 (Maintenance) and 27 (Aquatic Habitat Restoration, Establishment, & Enhancement Activities) (authorized pending CDP approval)
- (3) California Department of Fish and Game CFGC Sec. 1603 Streambed Alteration Agreement No. R-1-08-0103
- (4) Humboldt Bay Harbor, Recreation, & Conservation District Permit No. 08-01

OTHER APPROVALS REQUIRED: North Coast Regional Water Quality Control Board Clean Water Act Section 401 Water Quality Certification

SUBSTANTIVE FILE  
DOCUMENTS:

- (1) Mitigated Negative Declaration for the “Wood Creek Estuary, Tidal Marsh, and Fish Access Enhancement Project” (adopted by the Humboldt County Planning Commission on September 4, 2008)
- (2) *Wood Creek Tidal Marsh Enhancement Project Biological Assessment*, Prepared by McBain & Trush, Arcata, CA, October 2007
- (3) *Wood Creek Tidal Marsh Design Report*, Prepared by Jeff Anderson & Associates, Arcata, CA, February 2008
- (4) Humboldt County Local Coastal Program

## **SUMMARY OF STAFF RECOMMENDATION**

Staff recommends approval with special conditions of the proposed wetland restoration project.

The project area is located along Freshwater Slough approximately two miles northeast of Eureka (Exhibit Nos. 1 and 2). The 54-acre project parcel abuts the southern dike of Freshwater Slough along its northern boundary, Myrtle Avenue along its southern and southwestern boundaries, and private property to the east. Wood Creek, a small, perennial, salmonid-bearing stream, flows through the southern portion of the property and empties into Freshwater Slough on the western edge of the project area (Exhibit No. 3). Historically (prior to the construction of the Northwestern Pacific Railroad and Highway 101 beginning over one hundred years ago), the project site occupied the upper zone of tidal marshland surrounding the perimeter of Humboldt Bay and its tidal mudflats (Exhibit No. 4). According to the Biological Assessment prepared for the project, these upper marsh zones were characterized by an intermix of freshwater sources (e.g., creeks) with salt marsh habitat resulting in transitional brackish marsh habitat. A dike that skirts the northern edge of the project area along Freshwater Slough for approximately 1,900 feet separates the tidal slough from the diked former tidelands which make up the bulk of the project area. These diked former tidelands currently function as seasonal freshwater wetlands dominated mostly by nonnative grasses (Exhibit No. 5). At the western end of the project area, Wood Creek drains into Freshwater Slough through a concrete box weir and wooden top-hinged tidegate, which allows the creek to drain at lower stages of the tide but prevents all but a small volume of leakage water from Freshwater Slough during higher stages of the tide. Approximately 1,400 feet upstream of the Wood Creek tidegate, an existing access road with a culverted crossing of the creek allows cattle to access the site for seasonal grazing during the dry months of the year.

The project area supports various sensitive species and environmentally sensitive habitat areas including Lyngbye's sedge, Tidewater goby, Chinook salmon, Coho salmon, Steelhead, Coastal cutthroat trout, brackish marsh, and freshwater emergent wetlands.

The "Wood Creek Tidal Marsh Enhancement Project," which is funded in part by grants from the Department of Fish and Game, NOAA-Fisheries, the U.S. Fish & Wildlife Service, the Natural Resources Conservation Service, the Nature Conservancy, and the State Coastal Conservancy (for the property purchase), involves restoring tidal hydrology and brackish marsh habitat across 23 to 29 acres of diked former tidelands (seasonal freshwater wetlands) and enhancing 4,500 square feet of juvenile salmonid summer rearing habitat along Wood Creek. Project components include (1) excavating 2,450 cubic yards of material along 3,900 feet of historic tidal channels within diked former tidelands; (2) excavating 300 cubic yards of berm material along the north bank of Wood Creek; (3) enhancing freshwater habitat on Wood Creek by excavating 380 cubic yards of material to expand and enhance juvenile salmonid freshwater rearing habitat; (4) replacing a culvert crossing on Wood Creek with a "flatcar" bridge; (5) placing approximately 3,200 cubic yards of excavated material on-site within diked former tidelands to recreate high marsh surfaces and tidal hummocks; (6) removing an existing tidegate on Wood Creek to allow for tidal inundation to the tidal marsh restoration area; (7) sealing a

defunct Waterman tidegate located south of the main Wood Creek tidegate in the Freshwater Slough dike; (8) revegetating the tidal marsh restoration area with appropriate native species; and (9) relocating the western alignment of the existing agricultural fence.

The project would have significant overall habitat restoration benefits for a variety of marine resources. The project would not result in any loss of overall wetland habitat area; the same amount of wetland area would exist before and after implementation of the project. The project would, however, result in the conversion of approximately 13.5 acres of nonprime, seasonal agricultural land to restored tidal channels, brackish marsh habitat, and juvenile salmonid summer rearing habitat.

The proposed restoration of approximately 23 to 29 acres of tidal marsh habitat in the project area is within an area that was historically subject to the tidal influence of Humboldt Bay. Historically (prior to the construction of the Northwestern Pacific Railroad and Highway 101 beginning over one hundred years ago), the project site occupied the upper zone of tidal marshland surrounding the perimeter of Humboldt Bay and its tidal mudflats prior to being diked, drained, and muted through tidegate installation. Historically, the area supported transitional brackish marsh habitat at the interface of tidal flux intermixing with freshwater input (from Freshwater and Wood Creeks).

The proposed restoration of an approximately 4,500-square-foot pool along Wood Creek for the purpose of expanding and enhancing juvenile salmonid summer rearing habitat is within an area that historically has supported more freshwater marsh and freshwater aquatic habitats than tidally influenced, saline habitats, because the existing culvert and fill crossing, which was installed decades ago, acts as a salinity barrier on the creek. The proposed restoration will help restore habitat diversity within Humboldt Bay and assist in the recovery of listed salmonid species. Juvenile salmonid summer rearing habitat in particular is a limited habitat type in the region, as the availability of cool water/low saline pools is limited during the relatively long dry season.

Although the proposed restoration would not reestablish the exact same configuration of habitat that historically existed in the area prior to the diking of the former tidelands for agricultural use, the proposed creation of tidal channels, tidal marsh, and juvenile salmonid summer rearing habitats will re-establish wetland habitat types that did previously exist at the site, and the proposed wetland restoration and enhancements in converted or degraded natural wetlands will result in the re-establishment of landscape-integrated ecological processes associated with wetland habitats. Therefore, staff believes 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). In addition, staff believes the proposed restoration is consistent with the mandates of Sections 30230 and 30231 of the Coastal Act that marine resources and the biological productivity of coastal waters shall be maintained and enhanced.

Although the project would maintain and enhance marine resources and the biological productivity of coastal waters, the project would convert 13.5 acres of agricultural (grazing) land inconsistent with the provisions of Sections 30241 and 30242 of the Coastal Act. However, staff believes that to not approve the project would result in a failure to maintain and enhance marine

resources and the biological productivity of coastal wetlands and waters that would be inconsistent with the mandates of Sections 30230 and 30231. In addition, it is the very essence of the project, not an ancillary amenity offered as a trade-off, that is both inconsistent with certain Chapter 3 policies and yet also necessary restoration. Finally, staff examined alternatives to the proposed project including (1) alternative sites; (2) alternative configurations of project features; and (3) the no-project alternative. Staff believes that there is no less environmentally damaging feasible alternative to the development as conditioned, as required by Section 30233(a) of the Coastal Act.

Therefore, staff believes the proposed project presents a true conflict between Sections 30241 and 30242 and Sections 30230 and 30231 of the Coastal Act, and staff believes that it is appropriate for the Commission to invoke the conflict resolution policies of Section 30007.5 of the Coastal Act. Staff believes that the impacts on coastal resources from not constructing the project would be more significant than the project's agricultural impacts and would be inconsistent with the mandates of Sections 30230 and 30231 to maintain and enhance marine resources and the biological productivity of coastal waters.

To ensure that the maintenance and enhancement of marine resources and biological productivity envisioned by the project that would enable the Commission to use the balancing provision of Section 3007.5 are achieved, staff recommends Special Condition Nos. 1 through 5. Staff believes that without Special Condition Nos. 1 through 5, the proposed project could not be approved pursuant to Section 30007.5 of the Coastal Act.

The finding that the proposed project constitutes "restoration purposes" is based, in part, on the assumption that the proposed project will be successful in increasing salt marsh and riparian habitat values. Should the project be unsuccessful at increasing these habitat values, or worse, if the proposed dredging impacts of the project actually result in long term degradation of the habitat, the proposed diking, filling, and dredging would not actually be for "restoration purposes." To ensure that the proposed project achieves the objectives for which it is intended (*i.e.*, for the restoration and retention of 23 to 29 acres of tidal marsh habitat and 4,500 square feet of juvenile salmonid summer rearing habitat), staff recommends Special Condition No. 1, which would require the applicants to submit a final monitoring plan to outline a method for measuring and documenting the improvements in habitat value and diversity at the site over the course of five years following project completion. Furthermore, Special Condition No. 1 would require the monitoring plan to include provisions for remediation to ensure that the goals and objectives of the restoration project are met.

Depending on the manner in which the proposed project is conducted, the significant adverse impacts of the project may include (1) impacts to marine resources and wildlife habitat from water pollution in the form of sedimentation or debris entering coastal waters and wetlands; (2) introduction (through re-planting) of exotic invasive plants species that could compete with native vegetation and negate the habitat improvements they would provide; (3) use of certain rodenticides that could deleteriously bio-accumulate in predator bird species; and (4) impacts to sensitive plant species (Lyngbye's sedge) and animal species (various fish species). Overall, the project would restore and enhance wetland habitat values and would produce generally beneficial

environmental effects. However, staff recommends various special conditions to ensure that habitat restoration and enhancement results and that potentially significant adverse impacts are minimized. These include Special Condition No. 2, which would require the applicants to undertake the development pursuant to certain construction responsibilities; Special Condition No. 3, which would require the applicants to submit a final Storm Water Pollution Prevention Plan that is to include certain specified water quality best management practices for minimizing impacts to coastal waters; Special Condition No. 4, which would prohibit the planting of any plant species listed as problematic and/or invasive and contains a prohibition on the use of anticoagulant-based rodenticides; and Special Condition No. 5, which would require the implementation of various measures and protocols to ensure minimization of impacts to Lyngbye's sedge, Tidewater goby, sensitive salmonids, and sensitive fish critical habitat within and around the project area.

Therefore, staff believes that as conditioned, the proposed development is consistent with all applicable Chapter 3 policies of the Coastal Act.

In addition to acting on the permit itself, the Commission will need to act on a request by the applicant that the Commission waive the balance of four thousand four hundred dollars (\$4,400) due on the application fee for the permit request. The applicant requests that the fee be reduced to six hundred dollars (\$600.00), which is what the filing fee was at the time that the applicant applied for the public grant funds that are supporting the proposed project and downloaded the application fee schedule from the Commission's website (on February 26, 2008) in preparation for submittal of the permit application on March 19, 2008 – five days after the Commission's new fee schedule became effective. Staff recommends that the Commission deny the request due to the deficiency of the Commission's current budget and because the application was submitted after the March 14, 2008 effective date of the Commission's fee regulations.

**The Motions to adopt the Staff Recommendation are found on Page 7.**

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## **STAFF NOTES**

### **1. Jurisdiction and Standard of Review**

The project site is located in the Commission's retained permit jurisdiction. The County of Humboldt has a certified LCP, but the site is within an area shown on State Lands Commission maps over which the State retains a public trust interest. Therefore, the standard of review that the Commission must apply to the project is the Chapter 3 policies of the Coastal Act.

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**I. MOTIONS, STAFF RECOMMENDATIONS, & RESOLUTIONS**

**A. MOTION, STAFF RECOMMENDATION, & RESOLUTION FOR APPROVAL OF COASTAL DEVELOPMENT PERMIT NO. 1-08-012 AS CONDITIONED**

The staff recommends that the Commission adopt the following resolution:

**Motion:**

*I move that the Commission approve Coastal Development Permit No. 1-08-012 pursuant to the staff recommendation.*

**Staff Recommendation of Approval:**

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

**Resolution to Approve Permit:**

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.

**B. MOTION, STAFF RECOMMENDATION, & RESOLUTION FOR WAIVER OF APPLICATION FEE**

The staff recommends that the Commission adopt the following resolution:

**Motion:**

*I move that the Commission direct the Executive Director to reduce the permit application fee for Coastal Development Permit No. 1-08-012 from five thousand dollars (\$5,000) to six hundred dollars (\$600).*

**Staff Recommendation of Denial:**

Staff recommends a **NO** vote. Following the staff recommendation will result in the applicant paying the permit application fee identified in the Commission's regulations without a reduction from five thousand dollars (\$5,000) to six hundred dollars (\$600). The motion passes only by affirmative vote of a majority of the Commissioners present.

**Resolution to Deny a Fee Waiver Request**

The Commission hereby denies the permit application fee reduction for Coastal Development Permit No. 1-08-012 to six hundred dollars (\$600.00) and directs that the permit application fee remain five thousand dollars (\$5,000).

**II. STANDARD CONDITIONS:** See Appendix A.

**III. SPECIAL CONDITIONS:**

**1. Final Restoration & Enhancement Monitoring Program**

A. **PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-012**, the applicant shall submit for review and approval of the Executive Director, a final detailed restoration and enhancement monitoring program designed by a qualified biologist for monitoring of the brackish marsh restoration and juvenile salmonid summer rearing habitat enhancement sites (i.e., 23- to 29-acre brackish marsh restoration area and 4,500-square-foot salmonid rearing habitat). The monitoring program shall at a minimum include the following:

- 1) Performance standards that will assure achievement of the restoration goals and objectives set forth in Coastal Development Permit (CDP) Application No. 1-08-012 as summarized in the Findings IV.B, “Project Description;”
- 2) Provisions for submittal within 30 days of completion of the initial restoration and enhancement work of (a) “as built” plans demonstrating that the initial restoration and enhancement work has been completed in accordance with the approved restoration and enhancement program, and (b) an assessment of the initial biological and ecological status of the “as built” restoration/enhancements. The assessment shall include an analysis of the attributes that will be monitored pursuant to the program, with a description of the methods for making that evaluation;
- 3) Provisions to ensure that the restoration and enhancement sites will be remediated within one year of a determination by the permittee or the Executive Director that monitoring results indicate that the sites do not meet the goals, objectives, and performance standards identified in the approved restoration/enhancement program and in the approved final monitoring program;
- 4) Provisions for monitoring and remediation of the restoration and enhancement sites in accordance with the approved final restoration and enhancement program and the approved final monitoring program for a period of five (5) years;
- 5) Provisions for submission of annual reports of monitoring results to the Executive Director by November 1 each year for the duration of the required monitoring period, beginning the first year after submission of the “as-built” assessment. Each report shall include copies of all previous reports as appendices. Each report

shall also include a “Performance Evaluation” section where information and results from the monitoring program are used to evaluate the status of the wetland restoration/enhancement project in relation to the performance standards;

- 6) Provisions for submission of a final monitoring report to the Executive Director at the end of the five-year reporting period. The final report must be prepared in conjunction with a qualified wetlands biologist. The report must evaluate whether the enhancement site conforms with the goals, objectives, and performance standards set forth in the approved final restoration and enhancement program. The report must address all of the monitoring data collected over the five-year period.
- B. If the final report indicates that the restoration and enhancement project has been unsuccessful, in part, or in whole, based on the approved goals and objectives set forth in CDP Application No. 1-08-012 as described in Findings IV.B “Project Description,” the applicant shall submit a revised or supplemental restoration and enhancement program to compensate for those portions of the original program which did not meet the approved goals and objectives set forth in CDP Application No. 1-08-012 as described in Finding IV.B “Project Description.” The revised enhancement 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 monitor and remediate the wetland restoration and enhancement sites in accordance with the approved monitoring program. 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.

## **2. Construction Responsibilities**

The permittee shall comply with the mitigation measures listed in the Mitigated Negative Declaration completed for the project, except as modified herein. Construction-related requirements shall include, but shall not be limited to, the following Best Management Practices (BMPs):

- A. No construction materials, debris, or waste shall be placed or stored where it may be subject to entering coastal waters or wetlands;
- B. Any and all debris resulting from construction activities shall be removed from the project site within 10 days of project completion and disposed of at an authorized location;
- C. All grading activities shall be conducted during the dry season period of June 1 through November 15; any grading activity conducted between October 16 and November 15 shall be subject to the following conditions:
  - 1) All work shall cease upon the onset of precipitation at the project site and shall not recommence until the predicted chance of rain is less than 50 percent for the

Eureka area portion of the Redwood Coast segment of the National Weather Service's forecast for Northwestern California;

- 2) The work site(s) shall be winterized between work cessation periods by installing stormwater runoff and erosion control barriers around the perimeter of the construction site to prevent the entrainment of sediment into coastal waters; and
  - 3) Adequate stocks of stormwater runoff and erosion control barrier materials shall be kept onsite and made available for immediate use.
- D. Construction activities within and adjacent to the creek shall only be performed during low tide and when soils are sufficiently dry so that sediment is not discharged into coastal waters;
- E. If rainfall is forecast during the time construction activities are being performed, any exposed soil areas shall be promptly mulched or covered with plastic sheeting and secured with sand bagging or other appropriate materials before the onset of precipitation;
- F. Any debris discharged into coastal waters shall be recovered immediately and disposed of properly;
- G. Any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or within designated staging areas. Mechanized heavy equipment and other vehicles used during the construction process shall not be stored or re-fueled within 100 feet of coastal waters; and
- H. Fuels, lubricants, and solvents shall not be allowed to enter the coastal waters or wetlands. Hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call. Any accidental spill shall be rapidly contained and cleaned up.

**3. Final Storm Water Pollution Prevention Plan**

- A. **PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-012**, the applicant shall submit for the review and approval of the Executive Director a final Storm Water Pollution Prevention Plan that substantially conforms to the draft plan prepared by Redwood Community Action Agency, dated July 25, 2008 (Exhibit No. 11).
- 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.

#### **4. Site Revegetation**

The wetland restoration and enhancement sites shall be revegetated as proposed and shall comply with the following standards and limitations:

- A. Only native plant species shall be planted. All proposed plantings shall be obtained from local genetic stocks within Humboldt County. 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 property;
- B. All planting shall be completed within 60 days after completion of construction;
- C. The use of rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone, Brodifacoum or Diphacinone shall not be used.

#### **5. Implementation of Sensitive Plant & Fish Species Mitigation Measures**

The permittee shall undertake all development authorized by CDP No. 1-08-012 in accordance with the measures and protocols proposed in the application [summarized in Findings IV-B and IV-C below and included within the final Mitigated Negative Declaration for the project, the Wood Creek Tidal Marsh Enhancement Project Biological Assessment dated October 2007, the NOAA-Fisheries informal consultation letter dated July 11, 2008 (File No. 2008/04085), the U.S. Fish and Wildlife Service informal consultation letter dated April 30, 2008 (File No. 81331-2008-I-0217), and the Department of Fish and Game Streambed Alteration Agreement issued for the project (#R-1-08-0103)] to ensure minimization of impacts to Lyngbye’s sedge, Tidewater goby, sensitive salmonids, and sensitive fish critical habitat within and around the project area.

#### **6. Protection of Archaeological Resources**

- A. If an area of historic or prehistoric cultural resources or human remains are discovered during the course of the project, all construction shall cease and shall not recommence except as provided in subsection (B) hereof, and a qualified cultural resource specialist shall analyze the significance of the find.
- B. A permittee seeking to recommence construction following discovery of the cultural deposits shall submit an archaeological plan for the review and approval of the Executive Director.
  - 1) 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.

- 2) 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.

**7. North Coast Regional Water Quality Control Board Approval**

**PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-012**, the applicant shall provide to the Executive Director a copy of a permit or other permission issued by the North Coast Regional Water Quality Control Board, or evidence that no permit is required. The applicant shall inform the Executive Director of any changes to the project required by the Board. 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.

**8. State Lands Commission Review**

**PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-012**, the applicant shall submit to the Executive Director, a written determination from the State Lands Commission that:

- A. No State lands are involved in the development; or
- B. State lands are involved in the development and all permits required by the State Lands Commission have been obtained; or
- C. State lands may be involved in the development, but pending a final determination an agreement has been made with the State Lands Commission for the project to proceed without prejudice to that determination.

**9. Submittal of Application Filing Fee**

**PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-012**, the applicant shall submit the entire application fee applicable to the project pursuant to the Commission's fee regulations and as directed in the resolution adopted by the Commission on pages 7-8 of this staff report.

**IV. FINDINGS & DECLARATIONS**

The Commission hereby finds and declares as follows:

**A. Environmental Setting**

The project area is located along Freshwater Slough approximately two miles northeast of Eureka (Exhibit Nos. 1 and 2). The 54-acre project parcel abuts the southern dike of Freshwater Slough along its northern boundary, Myrtle Avenue along its southern and southwestern

boundaries, and private property to the east. Wood Creek, a small, perennial, salmonid-bearing stream, flows through the southern portion of the property and empties into Freshwater Slough on the western edge of the project area (Exhibit No. 3). Historically (prior to the construction of the Northwestern Pacific Railroad and Highway 101 beginning over one hundred years ago), the project site occupied the upper zone of tidal marshland surrounding the perimeter of Humboldt Bay and its tidal mudflats (Exhibit No. 4). According to the Biological Assessment prepared for the project (McBain & Trush, Inc. October 2007), these upper marsh zones were characterized by an intermix of freshwater sources (e.g., creeks) with salt marsh habitat resulting in transitional brackish marsh habitat.

A dike that skirts the northern edge of the project area along Freshwater Slough for approximately 1,900 feet separates the tidal slough from the diked former tidelands which make up the bulk of the project area. These diked former tidelands currently function as seasonal freshwater wetlands dominated mostly by nonnative grasses such as velvet grass (*Holcus lanatus*), creeping bentgrass (*Agrostis stolonifera*), and perennial ryegrass (*Lolium perenne*) (Exhibit No. 5).

At the western end of the project area, Wood Creek drains into Freshwater Slough through a concrete box weir (3 feet wide by 50 feet long by 8 feet deep) and wooden top-hinged tidegate. The tidegate allows the creek to drain at lower stages of the tide but prevents all but a small volume of leakage water from Freshwater Slough during higher stages of the tide from entering Wood Creek. There are two additional Waterman tidegates on each side of the Wood Creek tidegate that were installed to help drain the pasture, but both are currently leaky and dysfunctional.

Approximately 1,400 feet upstream of the Wood Creek tidegate, an existing access road with a culverted crossing of the creek allows cattle to access the site for seasonal grazing during the dry months of the year (Exhibit No. 5). The culvert at the crossing has concrete rubble armoring the banks and creek bottom, which function as a grade control and near total salinity barrier. Thus, the portion of creek downstream of the crossing is subject to significantly more tidal influence than the portion of creek above the crossing. Vegetation along the creek reflects the amount of tidal influence received. Lyngbye's sedge (*Carex lyngbyei*) and other brackish marsh vegetation line the lower creek channel. The upper (~900 feet of) creek channel (from the access road to the Myrtle Avenue culvert) has become moderately aggraded and colonized by cattail (*Typha latifolia*) and bulrush (*Scirpus acutus*). Some Hooker's willow (*Salix hookeriana*) plants line the banks of the upper creek channel.

The project area supports various sensitive species and environmentally sensitive habitat areas including Lyngbye's sedge, Tidewater goby, Chinook salmon, Coho salmon, Steelhead, Coastal cutthroat trout, brackish marsh, and freshwater emergent wetlands (see Table 1 below).

The project site includes two different zoning designations: Agriculture Exclusive (60-acre minimum parcel size) with Flood Hazard and Transitional Agricultural Lands Combining Zones) and Natural Resources with a Coastal Wetlands Combining Zone (see Exhibit No. 6, which

shows agricultural lands and non-agricultural lands on the property). The project area currently supports approximately 33.5 acres of agricultural land.

The project site is not located within a designated highly scenic area or coastal view area, but public vantage points along Myrtle Avenue do afford views of the site.

## **B. Project Description**

The “Wood Creek Tidal Marsh Enhancement Project,” which is funded in part by grants from the Department of Fish and Game, NOAA-Fisheries, the U.S. Fish & Wildlife Service, the Natural Resources Conservation Service, the Nature Conservancy, and the State Coastal Conservancy (for the property purchase), involves restoring tidal hydrology and brackish marsh habitat across 23 to 29 acres of diked former tidelands (seasonal freshwater wetlands) and enhancing 4,500 square feet of juvenile salmonid summer rearing habitat along Wood Creek through the following project components (and see Exhibit No. 7 for design plans):

1. Excavating 2,450 cubic yards of material along 3,900 feet of historic tidal channels within diked former tidelands: Exhibit No. 7 shows the locations of the proposed channels to be constructed in the project area. The excavation footprint would be approximately 0.7-acre, but slough channel excavation and tidal hummock creation (see No. 5 below) will result in the creation of 23 acres of brackish marsh. Excavation and backfilling will be performed using an excavator and backhoe in the dry pasture (diked former tidelands/seasonal agricultural wetlands) during the dry season. Slough channel excavations would begin at the downstream end of each channel, and the heavy equipment would traverse the seasonal wetland pasture only within the footprint of the eventual excavated channel so as to minimize disturbance to the adjacent seasonal wetland. Where the new tidal channels join Wood Creek, a small plug of dirt would be left in place until all the channels and pool (see No. 3 below) are dug and other construction elements are completed, after which the plug would be carefully removed to allow tidewater to access the new channels. A minimum of four large woody debris habitat structures would be constructed within the proposed tidal slough channels to provide aquatic habitat diversity (e.g., velocity breaks, scour holes, cover structure, etc.), primarily for tidewater goby and juvenile salmonids. Typically the log structures will be buried in the tidal channel and embedded into the banks so that they remain in place. Each habitat structure may be anchored by a 1-ton to 2-ton boulder if necessary. Log structures may also be installed to provide grade control in strategic locations (e.g., at the entrance to the proposed pool described in No. 3 below) to prevent downcutting. Tidal pools also would be constructed within the restored tidal channels in some areas to further enhance aquatic habitat values.
2. Excavating 300 cubic yards of berm material along the north bank of Wood Creek: The purpose of removing this berm material is to allow for tidal inundation to the tidal marsh restoration area in the diked former tidelands (seasonal freshwater wetlands). See page 2 of Exhibit No. 7 for details.

3. Enhancing juvenile salmonid summer rearing habitat along Wood Creek by excavating 380 cubic yards of material to form a pool: See Exhibit No. 7 for details. The purpose of the pool is to expand and enhance juvenile salmonid summer rearing habitat along the portion of Wood Creek that will remain predominantly fresh. The proposed pool would usually contain freshwater, but at certain times of the year the pool may become brackish depending on the salinity gradient in Wood Creek, the function of the salinity sill described below, the volume of groundwater flow delivered to the pool, and the frequency of flushing from the upstream catchment. The upper approximately 900 feet of creek channel (from the access road crossing to the Myrtle Avenue culvert) has become moderately aggraded and colonized by cattail and bulrush. The Department of Fish and Game has recently documented valuable juvenile salmonid summer rearing habitat in the creek in an existing pool located at the mouth of the Myrtle Avenue culvert (see Exhibit No. 5). Rearing habitat that provides a cool water/low salinity refuge for fish during summer when salinity levels in lower Wood Creek are highest is important. The size of the new expanded pool would be approximately 4,500 square feet with a pool depth of 2.8 feet.
  
4. Replacing a culvert crossing on Wood Creek with a “flatcar” bridge: The existing access road/cattle crossing consists of an old culvert and fill material. The existing crossing would be excavated to the extent needed to remove the old culvert (approximately 70 cubic yards), the sides of the culvert excavation area will be laid back to a 2 to 1 (horizontal to vertical) slope or less, and the existing vegetation at the crossing will be skimmed, stockpiled, and replaced on the exposed fill outside the channel edges for erosion control. The purpose of leaving some of the existing fill in place is to maintain its existing function as a “salinity sill” to maintain the habitat quality (salinity and temperature) of the existing freshwater pool in Wood Creek located upstream of the crossing (at the mouth of the Myrtle Avenue culvert). As noted previously, this pool has recently been documented by the Department of Fish and Game as valuable juvenile salmonid summer rearing habitat, as it provides a cool water/low salinity refuge for fish during summer when salinity levels in lower Wood Creek are highest (for more discussion, see Finding IV-C below).

A 50-foot-long “flatcar” bridge spanning the 20-foot-wide creek reach would be installed to replace the old culvert that is to be removed. The bridge deck would be approximately 1 foot higher in elevation than the surrounding pasture elevation. The bridge would be set on and anchored to concrete abutments (2-feet-wide by 3-feet-high and 12-feet-long with 2-foot-deep abutments) located entirely out of and away from the creek channel. The left bridge abutment would be placed on an existing graveled road. Due to the length of the bridge, the right abutment may be able to be installed directly onto the pasture ground (i.e., no approach ramps). To minimize impacts to aquatic species and water quality, an approximately 100-foot-long section of the creek channel would be dewatered with coffer dams, fish screens would be installed upstream and downstream, and salmonids would be removed using minnow traps, seine nets, and (if salinity and conductivity conditions are conducive) electrofishing. Any exposed ground along or beyond the channel margins would be covered with sterile rice straw as mulch for erosion control. Work in the creek would occur during low tide intervals only. Excess debris from the old crossing would be disposed of at the City Garbage transfer station on West Hawthorne Street in Eureka.

5. Placing approximately 3,200 cubic yards of excavated material on-site within diked former tidelands to recreate high marsh surfaces and tidal hummocks: All of the excavated material (described in numbers 1-3 above) would be placed in the tidal marsh restoration area to create topographic diversity in the form of high marsh habitat and tidal hummocks (see Exhibit No. 7). The apices of the eight proposed tidal hummocks mirror those found along Fay Slough (approximately one mile north of the project site), which was used as a reference site for the proposed project design. Hummocks would be constructed at elevations appropriate to support tufted hairgrass (*Deschampsia cespitosa*) and other native brackish marsh plant species. The area to be enhanced through slough channel excavation (see No. 1 above) and tidal hummock creation is 23 acres.
6. Removing an existing tidegate on Wood Creek to allow for tidal inundation to the tidal marsh restoration area: The tidegate to be removed is wooden top-hinged tidegate on a concrete box weir (3 feet wide by 50 feet long by 8 feet deep). Currently the wooden flap and concrete structure inhibit the full tidal and stream-flow flushing that would normally occur at the confluence of Wood Creek and Freshwater Slough. Only the wooden flap and not the entire concrete structure would be removed (as removal of the latter would allow tidal inundation to productive agriculture land on the property and surrounding properties, as explained below). Removal of the wooden flap would increase the flushing capacity at the site due to the increased tidal prism and overall water volume allowed to pass through the moderately constricted mouth of Wood Creek. Removal of the wooden tide gate would occur after all other construction elements have been completed, including removal of the dirt plugs between the newly created tidal channels and Wood Creek (see No. 1 above). After the tidegate is removed, the total area of wetlands to be tidally enhanced (converted from seasonal freshwater) is approximately 23 acres, with a proposed mean higher high water (MHHW) elevation of 6.1 feet (NAVD88). The mean maximum monthly water (MMMW) elevation (proposed 7.6 feet NAVD88) could inundate up to 29 acres of diked former tidelands (currently seasonal freshwater wetlands).
7. Sealing a dysfunctional Waterman tidegate located south of the main Wood Creek tidegate in the Freshwater Slough dike: The existing Waterman tidegate is attached to a 2-foot-diameter culvert and is no longer functional, as it is rusted, leaky, unstable, and poses future risks (e.g., compromise of the Freshwater Slough dike and flooding of adjoining properties or Myrtle Avenue). The tidegate culvert would be opened up (approximately 2 square feet) from the top using hand tools and filled and sealed with concrete. The concrete would be mixed on site by hand and set by hand. Provisions would be made so that no uncured concrete comes into contact with the wetted channel. The work would occur during a single low tide cycle.
8. Revegetating the 23-acre tidal marsh restoration area with a combination of native species plugs (across approximately 11.5 acres), seeding (across approximately 4.5 acres), and passive revegetation (across approximately 7 acres): The stated goals of the revegetation are to (1) promote the recovery of desirable plant species and marsh types and minimize invasive species by planting the preferred species assemblages at appropriate hydrologic and elevation zones; (2) minimize surface erosion in areas disturbed by construction activities; and (3)

evaluate different revegetation methods that area intended to achieve recovery of desirable marsh types. See Exhibit No. 8 for more details.

- Plugs of Lyngbye’s sedge (*Carex lyngbyei*) and tufted hairgrass (*Deschampsia cespitosa*) would be installed on maximum 18-inch to 24-inch centers across approximately 11.5 acres of the tidal marsh restoration area (see Exhibit Nos. 8 & 9).
- Seeding of Lyngbye’s sedge and tufted hairgrass would be applied at a rate of 155 lbs/acre across approximately 4.5 acres of the tidal marsh restoration area (see Exhibit Nos. 8 & 9).
- Passive revegetation is proposed for the remaining approximately 7 acres of the tidal marsh restoration area. The applicant proposes to manually remove any invasive dense-flowered cordgrass (*Spartina densiflora*) plants that colonize the restoration area immediately upon detection.

The seeds and plugs would be obtained from Freshwater Farms Nursery, a local wetland plant nursery located adjacent to the project parcel. The plant material would be of local genetic stock gathered from adjacent stands of the applicable species. The revegetation is would be implemented during the fall/winter months to take advantage of the seasonal rains.

9. Relocating the western alignment of the existing agricultural fence: The proposed fencing would be the same as the existing fencing, except the western fence line would be moved eastward to accommodate the proposed restoration activities (see Exhibit No. 5). The corner posts would require three posts and two braces. End-braced posts would be needed at the culvert crossing near the access entrance to the property. Wooden posts would be placed every 150 feet between the braced stretch posts, and metal “T” posts would be inserted at 50-foot centers. The posts would be 4-inch pressure treated posts, 8 feet long, and set or driven at least 2 feet into the soil. Three strands of smooth high tensile wire would be strung on the posts using electric fence insulators and ratchet tighteners at one end of each wire span for easy tightening. A metal gate 12 feet to 14 feet in length would be installed at the culvert crossing/entrance to the field. A 12-volt battery powered electric fence charger would be installed to energize the fence. The fence would be designed to allow both for wildlife passage (small animals and amphibians to pass under and deer to jump over) and cattle exclusion (to protect the restoration area)

The project would have significant overall habitat restoration benefits for a variety of marine resources, as summarized in Table 1 below. The project would, however, result in the conversion of approximately 13.5 acres of nonprime, seasonal agricultural land to restored tidal channels and brackish marsh habitat (see Finding IV-F below).

**Table 1.** Summary of acreages & enhancements proposed for the 54-acre project area.

Habitat/Species	Approximate Size of Project Area Habitat	Notes
Brackish Marsh	1.4 acres (existing) 23 acres (proposed)	The project will result in an <b>increase</b> of approximately 21 acres

Habitat/Species	Approximate Size of Project Area Habitat	Notes
		through the conversion of existing diked former tidelands (seasonal freshwater wetlands).
Lyngbye's sedge <i>Carex lyngbyei</i>	1 acre (existing) 13 acres (proposed)	The project will result in an <b>increase</b> of ~12 acres (see Exhibit No. 9)
Tidewater goby <i>Eucyclogobius newberryi</i>	0.02-acre (existing) 0.8-acre (proposed)	The project will result in an <b>increase</b> of ~0.78 acres.
Chinook salmon <i>Oncorhynchus tshawytscha</i>	2,300 feet (existing) 6,200 ft (proposed) 4,500 ft <sup>2</sup> (proposed)	The project will result in an <b>increase</b> of ~3,900 feet of winter rearing habitat and ~4,500 square feet of summer rearing habitat.
Coho salmon <i>O. kisutch</i>	2,300 feet (existing) 6,200 ft (proposed) 4,500 ft <sup>2</sup> (proposed)	The project will result in an <b>increase</b> of ~3,900 feet of winter rearing habitat and ~4,500 square feet of summer rearing habitat.
Steelhead <i>O. mykiss</i>	2,300 feet (existing) 6,200 ft (proposed) 4,500 ft <sup>2</sup> (proposed)	The project will result in an <b>increase</b> of ~3,900 feet of winter rearing habitat and ~4,500 square feet of summer rearing habitat.
Coastal cutthroat trout <i>O. clarki clarki</i>	2,300 feet (existing) 6,200 ft (proposed) 4,500 ft <sup>2</sup> (proposed)	The project will result in an <b>increase</b> of ~3,900 feet of winter rearing habitat and ~4,500 square feet of summer rearing habitat.
Agricultural land	33.5 acres (existing) 20 acres (proposed)	The project will result in the conversion of approximately 13.5 acres of agricultural land (to tidal marsh habitat) and a <b>decrease</b> of ~5 animal unit months (AUM), from approximately 20 to 15 AUMs.

The applicant proposes to construct an approximately 2,800-foot-long temporary access road designed around the perimeter of the project area, through the seasonal wetland pasture. A secondary existing access road from the neighboring parcel (owned by Rick Storre) may also be utilized for occasional access. All equipment and material staging would take place within the project construction boundary. The only materials proposed to be staged would be large wood for use as instream habitat structures. Any equipment refueling would occur in the upland area next to Myrtle Avenue. Geotex mats and crushed rock would be temporarily placed in any pasture wet areas to minimize compaction during construction activities. Silt fencing and other erosion control measures would be installed as needed to reduce silt and turbidity runoff from Wood Creek during construction. To prevent salmonids and other estuarine fish species from moving into the site during construction, fish screens would be installed on Wood Creek during ebb tide, downstream of the tidegate and upstream of the proposed pool expansion/excavation site on Wood Creek.

The applicant has submitted a Compliance and Performance Monitoring Plan (dated April 2008; Exhibit No. 10), which outlines a preliminary monitoring plan for construction and compliance, physical site features, vegetation, and fisheries. The applicant also has prepared a preliminary Storm Water Pollution Prevention Plan (Exhibit No. 11).

The applicant proposes various mitigation measures to avoid or minimize project impacts on the environment, which are included in the Mitigated Negative Declaration prepared for the project (Exhibit No. 12) and are required to be implemented as a condition of approval of the Conditional Use Permit issued by the County for the project. In addition, the Commission notes that the applicant has been or will be issued several other permits and associated authorizations for the project that contain terms and conditions for avoiding or minimizing impacts to coastal resources and the environment (see “Other Approvals” listed on page 2).

**C. Restoration of Marine Resources, Biological Productivity, and Permissible Filling, Dredging, & Diking of Wetlands**

1. Applicable Coastal Act Policies and Standards

Coastal Act Section 30230 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.* [Emphasis added.]

Coastal Act Section 30231 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.* [Emphasis added.]

Coastal Act Section 30233 provides as follows, in applicable part:

(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...* [Emphasis added.]

## 2. Consistency Analysis

The proposed project will convert 23 to 29 acres of existing seasonal freshwater wetlands to tidal marsh. Many of the project components include activities that could be characterized as the placement of fill, dredging, or diking of a wetland. However, the project does not result in any loss of overall wetland habitat area. The same amount of wetland area exists before and after implementation of the project.

Coastal Act Sections 30230 and 30231 require, in part, that marine resources and coastal wetlands be maintained and enhanced. These policies also call for restoration of marine resources, coastal waters, streams, wetlands, and estuaries where feasible.

When read together as a suite of policy directives, Sections 30230, 30231, and 30233 set forth a number of different limitations on what types of projects may be allowed in coastal wetlands. For analysis purposes, the limitations applicable to the subject project can be grouped into four general categories or tests. These tests require that projects that entail the dredging, diking, or filling of wetlands demonstrate that:

- a. That the purpose of the filling, diking, or dredging is for one of the seven uses allowed under Section 30233;
- b. That the project has no feasible less environmentally damaging alternative;
- c. That feasible mitigation measures have been provided to minimize adverse environmental effects; and
- d. That the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible.

Each category is discussed separately below.

### **a. Permissible Use for Fill**

The first test set forth 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.”

The project involves restoring tidal hydrology and brackish marsh habitat across 23 to 29 acres of diked former tidelands (seasonal freshwater wetlands) and enhancing 4,500 square feet of juvenile salmonid summer rearing habitat along Wood Creek by (1) excavating 2,450 cubic yards of material along 3,900 feet of historic tidal channels within diked former tidelands; (2)

excavating 300 cubic yards of berm material along the north bank of Wood Creek; (3) enhancing juvenile salmonid summer rearing habitat on Wood Creek by excavating 380 cubic yards of material; (4) replacing a culvert crossing on Wood Creek with a “flatcar” bridge; (5) placing approximately 3,200 cubic yards of excavated material on-site within diked former tidelands to recreate high marsh surfaces and tidal hummocks; (6) removing an existing tidegate on Wood Creek to allow for tidal inundation to the tidal marsh restoration area; (7) sealing a dysfunctional waterman tidegate located south of the main Wood Creek tidegate in the Freshwater Slough dike; (8) revegetating the tidal marsh restoration area with appropriate native species; and (9) relocating the western alignment of the existing agricultural fence.

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.”<sup>1</sup> 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.”<sup>2</sup> 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 and lead to a persistent, resilient system integrated within its landscape”<sup>3</sup> 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 re-establishing 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, and will not promptly return to the pre-restored state.

Moreover, finding that proposed diking, filling, and dredging constitutes “restoration purposes” must be based, in part, on evidence that the proposed project will be successful in restoring habitat values. Should the project be unsuccessful at increasing and/or enhancing habitat values, or worse, if the proposed diking, filling, and dredging impacts of the project actually result in long term degradation of the habitat, the proposed diking, filling, and dredging would not actually be for “restoration purposes.” These two characteristics are particularly noteworthy to restoration grant program administrators in reviewing funding requests to ensure that the return

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<sup>1</sup> Merriam-Webster’s Collegiate Dictionary, Tenth Edition

<sup>2</sup> “Definitions,” *Society of Ecological Restoration News*, Society for Ecological Restoration; Fall, 1994

<sup>3</sup> *Position Paper on the Definition of Wetland Restoration*, Society of Wetland Scientists, August 6, 2000

on the funding investment is maximized and liabilities associated with unwanted side effects of the project are minimized.

Thus, to ensure that the project achieves its stated habitat restoration or enhancement objectives, and therefore 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 re-establishment of landscape-integrated ecological processes, and/or abiotic/biotic linkages associated with wetland habitats; (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.

The components of the proposed project that include filling, diking, or dredging of wetlands for the proposed restoration are discussed below. Those components that contribute to the tidal marsh restoration are discussed first followed by those components that contribute to the juvenile salmonid summer rearing habitat restoration.

(1) Tidal Marsh Restoration Components:

The components of the project that involve filling, diking, or dredging of existing wetlands for tidal marsh restoration include the following: (1) excavating 2,450 cubic yards of material along 3,900 feet of historic tidal channels within diked former tidelands; (2) excavating 300 cubic yards of berm material along the north bank of Wood Creek; (3) placing approximately 3,200 cubic yards of excavated material on-site within diked former tidelands to recreate high marsh surfaces and tidal hummocks; (4) replacing the culverted crossing of Wood Creek with a flatcar bridge; and (5) relocating the western alignment of the existing agricultural fence.

As described in more detail above in Finding No. IV-B, the project proposes to excavate approximately 0.7-acre of diked former tidelands (seasonal freshwater wetlands) along historic tidal channels to restore tidal hydrology to the area in conjunction with (among other project components) tidegate removal at the mouth of Wood Creek, berm removal, tidal hummock construction, replacing the culverted crossing of Wood Creek with a flatcar bridge, and relocating the western alignment of the existing agricultural fence. Approximately 3,200 cubic yards of excavated material will be placed in diked former tidelands to create topographic diversity in the form of high (brackish) marsh habitat and tidal hummocks. The project design will enable tidewater inundation to between 23 acres (MHHW) and 29 acres (MMMW) of diked former tidelands.

The proposed restoration of approximately 23 to 29 acres of tidal marsh habitat in the project area is within an area that was historically subject to the tidal influence of Humboldt Bay. As described above in Finding No. IV-B, historically (prior to the construction of the Northwestern Pacific Railroad and Highway 101 beginning over one hundred years ago), the project site occupied the upper zone of tidal marshland surrounding the perimeter of Humboldt Bay and its tidal mudflats prior to being diked, drained, and muted through tidegate installation. The project

area is shown as “tidal marsh” on the 1870 U.S. Coast and Geodetic Survey Map (see page 7 of the October 2007 Biological Assessment for the project), which delineated pre-development tidal marsh boundaries around the bay. Historically, the area likely supported transitional brackish marsh habitat at the interface of tidal flux intermixing with freshwater input (from Freshwater and Wood Creeks).

According to information from the U.S. Fish and Wildlife Service (FWS), in the Humboldt Bay region it is estimated that between 7,000 and 8,700 acres of tidal marsh (including salt marsh and brackish marsh habitats) were present prior to human development (more recent estimates [Pickart 1988] place the historic tidal marshes closer to 10,000 acres). Since the mid-1800’s, most of what was likely to have been historic tidal marsh has been diked or filled and has been reduced to a total area of around 900 acres, a reduction of at least 87 percent. The FWS has indicated that restoration of tidal marsh habitats around the Bay is a high priority, as tidal marsh restoration is important for the protection, enhancement, and restoration of native fish, wildlife, and plant communities, some of which are dependent on tidal marsh for their existence. In past permit actions on wetland restoration projects around Humboldt Bay, the Commission has acknowledged that, in general, restoring areas that have historically supported tidal marsh is preferable when the physical conditions of a site present such an opportunity.

According to the Biological Assessment prepared for the project (McBain & Trush, Inc. October 2007), brackish marsh habitat is even more limited than salt marsh habitat in the Humboldt Bay region. Brackish marsh habitat represents a transitional interface between salt marsh and freshwater marsh, where salinity levels are relatively low, but the habitat still is tidally influenced. Typical brackish marsh vegetation in the Humboldt Bay region is dominated by tufted hairgrass, Lyngbye’s sedge, and other species. One of the few remaining pristine examples of brackish marsh habitat occurs along Fay Slough, approximately one mile north of the project site. This area was used as a reference site for the design phase of the “Wood Creek Tidal Marsh Enhancement Project.”

As explained above, due to the subject site’s location between two freshwater sources – Freshwater Slough, which is seasonally dominated by freshwater runoff from Freshwater Creek, and Wood Creek – the project area historically supported transitional brackish marsh habitat. Therefore, the Commission finds that the proposed creation of 23 to 29 acres of brackish marsh habitat is mandated by the requirements of Section 30230 that marine resources shall be maintained, enhanced, and where feasible, restored. The Commission further finds that the proposed dredging of 0.7 acres of seasonal wetlands and placement of 3,200 cubic yards of fill within seasonal wetlands for the restoration of 23 to 29 acres of brackish marsh habitat is permissible under Section 30233(a)(6) for “restoration purposes.”

As discussed above, this finding that the proposed project constitutes “restoration purposes” is based, in part, on the assumption that the proposed project will be successful in increasing tidal marsh habitat values. Should the project be unsuccessful at increasing brackish marsh habitat values, or worse, if the proposed dredging and filling impacts of the project actually result in long term degradation of the habitat, the proposed diking, filling, and dredging would not actually be for “restoration purposes.” To ensure that the proposed project achieves the

objectives for which it is intended (*i.e.*, for the restoration of 23 acres of tidal marsh), the Commission attaches Special Condition No. 1. This condition requires the applicants to submit a final monitoring plan for review and approval by the Executive Director prior to the issuance of the coastal development permit. The final monitoring plan is required to outline a method for measuring and documenting the improvements in habitat value and diversity at the site over the course of five years following project completion. Furthermore, Special Condition No. 1 requires the final monitoring plan to include provisions for remediation to ensure that the goals and objectives of the tidal marsh restoration project are met.

(2) Juvenile Salmonid Summer Rearing Habitat Restoration Components:

The project proposes to expand and enhance juvenile salmonid summer rearing habitat by creating a 4,500-square-foot pool along Wood Creek (excavating 380 cubic yards of material for a pool depth of 2.8 feet) upstream of the existing crossing. The upper approximately 900 feet of creek channel (from the access road crossing to the Myrtle Avenue culvert) has become moderately aggraded and colonized by cattail and bulrush. The proposed pool expansion on the creek would enhance degraded aquatic habitat for the benefit of juvenile salmonids.

Historically, the area upstream of the access road that crosses Wood Creek has supported more freshwater marsh and freshwater aquatic habitats than tidally influenced, saline habitats because the existing culvert and fill crossing, which was installed decades ago, acts as a salinity barrier on the creek. Furthermore, this area is situated at the outer extreme of historic bay tidelands, which, as discussed above, was a transitional habitat between freshwater and tidal habitats. The delineation between freshwater and tidal habitats likely was not distinct. The proposed pool would usually contain freshwater, but at certain times of the year the pool may become brackish depending on the salinity gradient in Wood Creek, the function of the salinity sill described below, the volume of groundwater flow delivered to the pool, and the frequency of flushing from the upstream catchment. Because the “salinity sill” road crossing maintains the low-saline, low-temperature freshwater habitats that are available upstream, the Wood Creek area upstream of the access road crossing and downstream of the Myrtle Avenue culvert currently and historically has supported valuable summer rearing habitat for juvenile salmonids. As a partially brackish habitat, the juvenile salmonid summer rearing habitat is a type of marine resource.

The project is designed to add both brackish marsh habitat and habitat for salmon rearing, both of which are dramatically reduced in the region over historic levels. The proposed enhancements are needed to help restore habitat diversity within Humboldt Bay and assist in the recovery of listed salmonid species including Coho salmon, Chinook salmon, Steelhead, and Coastal cutthroat trout. Juvenile salmonid summer rearing habitat in particular is a limited habitat type in the region, as the availability of cool water/low saline pools is limited during the relatively long dry season (approximately June through October).

Therefore, the Commission finds that the proposed juvenile salmonid summer rearing habitat enhancements are consistent with the definition of restoration and constitute filling and dredging for restoration purposes consistent with Section 30233(a)(6), because the proposed enhancements entail actions taken in converted or degraded natural wetlands that will result in

the reestablishment of landscape-integrated ecological processes associated with wetland habitats that historically existed in the area. The Commission further finds that as the proposed juvenile salmonid habitat enhancements will maintain and enhance marine resources and the biological productivity of coastal waters, the proposed improvements are mandated by the requirements of Sections 30230 and 30231.

As discussed above, this finding that the proposed project constitutes “restoration purposes” is based, in part, on the assumption that the proposed creation of a 4,500-square-foot pool along Wood Creek will be successful in enhancing juvenile salmonid summer rearing habitat values. Should the project be unsuccessful at increasing juvenile salmonid habitat values, or worse, if the proposed dredging impacts of the project actually result in long term degradation of the habitat, the proposed diking, filling, and dredging would not actually be for “restoration purposes.” To ensure that the proposed project achieves the objectives for which it is intended (*i.e.*, for the enhancement of 4,500 square feet of juvenile salmonid rearing habitat), the Commission attaches Special Condition No. 1, which (as described above) requires the applicants to submit a final monitoring plan to outline a method for measuring and documenting the improvements in habitat value and diversity at the site over the course of five years following project completion.

#### **b. Alternatives Analysis**

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 follows:

*“Feasible” means capable of being accomplished in a successful manner within a reasonable time, taking into account economic, environmental, social, and technological factors.*

Alternatives to the proposed project that were examined include (1) the no-project alternative; and (2) alternative sites; and (3) alternative methods. As explained below, each of these alternatives are infeasible and/or do not result in a project that is less environmentally damaging than the proposed project.

##### **(1) No-Project Alternative**

The “no project” alternative would maintain the *status quo* of the site and would not restore 23 to 29 acres of tidal marsh habitat and 4,500 square feet of juvenile salmonid freshwater rearing habitat as proposed. Excavation of 3,900 feet of historic tidal channels (2,450 cubic yards of material) would not occur, and recreation of high marsh habitats through the placement of 3,200 cubic yards of fill for tidal hummocks would not occur. Additionally, excavation of 380 cubic yards of freshwater marsh for the expansion and enhancement of a 4,500-square-foot habitat pool on Wood Creek would not occur. Existing conditions in the majority of the project area include mostly degraded seasonal freshwater wetlands (diked former tidelands), a portion of which are used for seasonal cattle grazing. Existing conditions in the freshwater portion of Wood Creek upstream of the existing access road consist of limited habitat for juvenile salmon, primarily restricted to the mouth of the Myrtle Avenue culvert.

Under the “no project” alternative, the land would continue to be used, in part, for seasonal agricultural grazing (as it would under the proposed project) and native plant nursery stock, but there would be no restored and improved habitat for marine resources. Furthermore, the biological productivity of the coastal wetlands and waters would not be improved, including improved wetland habitat value for a diversity of sensitive plant and animal species and habitats, including Lyngbye’s sedge, Tidewater goby, Chinook salmon, Coho salmon, Steelhead, Cutthroat trout, brackish marsh, and others. Accordingly, taking into consideration the economic, environmental, and social factors, the no project option is not a feasible less environmentally damaging alternative.

### (2) Alternative Sites

Much of the historic tidelands surrounding Humboldt Bay have been diked, drained, and converted to agriculture and other use types (e.g., public facilities, commercial and industrial development, etc.), and restoration and enhancement could theoretically occur on other parcels around the bay if there were willing landowners. However, at this time the applicant is the only landowner who has proposed the project and who is willing to contribute to the grant funds available for the project. Additionally, only certain sites (such as the subject site) around the bay are available for brackish marsh restoration, because historically this habitat type occurred at the outer fringes of historic tidelands where freshwater input (e.g., from adjacent creeks and seasonal runoff) intermixed with tidal flux to create a transitional brackish habitat. Furthermore, the majority of the land in immediate proximity to Humboldt Bay and its tributaries where restoration of these habitat types is possible is itself wetland by nature. Therefore, implementing the project at an alternative location is not a feasible less environmentally damaging alternative.

### (3) Alternative Methods

Instead of implementing the project as proposed, the applicant could (a) grade the marsh plain rather than excavate channels to allow tidal channels to form, (b) excavate fewer or more tidal channels than proposed, (c) not construct tidal hummocks as proposed, and/or use other restoration methods than those proposed.

#### (a) *Grading the marsh plain rather than excavating channels:*

Rather than carving 3,900 feet of tidal channels, the applicant instead could grade the entire 23-acre marsh plain down to the proper elevation to allow for natural tide channel formation once the Wood Creek tidegate is removed. The area proposed for tidal marsh restoration is currently at or near the mean higher high water (MHHW) tidal datum and grades to upland. According to the hydraulic analysis and design report prepared for the project (Jeff Anderson & Associates, February 2008), tidal channel initiation typically occurs on unvegetated mudflats, which are inundated with water over a significant portion of the tidal cycle with adequate depths and erosive force to carve channels. Tidal channel networks may redevelop naturally if an adequate tidal prism is delivered to the site when tidal action is restored. The tidal prism required to cut channels typically requires the marsh plain surface to be close to the mudflat colonization elevation (which is between mean tide level and mean high water). However, if the substrate is compacted (such as the case with past agricultural operations on the subject site), channel development may be limited due to increased resistance to erosion. Furthermore, channels will

not reestablish on marsh plain surfaces near MHHW because the tidal prism does not produce high enough erosive forces to cut channels. Additionally, on the subject site the concrete weir portion of the Wood Creek tidegate mutes the upper end of the tidal curve and thus limits the erosive power of high tides, which would impede channel development. Finally, this approach would require a significantly higher volume of material be dredged from the existing diked former tidelands than the proposed alternative. As proposed, the project has been designed to provide an adequate tidal prism to the site and a base channel network that will promote the evolution of a complex drainage system to support an ecologically rich and diverse community.

(b) *Excavating more or fewer channels than proposed:*

According to the hydraulic analysis and design report prepared for the project (Jeff Anderson & Associates, February 2008), the proposed tidal channels are based on historic maps of Wood Creek, connectivity of existing channels and ponds, and empirical relations that define the number of channel branches that generally compose a network of a given order. The proposed channel network design is based on the size of the tidal marsh restoration area, which will support a 4<sup>th</sup>-order slough channel. Reoccupation of other slough channels was not incorporated into the design for various reasons. First, full tidal inundation cannot be restored to the site without increasing tidal flooding on adjacent properties. Second, reestablishing channel branches at the upper end of the Wood Creek channel would require excavation of the creek channel through existing valuable juvenile salmonid freshwater summer rearing habitat and also would increase salinity levels on adjacent agricultural properties. Third, some of the smaller historic channels have been obscured by levee and berm construction and subsequently have developed new drainage patterns. The proposed project has been designed to enhance the established drainages in the area. Finally, excavating the channel network beyond the proposed alternative would conflict with the applicant's management objective to sustain agricultural use of a portion of the property that is currently leased to a local cattle rancher.

(c) *Not constructing tidal hummocks as proposed:*

Implementing the project without constructing tidal hummocks (through the placement of approximately 3,200 cubic yards of excavated material on-site) would result in less topographic diversity of the marsh plain surface. Topographic diversity provides the highest potential for diversity of native plant species and microhabitats that are valuable to wildlife. The proposed hummocks also will be the proper elevations necessary support the desired brackish marsh habitat.

(d) *Not relocating the western fence alignment:*

The relocation of the fence technically requires the placement of fill in the form of the installation of the fence posts into seasonal wetlands. However, this fill is essential to ensure that full restoration of brackish marsh habitat is achieved and maintained because without it, cattle would roam unimpeded over the restoration area and trample and destroy the restored habitat. As the fence currently exists in another alignment and is only being relocated, this component of the project will not result in significant amounts of new fill and affects only approximately 100 square feet of seasonal freshwater wetland habitat.

(e) *Conclusion:*

Therefore, for all of the above reasons, implementing the project using alternative methods or designs is not a feasible less environmentally damaging alternative.

#### (4) Conclusion

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

#### c. 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 waters and wetlands. Depending on the manner in which the proposed project is conducted, the significant adverse impacts of the project may include (1) impacts to water quality in the form of sedimentation or debris entering coastal waters and wetlands; (2) introduction (through re-planting) of exotic invasive plants species that could compete with native vegetation and negate the habitat improvements they would provide; (3) use of certain rodenticides that could deleteriously bio-accumulate in predator bird species; and (4) impacts to sensitive plant species (Lyngbye's sedge) and animal species (various fish species). Overall, the project would restore and enhance wetland habitat values and would produce generally beneficial environmental effects. However, the proposed project has been conditioned to ensure that habitat restoration and enhancement does result and that potentially significant adverse impacts are minimized. The potential impacts and their mitigation are discussed below in the following sections.

#### (1) Water Quality Impacts

The proposed restoration and enhancements are being undertaken to restore and enhance marine resources and the biological productivity of coastal wetlands and waters. The existing brackish marsh in and around the project area provides habitat for sensitive plant species such as Lyngbye's sedge. Freshwater Slough and Wood Creek provide habitat for various sensitive fish species (including tidewater goby and various salmonids) and a suite of macro-invertebrates and other marine organisms. The surrounding seasonal wetlands (diked former tidelands) provide habitat for a wide assortment of terrestrial organisms, most notably several environmentally sensitive avian species such as the Northern harrier (*Circus cyaneus*), White-tailed kite (*Elanus leucurus*), Great blue heron (*Ardea herodias*), and Snowy egret (*Egretta thula*).

Potential adverse impacts to both existing and to-be-restored/enhanced fish and wildlife habitat-related water quality could occur in the form of sedimentation or other pollutants adversely affecting coastal waters. In compliance with requirements of the necessary Regional Water Quality Control Board (RWQCB) permit for the project, the applicant has prepared a Storm Water Pollution Prevention Plan (SWPPP) (draft version, dated July 25, 2008) (Exhibit No. 11), which lists six main objectives: (1) identify all pollutant sources, including sources of sediment, that may affect the quality of stormwater discharges associated with construction activity; (2) identify non-stormwater discharges; (3) identify, construct, implement, and maintain Best

Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction; (4) develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs); (5) identify a sampling and analysis strategy and sampling schedule for discharges from construction activity which discharge directly into CWA Section 303(d) Water Bodies [water bodies listed as impaired for sedimentation under Clean Water Act Section 303(d)]; and (6) for all construction activity, identify a sampling and analysis strategy and sampling schedule for discharges that have been discovered through visual monitoring to be potentially contaminated by pollutants not visually detectable in the runoff.

To ensure that adverse impacts to water quality do not occur from construction activities or from entrainment of sediment into stormwater runoff from bare, disturbed ground in and around the project area, the Commission attaches Special Condition Nos. 2 and 3. Special Condition No. 2 requires the applicants to undertake the development pursuant to certain construction responsibilities. These include, but are not limited to, the following: (a) no construction materials, debris, or waste are to be placed or stored where they may enter coastal waters; (b) all construction debris is to be removed and disposed of in an approved location; (c) the construction window shall be limited to the dry season (June 1- November 15), and any grading between October 16 and November 15 shall only be conducted if conditions remain dry, the predicted chance of rain is less than 30 percent, and appropriate BMPs are in place; (d) construction activities adjacent to the creek and slough shall only be performed at low tide and when soils are sufficiently dry so that sediment is not discharged into streams; (e) if rainfall is forecast during the time construction activities are being performed, any exposed soil areas shall be promptly mulched or covered with plastic sheeting and secured with sand bagging or other appropriate materials before the onset of precipitation; (f) any debris discharged into coastal waters shall be recovered immediately and disposed of properly; (g) any fueling and maintenance of construction equipment shall occur within upland areas only outside of environmentally sensitive habitat areas or within designated staging areas; and (h) fuels, lubricants, and solvents shall not be allowed to enter the coastal waters or wetlands, hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and any accidental spill shall be rapidly contained and cleaned up. The Commission attaches Special Condition No. 3 to ensure that the project is undertaken according to the proposed erosion and runoff control specifications and other Best Management Practices. Special Condition No. 3 requires the applicants to submit, prior to issuance of the permit for the review and approval of the Executive Director, the final version of the RWQCB-approved SWPPP that substantially conforms to the draft version dated July 25, 2008. The condition further requires that development is implemented in accordance with the approved final plan.

## (2) Introduction of Exotic Invasive Plants

The use of non-invasive plant species adjacent to environmentally sensitive habitat areas (ESHAs) is critical to protecting such areas from disturbance. If invasive species are planted

adjacent to an ESHA they can displace native species and alter the composition, function, and biological productivity of the ESHA.

The applicant is proposing to revegetate the 23-acre tidal marsh restoration area with a combination of native species plugs (across approximately 11.5 acres), seeding (across approximately 4.5 acres), and passive revegetation (across approximately 7 acres). The applicant also proposes to eradicate any dense-flowered cordgrass (*Spartina densiflora*) plants (a noxious weed of tidal marsh habitats) currently on site as well as any that colonize the site post project implementation.

To assure that no invasive plant species are seeded in the project area, Special Condition No. 4 prohibits the planting of any 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. Furthermore, no plant species listed as a “noxious weed” by the governments of the State of California or the United States are to be utilized in the revegetation portion of the project. As discussed above, Special Condition No. 1 requires a final monitoring plan to outline a method for measuring and documenting the improvements in habitat value and diversity at the site (including eradicating cordgrass from the area) over the course of five years following project completion.

### (3) Use of Anticoagulant-based Rodenticides

To help in the establishment of vegetation, 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 No. 4 contains a prohibition on the use of such anticoagulant-based rodenticides.

### (4) Impacts to Sensitive Plant and Fish Species

One rare plant species occurs in the existing brackish habitat in the project area: Lyngbye’s sedge (*Carex lyngbyei*). Lyngbye’s sedge is considered “rare” by the California Native Plant Society (CNPS List 2.2) and the California Department of Fish and Game (G5/S2.2). Lyngbye’s sedge is a perennial species in the Sedge family (Cyperaceae) that grows in brackish or freshwater marsh habitats near sea level primarily along the North Coast of California (from Marin County to Del Norte County). The species is more common outside of California, extending into Oregon and elsewhere. According to the California Natural Diversity Database, there are numerous documented occurrences of the species in the Humboldt Bay region. A 2006 vegetation map produced by the applicant’s consultant shows a band of Lyngbye’s sedge approximately an acre in size on lower Wood Creek in existing brackish marsh habitat. The

project proposes to increase Lyngbye's sedge habitat to approximately 13 acres, and Lyngbye's sedge plugs and seeds are proposed to be planted in the project area.

There are various sensitive fish species that also occur or have the potential to occur in the project area. The Southern Oregon/Northern California Coast Evolutionary Significant Unit (ESU) of Coho salmon and the Coastal California ESU of Chinook salmon are listed under the federal Endangered Species Act (ESA) as "threatened." Chinook salmon (*Oncorhynchus tshawytscha*) spawn in upstream reaches of stream tributaries to Humboldt Bay (e.g., Freshwater Creek), but young fish are believed to spend several months during their first year "rearing" in the estuary. Coho salmon (*O. kisutch*) also spawn in upstream reaches, and their young also spend time in the estuary before first entering the ocean. In addition, adults of both species spend time in the estuary when returning to the basin to spawn, "holding" there while waiting for fall rains to bring river levels up enough to allow upstream migration. As shown in Table 1 above, there is approximately 2,300 feet of existing habitat in the project area for salmonids, and the project proposes to restore an additional 3,900 feet of winter rearing habitat in the form of the excavation of the proposed tidal channels within the proposed tidal marsh restoration area. Summer rearing habitat for juvenile salmonids also has recently been documented by the Department of Fish and Game in the project area in a freshwater pool in Wood Creek at the mouth of the Myrtle Avenue culvert. The applicant proposes to restore an additional 4,500-square-foot pool to provide additional summer rearing habitat.

The third salmonid species of concern in the project vicinity is Steelhead (*O. mykiss*), a seagoing trout. Steelhead have a life history similar to that of Chinook and Coho, although the Steelhead (which is closely related to non-seagoing rainbow trout), find appropriate habitat conditions in smaller streams, and in more upstream reaches than do the larger salmonids. The Northern California Steelhead ESU is presently listed under the federal ESA as "threatened." As shown in Table 1 above, there is approximately 2,300 feet of existing habitat in the project area for Steelhead, and the project proposes to restore an additional 3,900 feet of winter rearing habitat.

An additional fish species of concern in the project area is the Coastal cutthroat trout (*O. clarki clarki*), a resident salmonid in coastal streams in northern California and southern Oregon. This species is a "species of special concern" for the Department of Fish and Game, but is not listed under either the federal or state ESAs. Coastal cutthroat trout have been documented in many streams in the Humboldt Bay basin, and are presumed to be present in all the perennially flowing tributary streams to Humboldt Bay. All of the life requisites for this species are provided by the conditions in the streams in which it resides. As shown in Table 1 above, there is approximately 2,300 feet of existing habitat in the project area for Coastal cutthroat trout, and the project proposes to restore an additional 3,900 feet of winter rearing habitat.

Finally, the project area provides habitat for an additional federally listed fish species, the Tidewater goby (*Eucyclogobius newberryi*), a species currently listed as "endangered" under the federal ESA. Tidewater gobies occur in near-estuarine tidal stream bottoms with varying salinities and substrates generally of fine (*i.e.*, silty to clayey mud) materials. In the project area gobies have been found just inside the dysfunctional Waterman tidegate that is proposed to be sealed in place. Approximately 0.02-acre of goby habitat currently exists in the project area, and

the project proposes to create an additional 0.78-acre of goby habitat through restoration activities.

The applicant proposes various measures to minimize impacts to sensitive plant and fish species in the project area. To minimize impacts to Lyngbye's sedge, the applicant proposes to leave existing plants undisturbed, if possible, during excavation and grading activities. If plants cannot be avoided, the applicant proposes to remove plants along with the top 12 inches of topsoil and transplant these "wafers" into the tidal marsh restoration area along new tidal channels at the appropriate finished grade and in the same orientation. If plants will not be immediately transplanted, they will be kept moist and protected until transplantation can occur.

To minimize impacts to sensitive fish species, the applicant proposes to (1) install fish screens upstream and downstream of the project site to minimize the number of fish within the project area during construction activities; (2) dewater and exclude fish from about a 100-foot section of Wood Creek prior to work in the creek through the use of coffer dams or sand bags; (3) capture and relocate any fish that might be present prior to work in the creek (including the damming and dewatering work described above); (4) implement erosion and runoff control BMPs (e.g., silt fences) to minimize water quality impacts that could adversely impact aquatic habitat values; (5) for the dysfunctional Waterman tidegate, a) seal the tidegate in place rather than remove it completely to minimize impacts to Tidewater goby habitat; b) install filter fabric along the levee to prevent dirt from entering goby habitat; c) install fish exclusion nets between the goby habitat and the levee; and c) perform the Waterman tidegate work during one low-tide interval.

Both NOAA-Fisheries and the U.S. Fish and Wildlife Service (FWS) completed informal consultations for the project (for the various salmonids and Tidewater goby respectively). NOAA-Fisheries concluded that the proposed project is not likely to adversely affect Coho, Chinook, Steelhead, or their critical habitats. Although the proposed project would result in an insignificant mobilization of sediment which may kill a small amount of salmonid prey, this sediment release is expected to be temporary, and the newly created habitat is expected to be rapidly colonized with prey species. Salmonids are not expected to be using the area during or immediately following construction, so no salmonids are expected to have reduced growth or survival as a result of the proposed project. NOAA-Fisheries concludes that the proposed project would result in an increase in tidal marsh and slough channel habitat which will increase the available habitat for salmonids. Similarly, the FWS informal consultation concludes that the proposed project is not likely to adversely affect the Tidewater goby or its critical habitat. The areas where tidal channel excavation is proposed to occur are not currently considered habitat for the goby, and excavation will be completed prior to removal of the berm along Wood Creek and the wooden tidegate on Wood Creek that will allow inundation and potentially goby inhabitation of these areas. Neither NOAA-Fisheries or FWS provided further recommendations or conservation measures to be implemented beyond those proposed by the applicant to minimize impacts to sensitive fish species and critical habitat.

To ensure that the project incorporates all feasible mitigation measures as proposed to minimize all significant adverse effects to sensitive plant and fish species and habitat, the Commission attaches Special Condition No. 5. This special condition requires that the permittee comply with

all proposed and agency-recommended mitigation measures to protect Lyngbye's sedge, Tidewater goby, and the various sensitive salmonids and their habitat in the project area.

(5) Conclusion

The Commission finds that, as conditioned, feasible mitigation measures have been provided to minimize adverse environmental effects consistent with Section 30233 of the Coastal Act.

**d. Maintenance & Enhancement of Biological Productivity & Functional Capacity**

The fourth general limitation set by Section 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.

As discussed above, the conditions of the permit will ensure that the project will not have significant adverse impacts on the water quality of any of the coastal waters in the project area and will ensure that the project construction will not adversely affect the biological productivity and functional capacity coastal waters or wetlands. The project's stated purpose is to restore and enhance the biological productivity of coastal wetlands and waters, and conditions of the permit will ensure that the site is monitored for achievement of these goals. 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, 30230, and 30231 of the Coastal Act.

**D. Protection of Archaeological Resources**

1. Applicable Coastal Act Policies and Standards:

Section 30244 of the Coastal Act states the following:

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

2. Consistency Analysis:

The project area is located within the ethnographic territory of the Wiyot Indians. Wiyot settlements existed along Humboldt Bay and along the banks of many of the streams and sloughs in this area.

A cultural resources investigation report was prepared for the project by Anne King-Smith and Susie Van Kirk. The report concludes that the proposed project is unlikely to affect cultural or historic resources on the site. Additionally, a referral to the North Coastal Information Center sent by the County during the processing of the conditional use permit for the project recommended project approval.

Nevertheless, to ensure protection of any archaeological or cultural resources that may be unearthed at the site during construction, the Commission attaches Special Condition No. 6. This 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 mitigation measures to ensure that the development will not adversely impact archaeological resources.

## **E. Public Access**

### **1. Applicable Coastal Act Policies and Standards:**

Coastal Act Sections 30210, 30211, and 30212 require the provision of maximum public access opportunities, with limited exceptions. Coastal Act Section 30210 requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. Section 30211 requires in applicable part that development not interfere with the public's right of access to the sea where acquired through use (i.e., potential prescriptive rights or rights of implied dedication). Section 30212 requires in applicable part that public access from the nearest public roadway to the shoreline and along the coast be provided in new development projects, except in certain instances, such as when adequate access exists nearby or when the provision of public access would be inconsistent with public safety. In applying Sections 30211 and 30212, the Commission is 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 public access.

### **2. Consistency Analysis:**

No existing public access to a beach or shoreline is available in the project area, which is private land that currently supports and will continue to support seasonal agricultural grazing. The proposed project does not involve any changes or additional restrictions to existing public access that would interfere with or reduce the amount of area public access and recreational opportunities. In fact, birdwatching from the surrounding public roadways (Myrtle Avenue) may increase, as the proposed enhancements are expected to benefit waterfowl and other water-associated wildlife.

Therefore, the Commission finds that the proposed project would not have an adverse effect on public access and that the project as proposed is consistent with the requirements of Coastal Act Sections 30210, 30211, and 30212.

## **F. Conversion of Agricultural Lands**

1. Applicable Coastal Act Policies and Standards:

Coastal Act Section 30241 states:

*The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:*

- (a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.*
- (b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.*
- (c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.<sup>4</sup>*
- (d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.*
- (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.*
- (f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.*

Coastal Act Section 30242 states:

*All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.*

In addition, Coastal Act Section 30250 requires consideration of the cumulative impacts of development (defined in Coastal Act Section 30105.5) as follows:

*"Cumulatively" or "cumulative effect" means the incremental effects of an individual project shall be reviewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.*

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<sup>4</sup> The portion of referenced Section 30250 applicable to this project type and location [sub-section (a)] requires that, "New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources."

Coastal Act Section 30250 states in pertinent part:

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

2. Consistency Analysis:

Coastal Act Sections 30241 and 30242 require the protection of prime agricultural lands<sup>5</sup> and sets limits on the conversion of all agricultural lands to non-agricultural uses.

The subject property is currently being leased to a local rancher for seasonal cattle grazing. Given the fine sediment size generally associated with fluviually deposited soil materials within bays and estuaries, the low relief of the area, the relatively shallow water table, and the limited amount of tillage and organic material or other soils component amendments made to the site over the last century since their reclamation, the site's seasonally waterlogged soils and their high bulk density severely limit the types of agricultural activities that may be feasibly undertaken at the site.

a. **Maintaining Maximized Production of Prime Agricultural Land**

Based on information derived from the Natural Resources Conservation Service (NRCS), the majority of the soils in the project area (north of the creek) are mapped as Occidental, 0-2 percent slopes (mapping has not been completed for the soils in the project area south of the creek). This soil series consists of very deep, very poorly drained, saline, silty clay loam soils on reclaimed salt marshes and tidal marshes on alluvial plains. They are identified as hydric soils and recognized as having several impediments to extensive agricultural uses. According to the NRCS, natural vegetation for this soil type is estimated to have been "perennial grasses, rushes, and sedges and salt tolerant varieties of same." As a result, the NRCS has assigned Class VII classification to the project site soils as a locale which has "severe limitations that reduce the choice of plants or require special conservation practices, or both." Thus, under the NRCS land capability classification system, the soils at the project site do not meet the first criterion for the definition of prime agricultural soils.

According to Soils of Western Humboldt County, California (McLaughlin & Harradine 1965), the project site contains mostly Bayside silty clay loam soils with 0-3% slopes. The Bayside

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<sup>5</sup> Coastal Act Section 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.

soils have a Storie Index rating between 36 and 49. Thus, the project area does not qualify as prime agricultural land under the second prong of the Coastal Act's definition.

The third potential qualifying definition of prime agricultural land – the ability to support livestock used for the production of food and fiber with an annual carrying capacity equivalent to at least 1 animal-unit per acre as defined by the United States Department of Agriculture – similarly does not apply to the project site. Based on correspondence from, Gary Markegard, County Farm Advisor for the U.C. Cooperative Extension, the low-lying, poorly drained, saltwater intruded, and flood-prone soils along the northern reclaimed fringes of Humboldt Bay typically require three acres per animal-unit. Thus, the project site supports only 0.33 Animal Unit Months (AUMs) per acre.

Finally, with regard to the site's potential qualification as prime agricultural land based upon its potential for commercial fruit or nut crop production at specified minimal yields, the project area similarly fails to meet the criterion. Due to the maritime-influenced climate of the western Humboldt County, commercial nut production is precluded along the immediate coastal areas by the significant precipitation and limited number of warm, overcast-free days to allow for full seed maturation. In addition, due to the high bulk density of the soils underlying the project site and the relatively shallow water table, fruit and berry crops suitable for the North Coast's temperate setting are similarly restricted to areas further inland, primarily on uplifted marine terraces and within well developed river floodplain areas with improved drainage and more friable soil characteristics. As a result, fruit and nut production on an economically successful commercial basis is not currently, nor has ever been historically pursued in open coastal environs, such as the project area.

### Conclusion

Therefore, based upon the above discussed set of conditions at the project site, the Commission finds that the subject site does not contain prime agricultural soils or livestock and/or crop productivity potential that would otherwise qualify the subject property as "prime agricultural land."

#### **b. Minimizing Conflicts Between Agricultural and Urban Land Uses**

Since 2006, seasonal livestock grazing has occurred on approximately 33.5 acres of the property under a lease agreement with a local cattle rancher. According to the applicant, for the 20 years prior to 2006, no agricultural operations were conducted on the property. The proposed project would result in the creation of habitat on portions of the project site that is not suitable for grazing (tidal marsh habitats). Approximately 13.5 acres of the property would be converted from agricultural use to restored tidal habitats. The number of "animal unit months" (AUMs), which is the amount of forage necessary to feed a mature cow (or its equivalent) for one month, sustained on the property would be reduced from 20 AUMs to 15 AUMs. According to the applicant, the lessee is aware of and in agreement with the proposed restoration project and its effect on available pasture.

Section 30241 requires that conflicts between urban and agricultural land uses be minimized through, among other things, limiting conversions of agricultural lands. Section 30241(b) limits 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. Section 30241(c) permits the conversion of agricultural lands surrounded by urban uses where the conversion of the land would be consistent with Section 30250. Finally, Section 30241(d) requires the development of available lands not suited for agriculture prior to the conversion of agricultural lands.

The proposed conversion of 13.5 acres of agricultural lands in the project area constitutes a conversion of agricultural land in an area that is neither located around the periphery of urban areas nor surrounded by urban uses, and the viability of existing agricultural use at the site is not limited by conflicts with urban uses. The project site is located over 1 mile east of the developed portions of Eureka, the nearest urban area, and all of the lands surrounding the project site to the north and east are undeveloped and used primarily either for agricultural uses or natural resources uses. In addition, there are many areas of undeveloped land within the coastal zone around the Humboldt Bay region that are not suitable for agriculture that have yet to be developed. Thus, given this location relative to adjoining land uses, development of the restoration and enhancement project on the currently grazed portions of the site would not be consistent with the limitation on conversion of agricultural lands of Section 30241(b), (c), and (d) and would not serve to minimize conflicts between agricultural and urban land uses.

Conclusion:

For all of the reasons stated above, the Commission finds the permanent loss of the subject 13.5 acres of agricultural land is not consistent with the provisions of Section 30241 cited above.

**c. Conversion of “All Other Lands” Suitable for Agricultural Use**

Coastal Act Section 30242 protects lands suitable for agricultural use that are not prime agricultural lands or agricultural lands on the periphery of urban areas from conversion to non-agricultural use unless continued agricultural use is not feasible, or such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. In the case of the subject parcel, although the land is not considered “prime,” cattle grazing (though limited by seasonal inundation and general pasture quality) is a primary use on the subject site, and this use is proposed to continue in the future. Thus, continued agricultural use is feasible, and conversion of the land to non-agricultural use under the proposed project would not preserve prime agricultural land or concentrate development, which the Coastal Act prescribes as the basis for allowing conversion. For these reasons, the proposed conversion of agricultural lands in the project area would be inconsistent with the requirements of Coastal Act Section 30242.

**G. Conflict Resolution**

As noted above, the proposed restoration of tidal marsh habitat in the project area would convert 13.5 acres of agricultural land inconsistent with the provisions of Sections 30241 and 30242.

However, as also noted above, to not approve the project would result in a failure to restore marine resources and the biological productivity of coastal wetlands and waters that would be inconsistent with the mandates of Sections 30230 and 30231 of the Coastal Act. Section 30230 mandates that marine resources shall be maintained and enhanced, and where feasible, restored. Section 30231 mandates that the biological productivity of coastal waters appropriate to maintain optimum populations of marine organisms shall be maintained, and where feasible, restored.

1. The Identification of a True Conflict is Normally a Condition Precedent to Invoking a Balancing Approach

As is indicated above, the standard of review for the Commission's decision whether to approve a coastal development permit in the Commission's retained jurisdiction is whether the project as proposed is consistent the Chapter 3 policies of the Coastal Act. In general, a proposal must be consistent with all relevant policies in order to be approved. Put differently, consistency with each individual policy is a necessary condition for approval of a proposal. Thus, if a proposal is inconsistent with one or more policies, it must normally be denied (or conditioned to make it consistent with all relevant policies).

However, the Legislature also recognized that conflicts can occur among those policies (Coastal Act Section 30007.5). It therefore declared that, when the Commission identifies a conflict among the policies in Chapter 3, such conflicts are to be resolved "*in a manner which on balance is the most protective of significant coastal resources* (Coastal Act Sections 30007.5 and 30200(b))." That approach is generally referred to as the "balancing approach to conflict resolution." Balancing allows the Commission to approve proposals that conflict with one or more Chapter 3 policies, based on a conflict among the Chapter 3 policies as applied to the proposal before the Commission. Thus, the first step in invoking the balancing approach is to identify a conflict among the Chapter 3 policies.

2. Identification of a Conflict

For the Commission to use the balancing approach to conflict resolution, it must establish that a project presents a substantial conflict between two statutory directives contained in Chapter 3 of the Coastal Act. The fact that a proposed project is consistent with one policy of Chapter 3 and inconsistent with another policy does not necessarily result in a conflict. Virtually every project will be consistent with some Chapter 3 policy. This is clear from the fact that many of the Chapter 3 policies prohibit specific types of development. For example, section 30211 states that development "*shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization . . .*," and subdivision (2) of section 30253 states that new development "*shall . . . neither create nor contribute significantly to erosion . . . or in any way require the construction of protective devices . . .*" Almost no project would violate every such prohibition. A project does not present a conflict between two statutory directives simply because it violates some prohibitions and not others.

In order to identify a conflict, the Commission must find that, although approval of a project would be inconsistent with a Chapter 3 policy, the denial of the project based on that inconsistency would result in coastal zone effects that are inconsistent with some other Chapter 3

policy. In most cases, denial of a proposal will not lead to any coastal zone effects at all. Instead, it will simply maintain the *status quo*. The reason that denial of a project can result in coastal zone effects that are inconsistent with a Chapter 3 policy is that some of the Chapter 3 policies, rather than prohibiting a certain type of development, affirmatively mandate the protection and enhancement of coastal resources, such as sections 30210 (“*maximum access . . . and recreational opportunities shall be provided . . .*”), 30220 (“*Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses*”), and 30230 (“*Marine resources shall be maintained, enhanced, and where feasible, restored*”). If there is ongoing degradation of one of these resources, and a proposed project would cause the cessation of that degradation, then denial would result in coastal zone effects (in the form of the continuation of the degradation) inconsistent with the applicable policy. Thus, the only way that denial of a project can have impacts inconsistent with a Chapter 3 policy, and therefore the only way that a true conflict can exist, is if: (1) the project will stop some ongoing resource degradation and (2) there is a Chapter 3 policy requiring the Commission to protect and/or enhance the resource being degraded. Only then is the denial option rendered problematic because of its failure to fulfill the Commission’s protective mandate.

With respect to the second of those two requirements, though, there are relatively few policies within Chapter 3 that include such an affirmative mandate to enhance a coastal resource. Moreover, because the Commission’s role is generally a reactive one, responding to proposed development, rather than affirmatively seeking out ways to protect resources, even policies that are phrased as affirmative mandates to protect resources more often function as prohibitions. For example, Section 30240’s requirement that environmentally sensitive habitat areas “*shall be protected against any significant disruption of habitat values*” generally functions as a prohibition against allowing such disruptive development, and its statement that “*only uses dependent on those resources shall be allowed within those areas*” is a prohibition against allowing non-resource-dependent uses within these areas. Similarly, section 30251’s requirement to protect “*scenic and visual qualities of coastal areas*” generally functions as a prohibition against allowing development that would degrade those qualities. Section 30253 begins by stating that new development shall minimize risks to life and property in certain areas, but that usually requires the Commission to condition projects to ensure that they are not unsafe. Even Section 30220, listed above as an affirmative mandate, can be seen more as a prohibition against allowing non-water-oriented recreational uses (or water-oriented recreational uses that could be provided at inland water areas) in coastal areas suited for such activities. Denial of a project cannot result in a coastal zone effect that is inconsistent with a prohibition on a certain type of development. As a result, there are few policies that can serve as a basis for a conflict.

Similarly, denial of a project is not inconsistent with Chapter 3, and thus does not present a conflict, simply because the project would be less inconsistent with a Chapter 3 policy than some alternative project would be, even if approval of the proposed project would be the only way in which the Commission could prevent the more inconsistent alternative from occurring. For denial of a project to be inconsistent with a Chapter 3 policy, the project must produce tangible, necessary enhancements in resource values over existing conditions, not over the conditions that would be created by a hypothetical alternative. In addition, the project must be fully consistent

with the Chapter 3 policy requiring resource enhancement, not simply less inconsistent with that policy than the hypothetical alternative project would be. If the Commission were to interpret the conflict resolution provisions otherwise, then any proposal, no matter how inconsistent with Chapter 3, that offered even the smallest, incremental improvement over a hypothetical alternative project would necessarily result in a conflict that would justify a balancing approach. The Commission concludes that the conflict resolution provisions were not intended to apply based on an analysis of different potential levels of compliance with individual policies or to balance a proposed project against a hypothetical alternative.

In addition, if a project is inconsistent with at least one Chapter 3 policy, and the essence of that project does not result in the cessation of ongoing degradation of a resource the Commission is charged with enhancing, the project proponent cannot “create a conflict” by adding on an essentially independent component that does remedy ongoing resource degradation or enhance some resource. The benefits of a project must be inherent in the essential nature of the project. If the rule were to be otherwise, project proponents could regularly “create conflicts” and then demand balancing of harms and benefits simply by offering unrelated “carrots” in association with otherwise-unapprovable projects. The balancing provisions of the Coastal Act could not have been intended to foster such an artificial and manipulatable process. The balancing provisions were not designed as an invitation to enter into a bartering game in which project proponents offer amenities in exchange for approval of their projects.

Finally, a project does not present a conflict among Chapter 3 policies if there is at least one feasible alternative that would accomplish the essential purpose of the project without violating any Chapter 3 policy. Thus, an alternatives analysis is a condition precedent to invocation of the balancing approach. If there are alternatives available that are consistent with all of the relevant Chapter 3 policies, then the proposed project does not create a true conflict among Chapter 3 policies.

In sum, in order to invoke the balancing approach to conflict resolution, the Commission must conclude all of the following with respect to the proposed project before it: (1) approval of the project would be inconsistent with at least one of the policies listed in Chapter 3; (2) denial of the project would result in coastal zone effects that are inconsistent with at least one other policy listed in Chapter 3, by allowing continuing degradation of a resource the Commission is charged with protecting and/or enhancing; (3) the project results in tangible, necessary resource enhancement over the current state, rather than an improvement over some hypothetical alternative project; (4) the project is fully consistent with the resource enhancement mandate that requires the sort of benefits that the project provides; (5) the benefits of the project are a function of the very essence of the project, rather than an ancillary component appended to the project description in order to “create a conflict;” and (6) there are no feasible alternatives that would achieve the objectives of the project without violating any Chapter 3 policies.

An example of a project that presented such a conflict is a project approved by the Commission in 1999 involving the placement of fill in a wetland in order to construct a barn atop the fill, and the installation of water pollution control facilities, on a dairy farm in Humboldt County (CDP #1-98-103, O’Neil). In that case, one of the main objectives of the project was to create a more

protective refuge for cows during the rainy season. However, another primary objective was to improve water quality by enabling the better management of cow waste. The existing, ongoing use of the site was degrading water quality, and the barn enabled consolidation and containment of manure, thus providing the first of the four necessary components of an effective waste management system. Although the project was inconsistent with Section 30233, which limits allowable fill of wetlands to eight enumerated purposes, the project also enabled the cessation of ongoing resource degradation. The project was fully consistent with Section 30231's mandate to maintain and restore coastal water quality and offered to tangibly enhance water quality over existing conditions, not just some hypothetical alternative. Thus, denial would have resulted in impacts that would have been inconsistent with Section 30231's mandate for improved water quality. Moreover, it was the very essence of the project, not an ancillary amenity offered as a trade-off, that was both inconsistent with certain Chapter 3 policies and yet also provided benefits. Finally, there were no alternatives identified that were both feasible and less environmentally damaging.

### 3. The Proposed Project Presents a Conflict

The Commission finds that the proposed project presents a true conflict between Chapter 3 policies of the Coastal Act. The proposed restoration of tidal marsh and juvenile salmonid summer rearing habitats would convert agricultural land in a manner inconsistent with the provisions of Sections 30241 and 30242 of the Coastal Act. However, to not approve the project would result in a failure to maintain and enhance marine resources and the biological productivity of coastal waters that would be inconsistent with the mandates of Sections 30230 and 30231 of the Coastal Act. Section 30230 mandates that marine resources shall be maintained and enhanced, and where feasible, restored. Section 30231 mandates that the biological productivity of coastal waters appropriate to maintain optimum populations of marine organisms shall be maintained.

As a partially brackish habitat, the juvenile salmonid summer rearing habitat is a type of marine resource. The project is designed to add both brackish marsh habitat and habitat for salmon rearing, both of which are dramatically reduced in the region over historic levels. The proposed enhancements are needed to help restore habitat diversity within Humboldt Bay and assist in the recovery of listed salmonid species including Coho salmon, Chinook salmon, Steelhead, and Coastal cutthroat trout.

As discussed above in Finding IV-C, historically (prior to the construction of the Northwestern Pacific Railroad and Highway 101 beginning over one hundred years ago), the project site occupied the upper zone of tidal marshland surrounding the perimeter of Humboldt Bay and its tidal mudflats prior to being diked, drained, and muted through tidegate installation. The project area is shown as "tidal marsh" on the 1870 U.S. Coast and Geodetic Survey Map (see page 7 of the October 2007 Biological Assessment for the project), which delineated pre-development tidal marsh boundaries around the bay. Historically, the area likely supported transitional brackish marsh habitat at the interface of tidal flux intermixing with freshwater input (from Freshwater and Wood Creeks). Since the mid-1800's, most of what was likely to have been historic tidal marsh has been diked or filled and has been reduced to a total area of around 900 acres, a

reduction of at least 87 percent. The FWS has indicated that restoration of tidal marsh habitats around the Bay is a high priority, as tidal marsh restoration is important for the protection, enhancement, and restoration of native fish, wildlife, and plant communities, some of which are dependent on tidal marsh for their existence. The majority of the original habitat has been replaced with grazed seasonal wetlands that provide far less habitat values and functions than those provided by the array of wetland habitat types that originally existed at the site.

Although the proposed project is inconsistent with the requirements of Sections 30241 and 30242 that protect productive agricultural land and limit the conversion of agricultural land, denial would preclude achieving Sections 30230's and 30231's mandates for protection and maintenance of marine resources and biological productivity. In addition, it is the very essence of the project, not an ancillary amenity offered as a trade-off, that is both inconsistent with certain Chapter 3 policies and yet also provides benefits. Finally, as discussed below, there are no alternatives identified that were both feasible and less environmentally damaging.

**a. Alternatives Analysis**

As noted above, a true conflict among Chapter 3 policies would not exist if there are feasible alternatives available that are consistent with all of the relevant Chapter 3 policies. Alternatives that have been identified include (a) alternative sites, (b) alternative methods or configurations of project features, and (c) the "no project" alternative. These various alternatives are discussed below.

(1) Alternative Sites

Restoration of the former habitat conditions that existed on a site prior to manipulation by humans within the meaning of Sections 30230 and 30233(a) of the Coastal Act is inherently site specific. As discussed previously, implicit in the common definition of restoration is the understanding that the restoration entails returning something to a prior state. A site cannot be returned to a prior state by performing wetland enhancement or creation work at some other site. However, as also discussed previously, restoration is also defined as reestablishing ecological processes, functions, and biotic/abiotic linkages that lead to a persistent, resilient system integrated within its landscape that may not necessarily result in a return to historic locations or conditions with the subject wetland area. Thus, restoration of ecological processes, functions, and biotic/abiotic linkages at an alternative location within the landscape of the particular wetland system involved could under certain circumstances be found to be consistent with Sections 30230 and 30233(a) of the Coastal Act. However, no such feasible alternative location other than the project site exists in this case. Nearly the entire 54-acre project parcel is agricultural land, so there is no other location on the parcel where the restoration could be carried out that would not result in a conversion of agricultural land inconsistent with Sections 30241 and 30242 of the Coastal Act. Similarly, if restoration of another site to restore a combination of brackish marsh and tidal channel habitats was considered, no feasible off-site locations that would not result in conversions of agricultural land inconsistent with Sections 30241 and 30242 have been identified. Much of the land surrounding Humboldt Bay that could support the habitat types to be restored has been diked, drained, and cleared for agricultural purposes, and thus the proposed site is one of the few locations where the proposed restoration project could occur

consistent with Section 30233(a)(6) as discussed above (Finding IV-C). Therefore, implementing the project at an alternative location is not a feasible alternative that is consistent with all relevant Chapter 3 policies.

(2) Alternative Configuration of Project Features

Feasible restoration of the site is not dependent on the exact site plan or configuration of tidal marsh restoration proposed by the applicant. Other configurations of these features could be successful at re-establishing ecological processes, functions, and biotic/abiotic linkages that lead to a persistent, resilient system integrated within its landscape consistent with the definition of restoration for which diking, dredging, and filling is allowed pursuant to Section 30233 of the Coastal Act and which Section 30230 mandates to occur if feasible. For example, rather than removing just the wooden flap of the existing tidegate on Wood Creek, the applicant instead could remove the entire concrete structure (which is 3 feet wide by 50 feet long by 8 feet deep) as well, thereby restoring tidal inundation to an even greater area than proposed. According to the hydraulic analysis and design report prepared for the project (Jeff Anderson & Associates, February 2008), the concrete weir portion of the existing tidegate on Wood Creek mutes the water level in the project area at high tides. This alternative configuration or layout of the project, and many other alternative configurations (see alternative methods discussed in Finding IV-C above), would achieve similar results. However, none of these alternative configurations would avoid conversion of agricultural lands to habitat in a manner inconsistent with Sections 30241 and 30242 of the Coastal Act. No feasible use of tidal marsh habitat for agricultural purposes has been identified. As the use of any portion of these areas for restoration of tidal marsh would preclude agricultural use and convert agricultural land, no alternative configuration of the project site would avoid conversion of agricultural land either actively used for agricultural purposes or capable of being used for such purposes, inconsistent with Sections 30241 and 30242 of the Coastal Act. The proposed project has been designed to restore tidelands and tidal marsh habitats across 23 to 29 acres while simultaneously sustaining agricultural production on 19 acres of the property (which equates to approximately 15 animal unit months), protecting valuable existing upstream summer rearing habitat for juvenile salmonids, and protecting adjacent properties from tidal inundation.

Therefore, the Commission finds that none of the alternative configurations of the restoration project are a feasible alternative that is consistent with all Chapter 3 policies.

(3) “No Project” Alternative

The “no project” alternative would maintain the *status quo* of the site and would not restore 23 to 29 acres of tidal marsh habitat and 4,500 square feet of juvenile salmonid summer rearing habitat as proposed. Existing conditions on the project site consist of actively used agricultural land (farmed seasonal wetlands) used for seasonal cattle grazing. Under the “no project” alternative, the land would continue to be used for seasonal agricultural grazing (as it would under the proposed project), but there would be no restored and improved habitat for marine resources, and the biological productivity of the coastal wetlands and waters would thus not be restored. Existing habitats for Lyngbye’s sedge, brackish marsh, rearing salmonids, and tidewater goby would continue to be limited on the site. Therefore, the Commission finds that the “no project”

alternative would have significant impacts to coastal resources that would be inconsistent with Section 30230's mandate to, where feasible, restore marine resources and maintain and improve biological productivity. Therefore, the "no project" alternative is not a feasible alternative that is consistent with all relevant Chapter 3 policies.

**b. Conclusion**

As discussed above, none of the identified alternatives to the proposed project would be both feasible and consistent with all relevant Chapter 3 policies. The Commission further finds that based on the alternatives analysis above, the proposed project as conditioned is the least environmentally damaging feasible alternative, and therefore the project is consistent with the requirements of Section 30233(a) that the proposed fill project has no feasible less environmentally damaging alternative.

**4. Conflict Resolution**

After establishing a conflict among Coastal Act policies, Section 30007.5 requires the Commission to resolve the conflict in a manner that is on balance most protective of coastal resources.

In this case, the Commission finds that the impacts on coastal resources from not constructing the project would be more significant than the project's agricultural conversion impacts. Denying the project because of its inconsistency with Sections 30241 and 30242 would avoid the conversion of 13.5 acres of agricultural grazing land. The Commission further finds that as the proposed juvenile salmonid habitat enhancements will maintain and enhance marine resources and the biological productivity of coastal waters, the proposed improvements are mandated by the requirements of Sections 30230 and 30231. Approving the development would restore habitats (tidal channels and brackish marsh) around Humboldt Bay that have been tremendously reduced over the past century consistent with Sections 30230 and 30231. As a partially brackish habitat, the juvenile salmonid summer rearing habitat is a type of marine resource. The project is designed to add both brackish marsh habitat and habitat for salmon rearing, both of which are dramatically reduced in the region over historic levels. The proposed enhancements are needed to help restore habitat diversity within Humboldt Bay and assist in the recovery of listed salmonid species including Coho salmon, Chinook salmon, Steelhead, and Coastal cutthroat trout. The Commission finds that the restoration of 23 to 29 acres of tidal channels and brackish marsh habitat, which would maintain and enhance marine resources necessary to maintain the biological productivity of existing degraded wetlands, would be more protective of coastal resources than the impacts of the conversion of 13.5 acres of agricultural land (the loss of approximately 5 animal unit months).

As discussed above in Finding IV-C, to ensure that the maintenance and enhancement of marine resources and of the biological productivity of coastal waters that would enable the Commission to use the balancing provision of Section 30007.5 is achieved, the Commission attaches Special Condition Nos. 1 through 6. These conditions require that the applicant submit various final plans, including a final restoration and enhancement monitoring plan and a final SWPPP. Additionally, Special Condition No. 2 requires that the applicant carry out the project in

accordance with various construction protocols to ensure the protection of coastal waters and wetlands, Special Condition No. 4 requires revegetation of the site to be carried out according to specified standards and limitations, Special Condition No. 5 requires implementation of sensitive plant and fish species mitigation measures, and Special Condition No. 6 requires that archaeological resources shall be protected. The Commission finds that without Special Condition Nos. 1 through 6, the proposed project could not be approved pursuant to Section 30007.5 of the Coastal Act.

#### 5. Mitigation for Agricultural Impacts

As stated above, the conflict resolution provisions of the Coastal Act require that the conflict be resolved in a manner that on balance is the most protective of significant coastal resources. To meet this test, in past actions where the Commission has invoked the balancing provisions of the Coastal Act, the Commission has found it necessary to mitigate adverse impacts on coastal agricultural resources to the maximum extent feasible. The applicant has not proposed any mitigation to compensate for the loss of agricultural land caused by the project.

The Commission finds that in this particular case because (1) the project proposes to re-establish prior habitat conditions and the processes that create those conditions in a converted and degraded natural wetland (agricultural land), and all of the agricultural land to be converted will be used solely for this purpose; (2) the project, as conditioned, will result in significant improvements in habitat value and diversity in a self-sustaining, persistent fashion independent of the need for repeated maintenance or manipulation to uphold the habitat function; (3) the agricultural land being converted is low quality, available only on a seasonal basis, and does not possess any of the characteristics of “prime agricultural land” as defined by Section 51201(c) of the California Government Code (see Finding IV-F above); and (4) approximately 20 of the 33.5 acres of land on the parcel currently in agricultural production will be retained for agricultural production, no agricultural mitigation is necessary to compensate for the conversion of 13.5 acres of agricultural land (the loss of approximately 5 animal unit months) for the restoration of 23 to 29 acres of tidal marsh habitats.

#### H. Other Agency Approvals

The project requires review and authorization by the U.S. Army Corps of Engineers. Pursuant to the Federal Coastal Zone Management Act, any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. Under agreements between the Coastal Commission and the U.S. Army Corps of Engineers, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification for the project or approves a permit. In a letter dated July 31, 2008, the Corps authorized approval of the project under Nationwide Permit Nos. 3 (Maintenance) and 27 (Aquatic Habitat Restoration, Establishment, & Enhancement Activities). The project also received a Streambed Alteration Agreement from the Department of Fish and Game and a permit from the Humboldt Bay Harbor, Recreation, and Conservation District (see “Approvals Received” page 2). Additionally, the project requires, but has not yet received, a Clean Water Act Section 401 Water Quality Certification from the North Coast Regional Water Quality Control Board. To

ensure that the project ultimately approved by the Board is the same as the project authorized herein, the Commission attaches Special Condition No. 7, which requires the applicant to submit to the Executive Director evidence of the Board's approval of the project prior to permit issuance. The condition requires that any project changes resulting from the Board's approval not be incorporated into the project until the applicant obtains any necessary amendments to this coastal development permit.

**I. Public Trust Lands**

The project site is located in an area subject to the public trust. Therefore, to ensure that the applicant has the necessary authority to undertake all aspects of the project on these public lands, the Commission attaches Special Condition No. 8, which requires that the project be reviewed and where necessary approved by the State Lands Commission prior to the issuance of the coastal development permit.

**J. Waiver of Application Fee**

The applicant has requested that the Commission reduce the application fee for the permit request from five thousand dollars (\$5,000) to six hundred dollars (\$600). The applicant states that the proposed project is entirely funded by public grant funds, and at the time that the applicant (1) applied for those funds, and (2) filled out the application for the subject permit request in March of 2008, the Commission's fee schedule posted on the Commission website listed the filing fee for the development as much lower than the fee due at the time the application was received at the Commission's North Coast District Office. The subject permit application was received on March 19, 2008 – five days after the Commission's new filing fee schedule went into effect on March 14, 2008.

Pursuant to Section 13055(a) of the Commission's regulations, the permit application fee in this case is five thousand dollars (\$5,000). Prior to the recent change to the Commission's application fee schedule, which went into effect on March 14, 2008, the application filing fee for the proposed development would have been six hundred dollars (\$600).

As a general rule, the Commission does not support application fee waiver requests. The Commission's fee schedule is not directly structured for "at-cost" recovery of the staff time actually spent on applications and thus tends to charge applicants less than the amount of the Commission resources that are expended in processing an application. In other words, application fees are already generally lower than the amount it costs the Commission to process the application. In part, this is in recognition of the larger public service being provided to the people of the State, including applicants, for a public airing and debate regarding proposed projects in the coastal zone.

Due to the current deficiencies of the Commission's budget, it is particularly difficult for the Commission to consider waiving fees and reducing needed revenues to support the coastal program. Therefore, the Commission hereby directs that the permit application fee for CDP No. 1-08-012 not be reduced to six hundred dollars (\$600) and shall remain at five thousand dollars

(\$5,000). The Commission attaches Special Condition No. 9 to require that the applicant submit the balance of the application fee prior to permit issuance.

**K. California Environmental Quality Act**

The County of Humboldt, as the lead agency, adopted a Mitigated Negative Declaration for the “Wood Creek Estuary, Tidal Marsh, and Fish Access Enhancement Project; Freshwater, Humboldt County, California” on September 4, 2008.

Section 13906 of the Commission’s administrative regulation requires Coastal Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

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

**V. EXHIBITS:**

1. Regional Location
2. Project Vicinity
3. Aerial Photo
4. Extent of Historic Tidelands
5. Existing Conditions
6. Extent of Existing Agricultural Land
7. Design Plans & Cross Sections
8. Revegetation Plan
9. Existing & Proposed Lyngbye’s Sedge Habitat
10. Proposed Monitoring Plan
11. Draft Storm Water Pollution Prevention Plan
12. Excerpt from CEQA Mitigated Negative Declaration (Proposed Mitigation Measures)
13. Fee Waiver Request

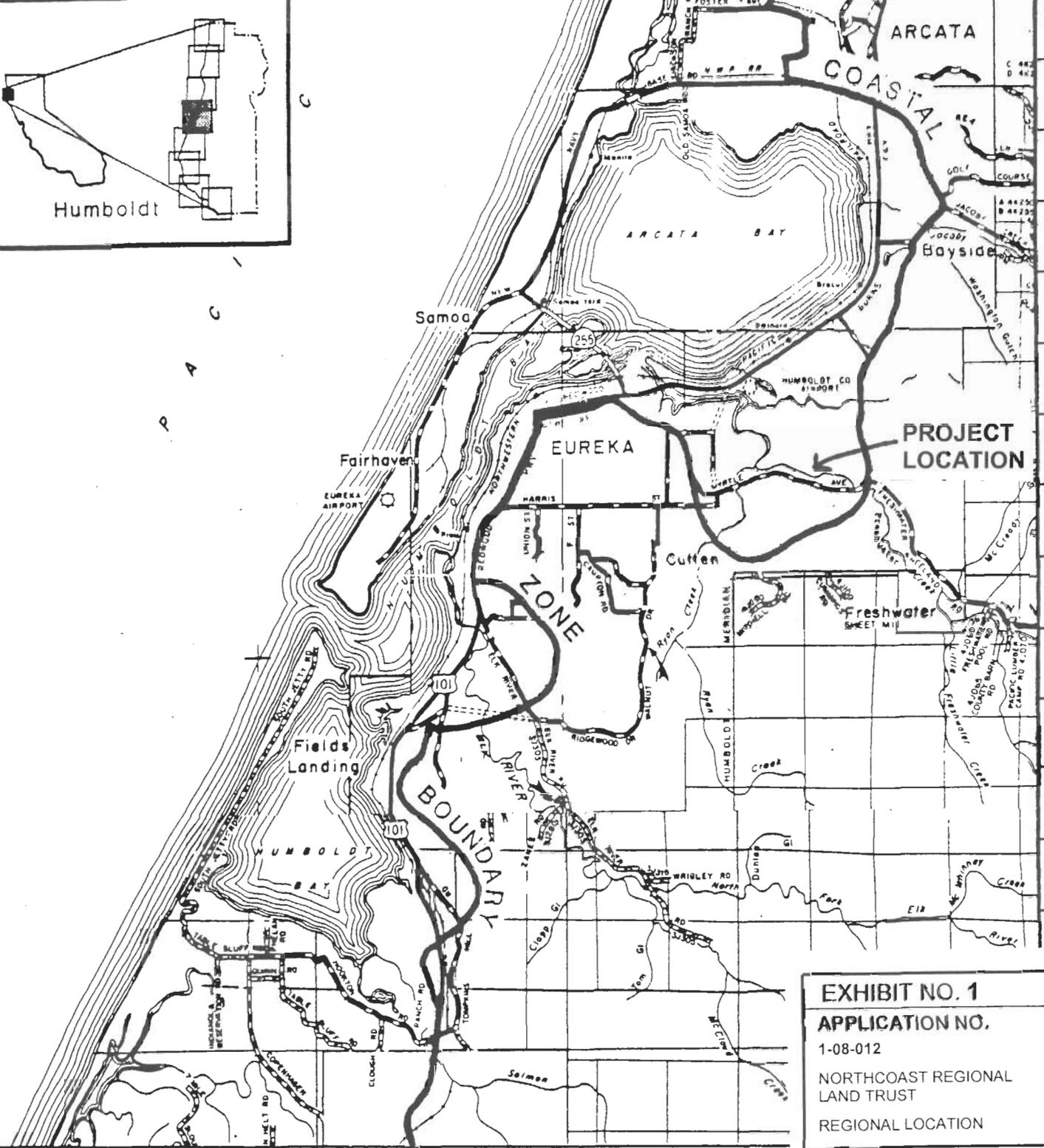
## APPENDIX A

### **STANDARD CONDITIONS**

1. Notice of Receipt and Acknowledgement. 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 of 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.

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**PROJECT LOCATION**

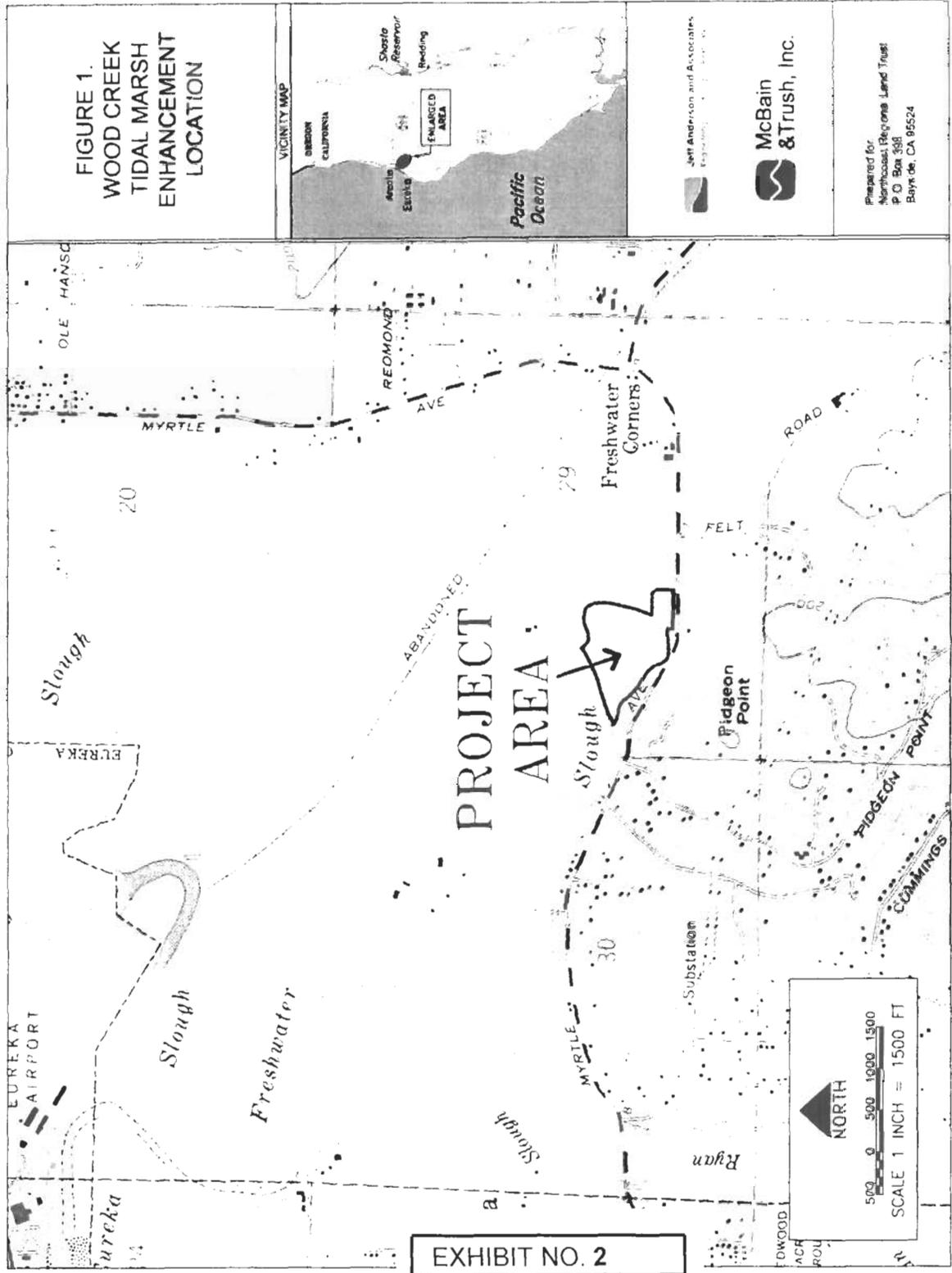
**EXHIBIT NO. 1**  
**APPLICATION NO.**  
 1-08-012  
 NORTHCOAST REGIONAL  
 LAND TRUST  
 REGIONAL LOCATION



# LOCATION MAP

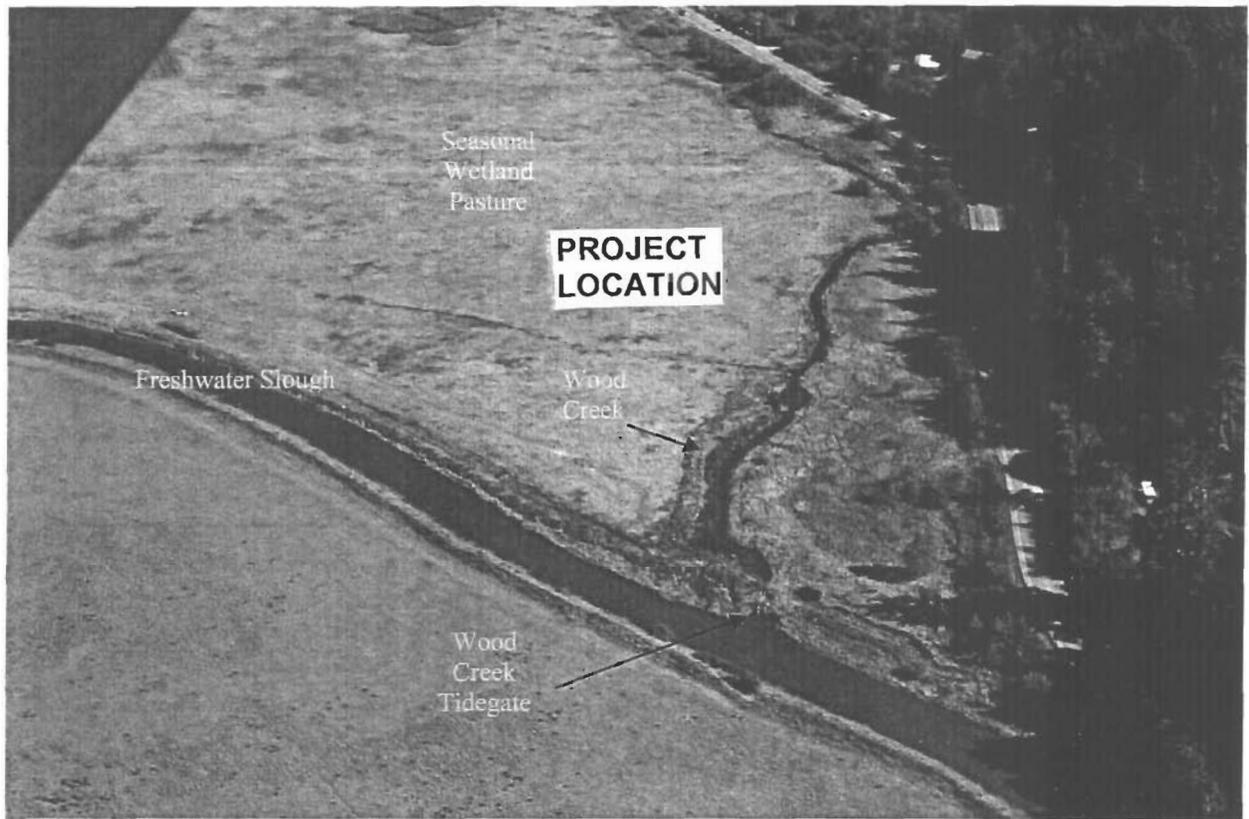


## County of Humboldt



**EXHIBIT NO. 2**  
**APPLICATION NO.**  
 1-08-012  
 NORTHCOAST REGIONAL  
 LAND TRUST  
 PROJECT VICINITY

Figure 1. Location of the Wood Creek Tidal Marsh Enhancement Project on Northcoast Regional Land Trust property, Humboldt County, CA.



*Oblique aerial photograph showing the Wood Creek project area.*

<b>EXHIBIT NO. 3</b>
<b>APPLICATION NO.</b>
1-08-012
NORTHCOAST REGIONAL LAND TRUST
AERIAL PHOTO

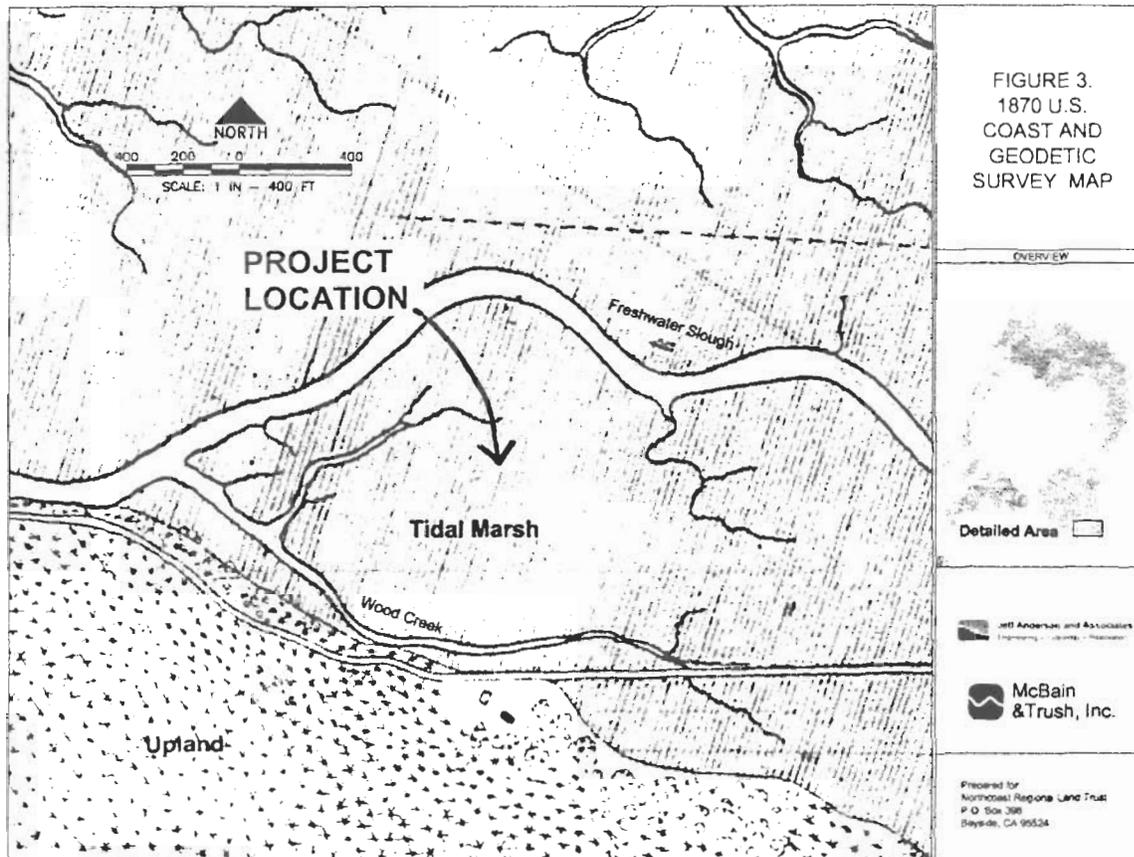


Figure 3. The 1870 US Coast and Geodetic Survey of Humboldt Bay and surrounding tidal marsh lands, which delineated pre-development salt marsh boundaries around the bay.

**EXHIBIT NO. 4**

**APPLICATION NO.**  
1-08-012 - NORTHCOAST  
REGIONAL LAND TRUST  
EXTENT OF HISTORIC  
TIDELANDS IN THE PROJECT  
AREA

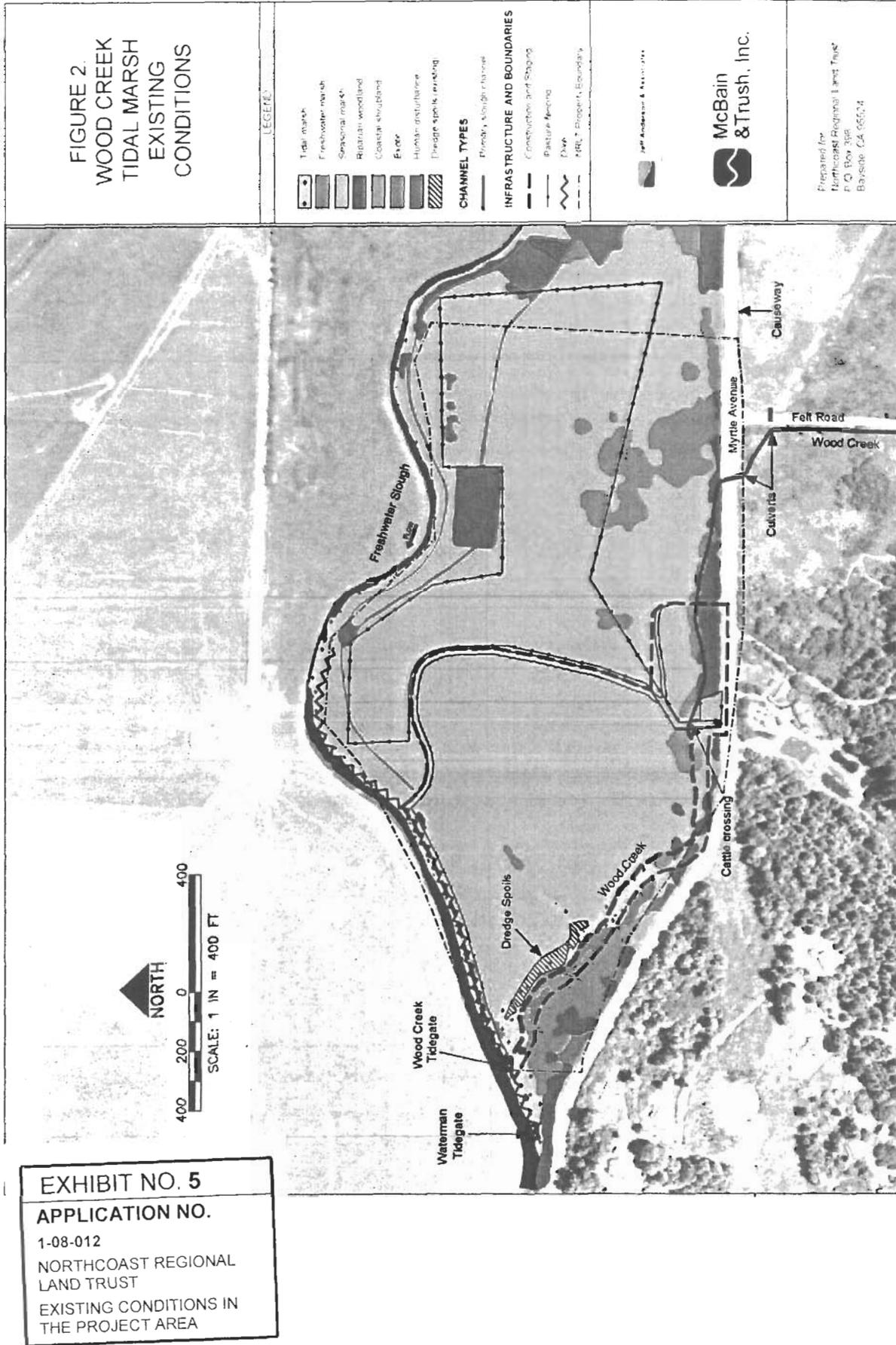
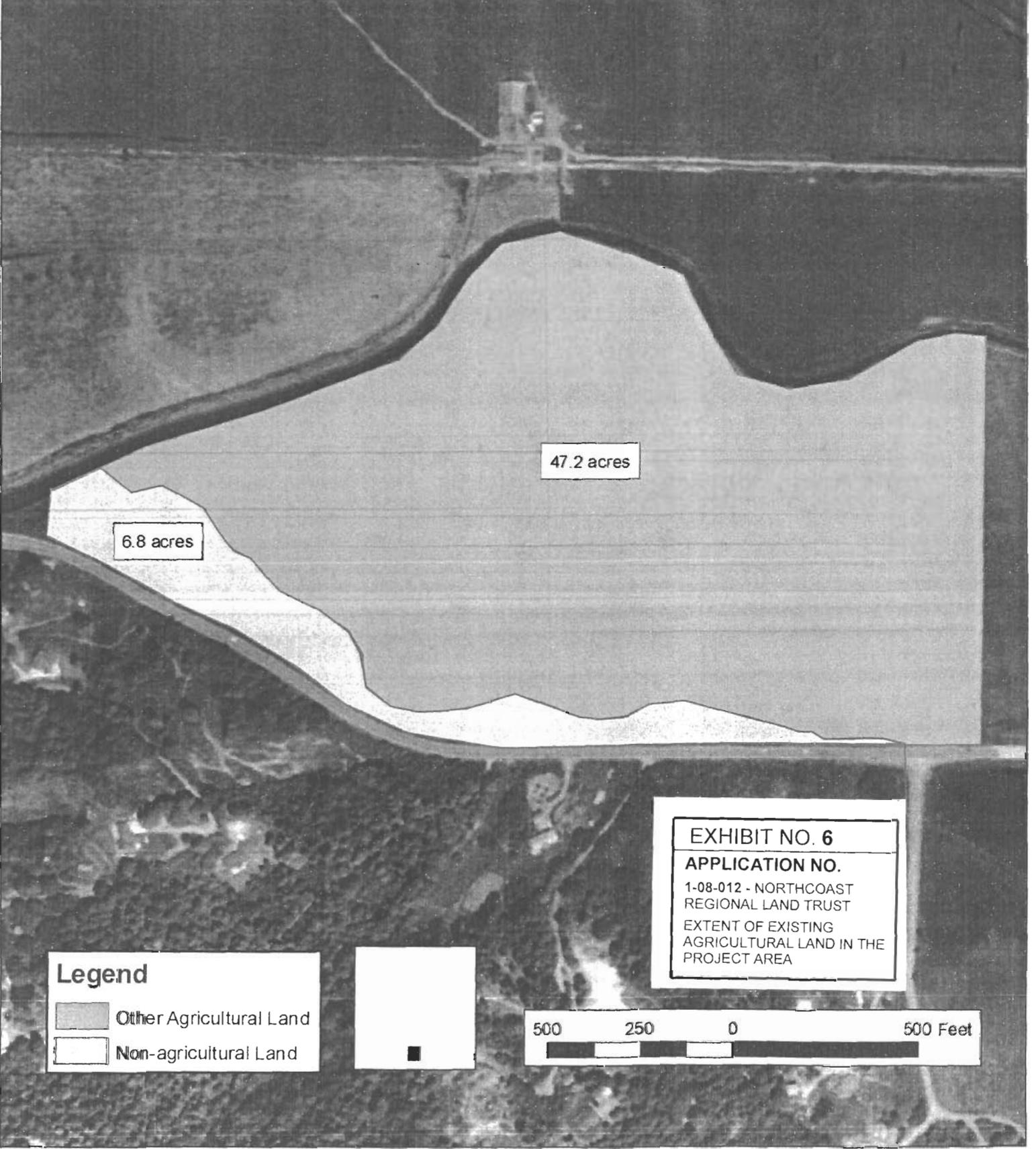


Figure 2. Existing conditions within the Wood Creek Tidal Marsh project area.

# Freshwater Farms Reserve Agricultural Lands Classifications

(Based on NRCS Custom Soil Resource Report for FWFR)



# WOOD CREEK TIDAL MARSH ENHANCEMENT PROJECT

100% DESIGN SUBMITTAL  
NORTHCOAST REGIONAL LAND TRUST

THESE PLANS ARE FOR REVIEW  
AND BID PURPOSES ONLY  
\*\*\* NOT FOR CONSTRUCTION \*\*\*

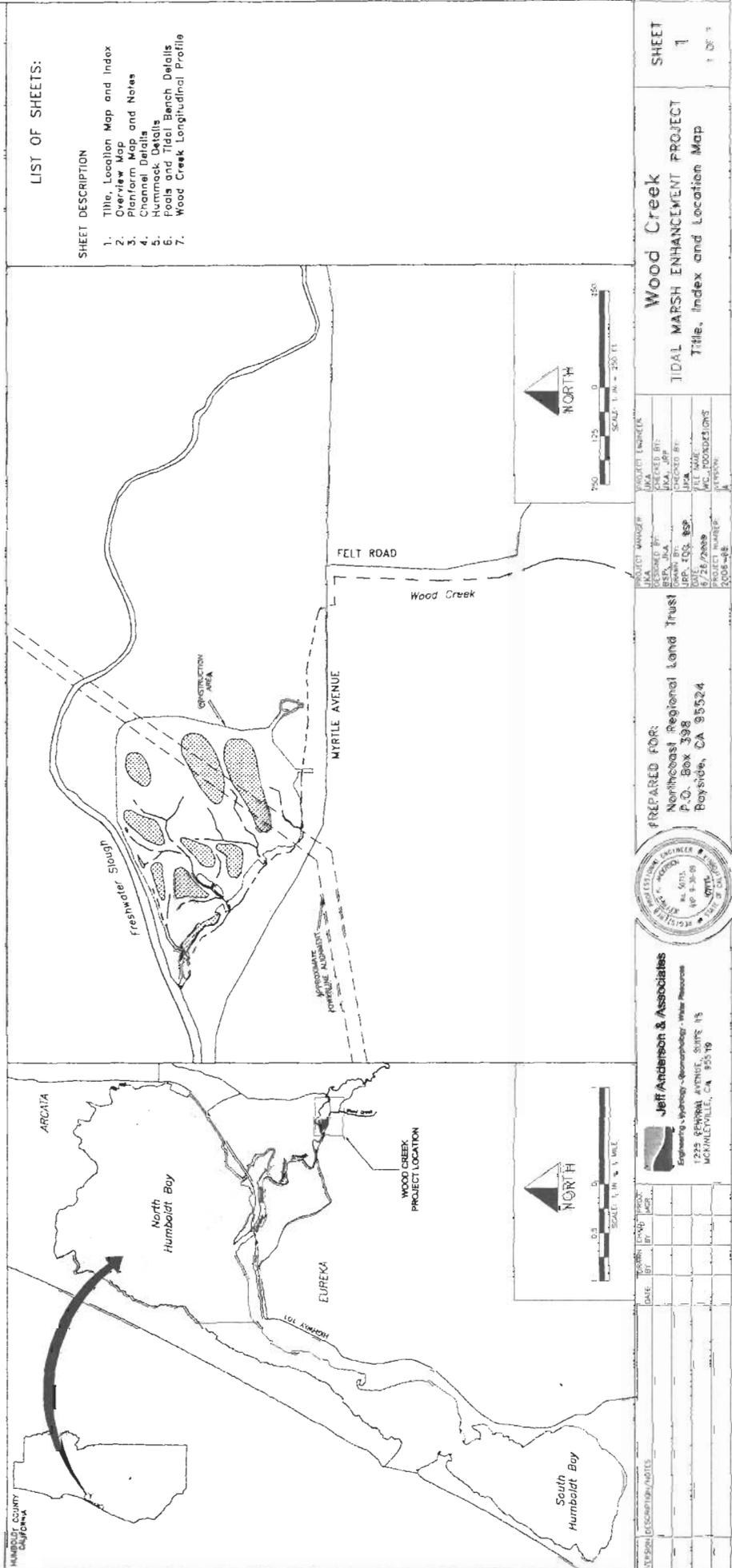
EXHIBIT NO. 7

APPLICATION NO.

1-08-012

NORTHCOAST REGIONAL  
LAND TRUST

DESIGN PLANS AND CROSS  
SECTIONS (1 of 7)



LIST OF SHEETS:

SHEET DESCRIPTION

1. Title, Location Map and Index
2. Overview Map
3. Planform Map and Notes
4. Channel Details
5. Hammock Details
6. Road and Tidal Bench Details
7. Wood Creek Longitudinal Profile

<p>PROJECT MANAGER DESIGNED BY: JJA CHECKED BY: JJA DRAWN BY: JJA DATE: 07/15/08 PROJECT NUMBER: 2008-48</p>		<p>PROJECT ENGINEER CHECKED BY: JJA DRAWN BY: JJA DATE: 07/15/08 PROJECT NUMBER: 2008-48</p>		<p>WOOD CREEK TIDAL MARSH ENHANCEMENT PROJECT Title, Index and Location Map</p>	<p>SHEET 1 1 OF 7</p>
<p>PREPARED FOR: Northcoast Regional Land Trust P.O. Box 398 Boyside, CA 95524</p>					
<p>JEFF ANDERSON &amp; ASSOCIATES Engineering - Hydrology - Geomorphology - Water Resources 1225 GENERAL AVENUE, SUITE 115 MONTEVILLE, CA 95519</p>					
<p>DATE: _____ TIME: _____ BY: _____</p>					
<p>DESCRIPTION/NOTES</p>					



**GENERAL GRADING NOTES**

1. THE HUNDRED SHALL BE CONSIDERED TO BE THE CENTER OF GRADE PLACED OFF MATERIAL.
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21. THE HUNDRED SHALL BE CONSIDERED TO BE THE CENTER OF GRADE PLACED OFF MATERIAL.

1. REVISIONS, ADDITIONS AND COMMENTS FOR THESE PLANS ARE BASED ON THE CHANGING STATE PLANS 2004, 1 NORTH AMERICAN GRADE OF 180
2. VERTICAL CURVES FOR THESE PLANS ARE BASED ON THE NATIONAL ROADWAY WORKING DESIGN OF 1988 (NATIONAL 18.07)
3. PROVISIONS FOR THESE PLANS ARE PROVIDED BY KIMBERLY AND ASSOCIATES, INC. ADDITIONAL INFORMATION DETAIL WITHIN THE CONSTRUCTION AND BIDDING
4. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES.

**TOPOGRAPHY NOTES**

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Volume Estimates	Cut (CY)	Fill (CY)
Channels	2560	0
Hummocks	0	3000
Tidal Bench	140	0
Pools	280	0
<b>Total</b>	<b>3000</b>	<b>3000</b>



**PREPARED FOR:**  
 Northcoast Regional Land Trust  
 P.O. Box 398  
 Bayside, CA 95524

**Jeff Anderson & Associates**  
 Engineers - Hydrology - Geomorphology - Water Resources  
 1225 CENTRAL AVENUE, SUITE 15  
 WCKMUELVILLE, CA 95519

**PROJECT MANAGER:** J.A.  
**DESIGNED BY:** J.A.  
**DRAWN BY:** J.A.  
**CHECKED BY:** J.A.  
**DATE:** 6/26/08  
**PROJECT NUMBER:** 2008-09

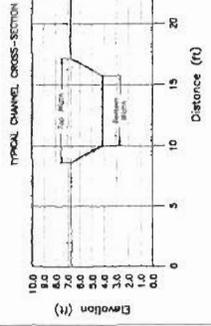
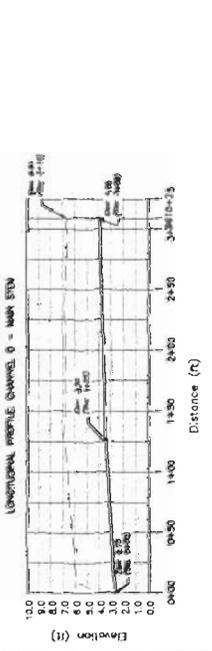
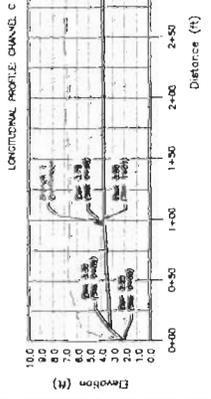
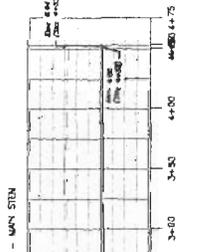
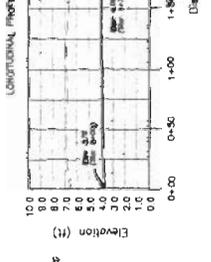
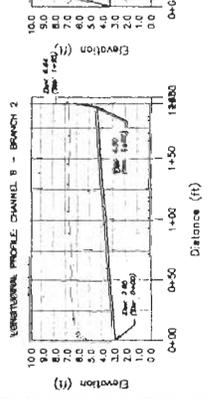
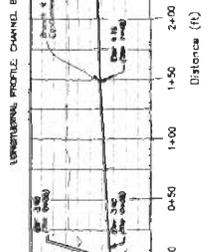
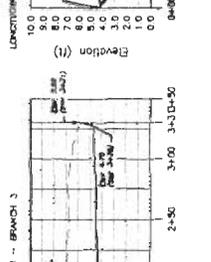
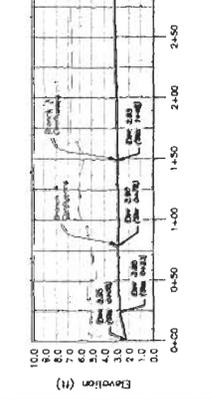
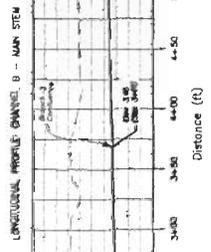
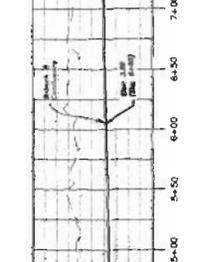
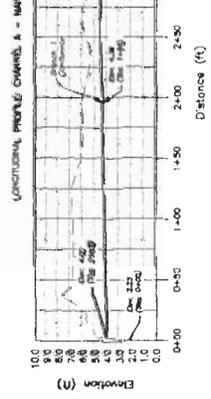
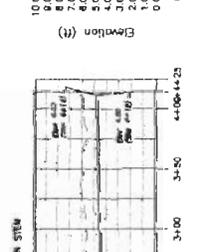
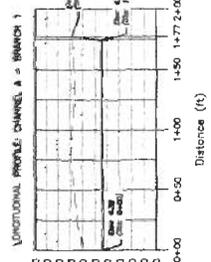
**REGISTERED PROFESSIONAL ENGINEER - CIVIL**  
 No. 5071  
 Exp. 8-30-09  
 STATE OF CALIFORNIA

**PERSON/DESCRIPTION/DATE:**

DATE	BY	DESCRIPTION

**SHEET** 3 **OF** 7  
**WOOD CREEK TIDAL MARSH ENHANCEMENT PROJECT**  
 Platform Map and Notes  
 Existing and Design Contours

THESE PLANS ARE FOR REVIEW  
AND BID PURPOSES ONLY  
\*\*\* NOT FOR CONSTRUCTION \*\*\*



CHANNEL A: SECTION DIMENSIONS

Channel	Segment	Station Start	Station End	Top Width	Bottom Width
A	Main Stem	0+00	2+00	8.1	5.7
A	Main Stem	2+00	4+14	4.9	3.9
A	Branch 1	0+00	1+27	5.9	4.8

CHANNEL B: SECTION DIMENSIONS

Channel	Segment	Station Start	Station End	Top Width	Bottom Width
B	Main Stem	0+00	0+78	18.0	7.4
B	Main Stem	0+78	1+40	17.8	7.3
B	Main Stem	1+40	3+48	16.1	7.1
B	Main Stem	3+48	6+08	12.4	6.8
B	Main Stem	6+08	7+60	7.2	5.3
B	Branch 1	0+00	2+46	6.0	5.0
B	Branch 2	0+00	1+95	6.0	5.0
B	Branch 3	0+00	1+48	7.2	5.3
B	Branch 4	0+00	3+21	5.4	4.4
B	Branch 5	0+00	1+12	3.6	2.6
B	Branch 5	0+00	2+10	7.0	5.3

CHANNEL C: SECTION DIMENSIONS

Channel	Segment	Station Start	Station End	Top Width	Bottom Width
C	Main Stem	0+00	1+01	13.6	6.8
C	Main Stem	1+01	4+53	8.1	5.6
C	Branch 1	0+00	1+78	9.7	6.0
C	Branch 1	1+78	3+25	5.7	4.7
C	Branch 2	0+00	1+93	5.9	4.8

CHANNEL D: SECTION DIMENSIONS

Channel	Segment	Station Start	Station End	Top Width	Bottom Width
D	Main Stem	0+00	3+10	8.5	5.7

1 Vertical ft = 10 Horizontal ft

PROJECT MANAGER: JEFF ANDERSON  
 DESIGNED BY: JEFF ANDERSON  
 CHECKED BY: JEFF ANDERSON  
 DATE: 10/20/10  
 PROJECT NUMBER: 10-000-08

PREPARED FOR:  
 Northeast Regional Land Trust  
 P.O. Box 396  
 Bayside, CA 95524

JEFF ANDERSON & ASSOCIATES  
 1338 CENTRAL AVENUE, SUITE 15  
 WICKETVILLE, CA 95519

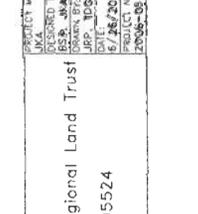
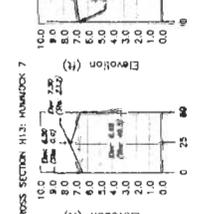
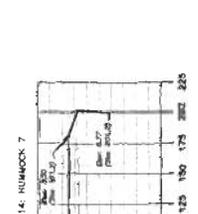
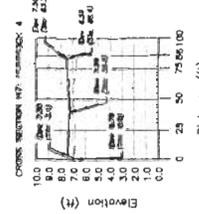
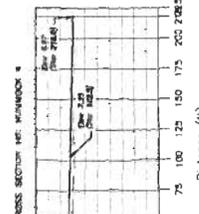
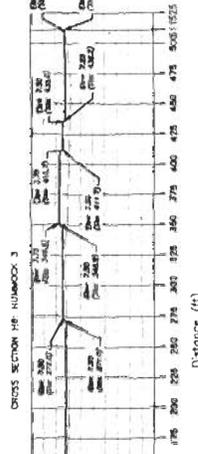
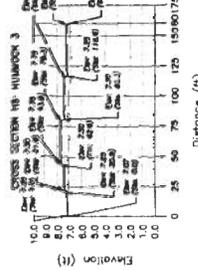
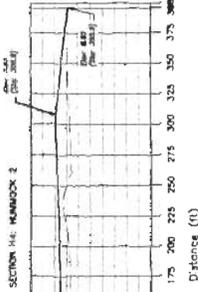
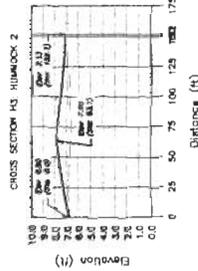
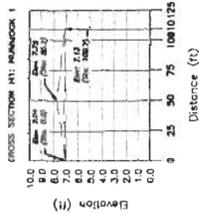
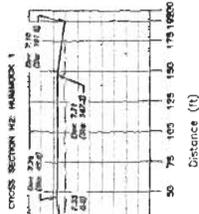
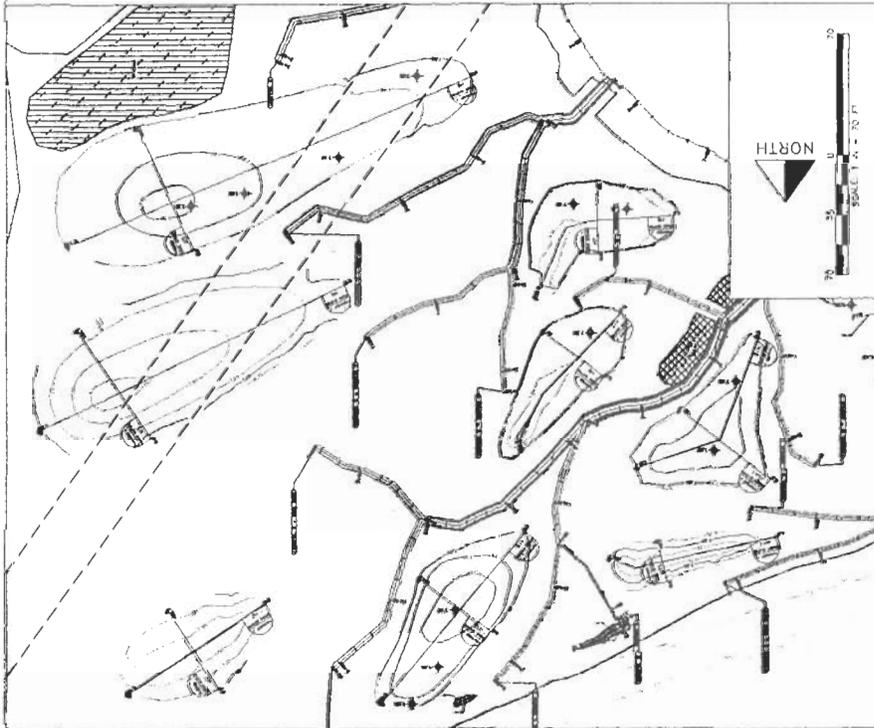
WOOD CREEK  
 TIDAL MARSH ENHANCEMENT PROJECT  
 Channel Geometry  
 Profiles and Cross Sections

SHEET 4 OF 7

4 of 7

1 Vertical ft = 10 Horizontal ft

THESE PLANS ARE FOR REVIEW  
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**Jeff Anderson & Associates**  
Environmental, Hydrology, Geomorphology, Water Resources  
1215 CENTRAL AVENUE, SUITE 15  
MCKINNEYVILLE, CA 95519

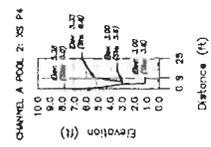
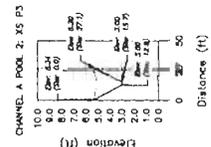
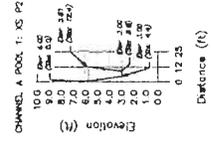
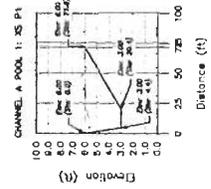
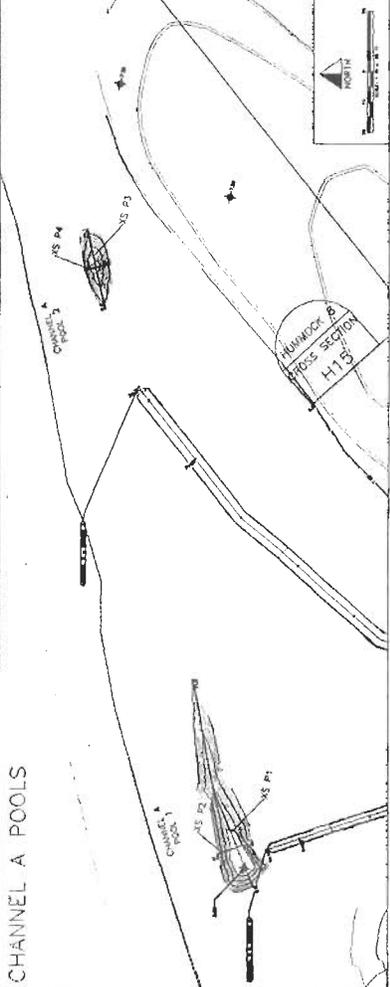
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				PROJECT ENGINEER
				JIA
				CHECKED BY
				JIA
				DESIGNED BY
				JIA
				FILE NAME
				MC_1000DESIGNS
				PROJECT NUMBER
				10000
				VERSION
				1

PREPARED FOR:  
Northcoast Regional Land Trust  
P.O. Box 398  
Boyside, CA 95524

WOOD Creek  
TIDAL MARSH ENHANCEMENT PROJECT  
Hummock Details  
Cross Section Geometry

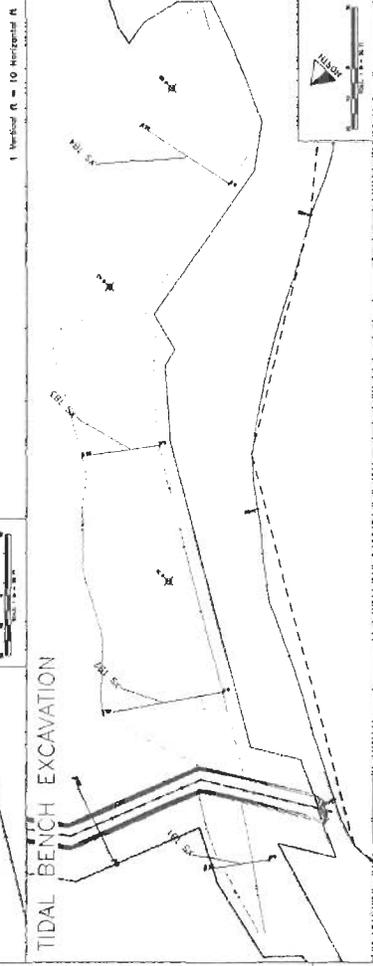
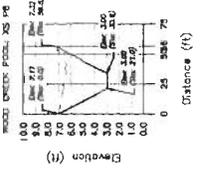
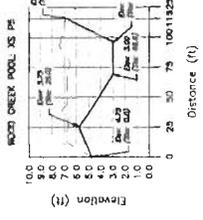
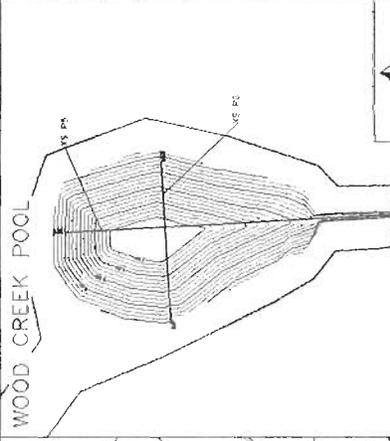
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CHANNEL A POOLS

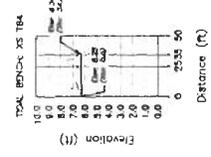
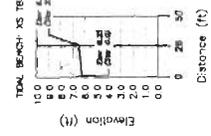
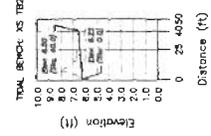
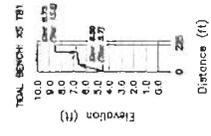


1 Vertical R = 10 Horizontal R

WOOD CREEK POOL



TIDAL BENCH EXCAVATION



1 Vertical R = 10 Horizontal R

THESE PLANS ARE FOR REVIEW  
AND BID PURPOSES ONLY  
\*\*\* NOT FOR CONSTRUCTION \*\*\*



**Jeff Anderson & Associates**  
Engineering - Hydrology - Geomorphology - Water Resources  
1225 CENTRAL AVENUE, SUITE 15  
MONTEREY, CA 95519

DATE	ISSUED FOR	BY	SCALE

PREPARED FOR:  
Northeast Regional Land Trust  
P.O. Box 398  
Boyside, CA 95524

PROJECT MANAGER: JVA  
DESIGNED BY: JVA, JRP  
CHECKED BY: JVA, JRP  
PROJECT ENGINEER: JVA  
FILE NAME: WC\_LODDESIGNS  
DATE: 5/26/2008  
PROJECT NUMBER: 2008-08

Wood Creek  
TIDAL MARSH ENHANCEMENT PROJECT  
Tidal Bench and Pool Details  
Cross Section Geometry

SHEET 6  
6 OF 7

6 of 7



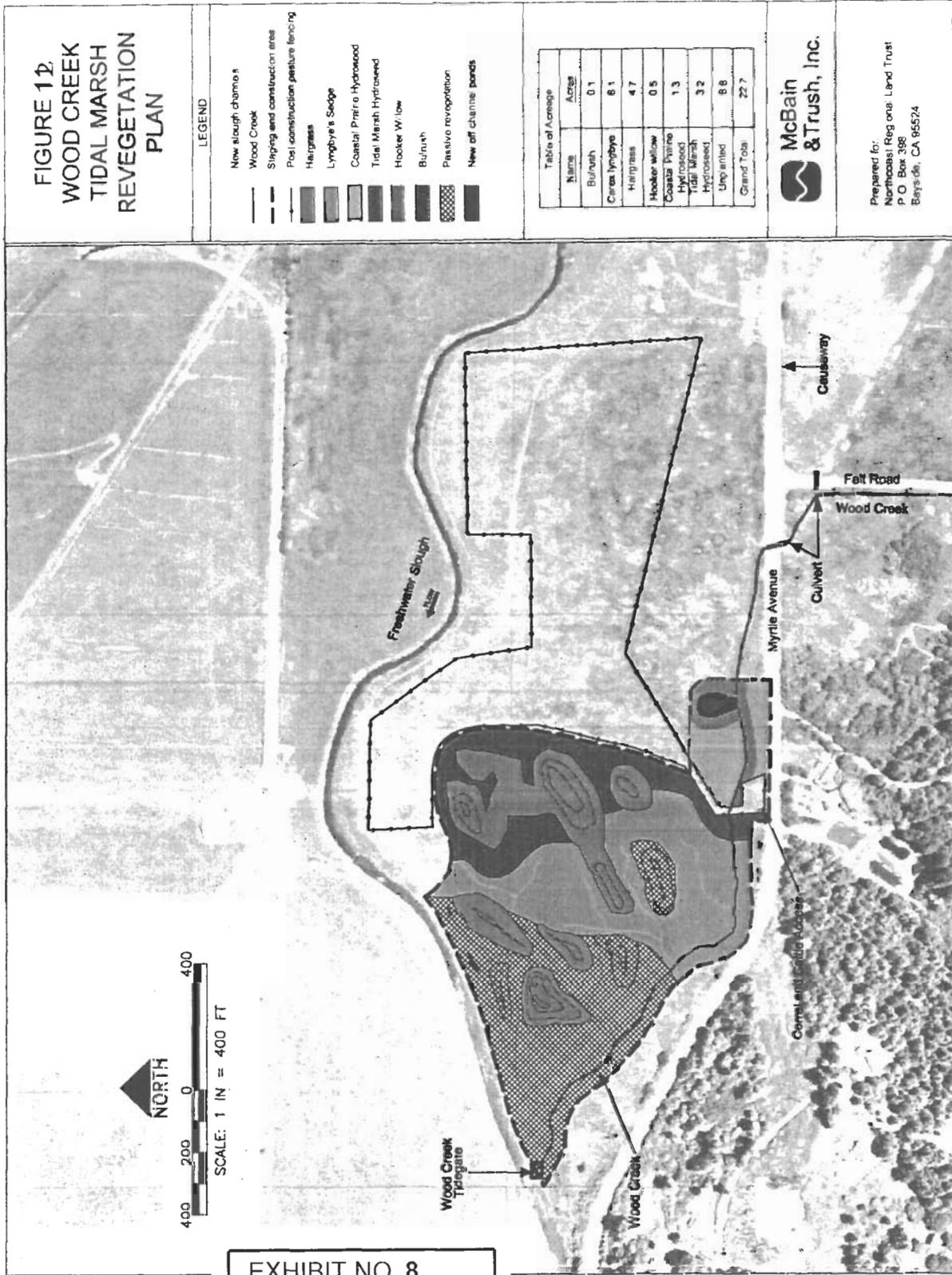
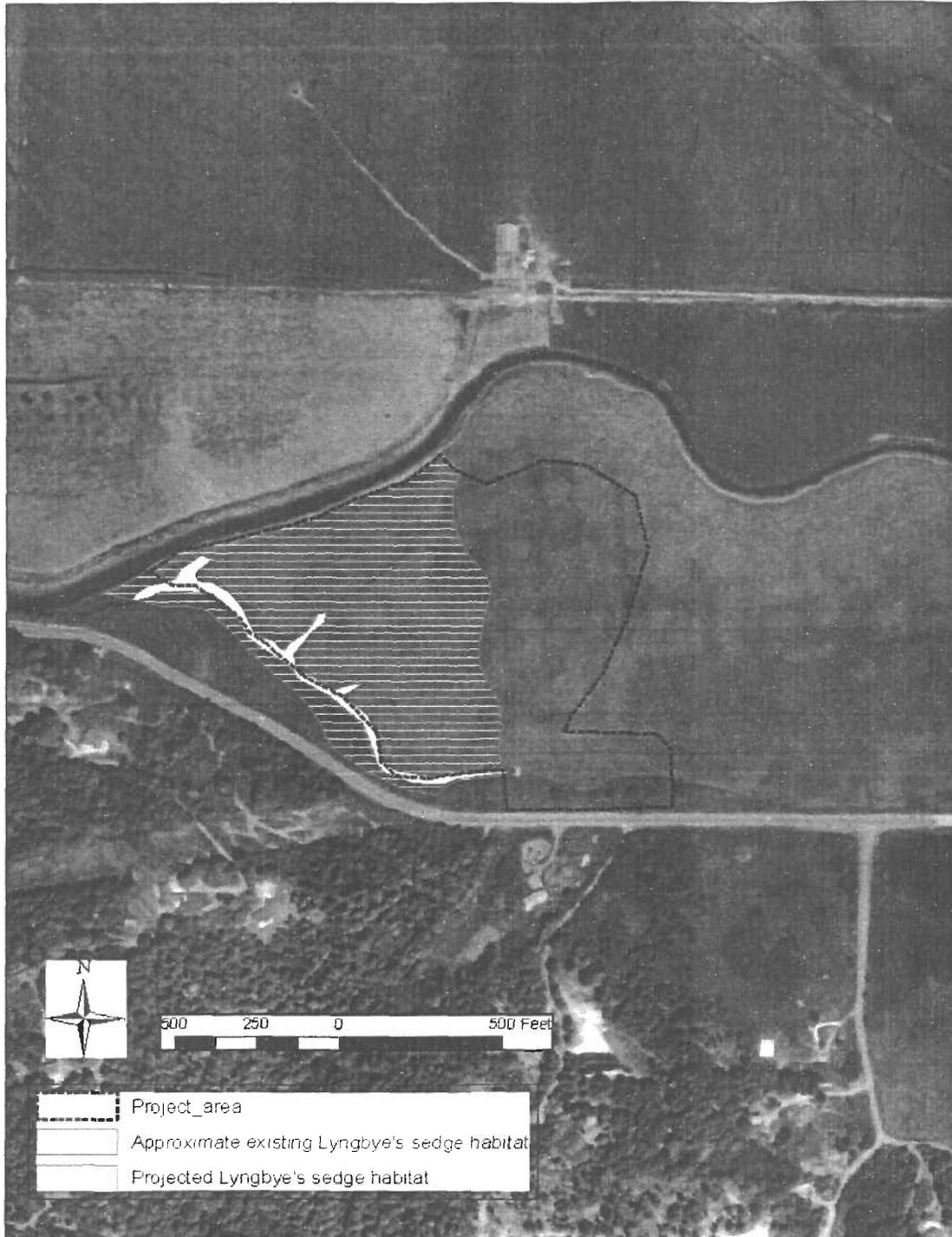


Figure 12. Proposed revegetation design for the Wood Creek project.

# Existing and Projected Lyngbye's Sedge Habitat



**EXHIBIT NO. 9**  
**APPLICATION NO.**  
1-08-012  
NORTHCOAST REGIONAL  
LAND TRUST  
EXISTING & PROPOSED  
LYNGBYE'S SEDGE HABITAT

Wood Creek Estuary Enhancement Project  
Compliance and Performance Monitoring Plan  
April 2008

<b>EXHIBIT NO. 10</b>
<b>APPLICATION NO.</b> 1-08-012 NORTHCOAST REGIONAL LAND TRUST PROPOSED MONITORING PLAN (1 of 4)

A. Construction and Compliance Monitoring

- document pre-project conditions, existing data includes:
  - topographic data (including channel cross sections and longitudinal profile)
  - vegetation mapping
  - fish utilization data
- collect data during construction required by permit conditions
  - temperature, salinity, turbidity, dissolved oxygen
  - photo-monitoring
  - weekly interval before/after construction; daily interval during construction
- post construction as built surveys
  - install long-term monitoring cross sections and survey xs's
  - conduct long profile survey
  - install staff plates and dataloggers for long-term performance monitoring
- prepare final construction and as-built report (available to permitting and funding agencies)

B. Physical Site Monitoring

- resurvey xs's and lp once a year for 3 years
- install datalogger for tidal stage data at tidegate
- install water quality sonde for salinity, DO, temp, etc., at tidegate
- download water quality data monthly
- map extent of tidal inundation at selected tide stages, corresponding to predictions in BA and hydraulic models, and at "important" high spring tides
- evaluate effects of cattle grazing on physical site conditions and water quality of newly restored marsh

C. Vegetation Monitoring

- continue NRCS exotics monitoring and eradication program; evaluate exotics colonization in newly created veg patches
- evaluate salvaged (i.e., transplanted), actively planted, and passive recolonization polygons for veg survival/recruitment success, using combination of transects, plots, and planform mapping (e.g., on yr-1, yr-2, yr-5 interval)
- monitor extent of vegetation conversion across NRLT property
- map vegetation plant stands and bio communities annually
- conduct analysis to link vegetation responses to salinity and stage data

D. Fisheries

- CDFG monthly fisheries monitoring for juvenile salmonid use (highest priority of all monitoring is to continue this)
- enlist the FWS to monitor tidewater goby colonization into new slough channels (note: the terminal ponds at upper end of new slough channels B10 and B11 [Design Report, p. 56, and the pond at sta. 18+00 Design Report, p. 53, Fig 3-1] are intended to provide potential habitat for tidewater goby but the lack of research and understanding of distribution mechanics means this is somewhat experimental; continued monitoring will provide information to better understand their habitat needs and distribution. From the USFWS website: "The species, which is endemic to California, is typically found in coastal lagoons, estuaries, and marshes with relatively low salinities (approximately ten parts per thousand (ppt)). Its habitat is characterized by brackish shallow lagoons and lower stream reaches where the water is fairly still but not stagnant. However, tidewater gobies can withstand a range of habitat conditions: they have been

documented in waters with salinity levels from 0 to 42 parts per thousand, temperatures from 8 to 25° Celsius, depths from 25 to 200 centimeters, and dissolved oxygen levels of less than one milligram per liter.)

- support DFG's analysis of scale and pit tag data for broader Freshwater Creek population utilization of watershed vs estuary/ecotone for rearing
- install antenna array on tidegate for pit tag tracking
- assess non-salmonid fish use of slough channels during tide cycles, presumably with data from DFG/ Mike Wallace's seining sampling

Wood Creek Compliance Monitoring

PARAMETER	TYPE OF MONITORING	FREQUENCY	SCHEDULE	SUCCESS CRITERIA
Design Plan Elements	Checklist	Once	Within 30 days of completion of construction	<ul style="list-style-type: none"> <li>• all design elements successfully built/ installed:                             <ul style="list-style-type: none"> <li>○ channels and ponds excavated</li> <li>○ tidal hummocks created</li> <li>○ habitat structures (large woody debris) installed</li> <li>○ Culvert removed/ bridge installed</li> <li>○ all temporary structures [water diversion, fish screens, silt fences, etc.] and unused construction materials/ waste removed</li> <li>○ erosion control (mulch, seed, etc.) installed</li> <li>○ wooden flap gate removed</li> <li>○ cattle fencing re-installed</li> </ul> </li> </ul>
Topography	Longitudinal channel profile and cross section survey and plot	Once	Within 30 days of completion of construction	<ul style="list-style-type: none"> <li>• Tidal hummock and channel bottom elevations within 1.0 ft. of design elevations</li> <li>• Channel widths within 20% of design width</li> <li>• Pond area within 20% of design area, bottom elevation within 1.0 ft. of design elevation</li> </ul>
Re-vegetation	Visual inspection	Once	Within 20 days of planting	<ul style="list-style-type: none"> <li>• Coverages by species within 90% of revegetation design plans</li> </ul>

Performance Monitoring

PARAMETER	TYPE OF MONITORING	FREQUENCY	SCHEDULE	SUCCESS CRITERIA	REMEDIAL ACTIONS
Topography	Longitudinal channel profile of Wood Creek channel and B channel, and cross section survey to replicate cross sections and profiles in Design Report; and plot	3 times	Once per year during summer	No net aggradation of channels and ponds within project site after 3 years (some deposition and scour is anticipated but no net volume decrease of ponds and channels)	Excavate material to achieve as-built condition unless otherwise agreed by regulatory agencies
Tidal stage	Data logger for tidal stage	Continuous, download monthly	Continuous for one year	Not Applicable (NA) – for research purposes to inform/refine future designs	NA
Water quality	Temperature, salinity, dissolved oxygen (DO) at 100 ft upstream of bridge	Continuous, download monthly	Continuous for one year	Average daily temperature $\leq 20^{\circ}\text{c}$ , average daily DO $\geq 6$ ppm, average daily salinity $\leq 1$ ppt	Repair salinity sill; install shade cover (native willows, alders, spruce)
Vegetation	Plant survival and species composition	3 times	Annually in Spring	80% survival of woody plants; 70% cover by native brackish marsh plants on tidal hummocks above MHHW after 3 years	Replant, re-seed until criteria met
Fisheries - salmonids	Seining, minnow traps	36 times	Monthly for 3 years	Annual average net increase of 100% over pre-project coho salmon numbers monitored by CDFG	None – uncontrollable variables (ocean conditions, run size) can affect numbers; this is a continuation of DFG's monitoring
Fisheries – tidewater goby	Seining,	6 times	Bi-annually for 3 years	Presence in new terminal ponds at upper end of new slough channels B10 and B11 (Design Report, p. 56; and pond at sta. 18+00 Design Report, p. 53, Fig 3-1); continued presence in pond at auxiliary tide gate	None – uncontrollable variables affect tidewater goby distribution including predation by birds and fish.

# Storm Water Pollution Prevention Plan

**For:**  
**Wood Creek Tidal Marsh Enhancement Project**

**COASTAL DEVELOPMENT PERMIT # XXXX**  
**CONDITIONAL USE PERMIT # XXXX**

**Prepared for:**  
**Northcoast Regional Land Trust**  
**P.O. Box 398**  
**Bayside, CA 95524**  
**Ryan Wells**  
**(707) 822-2242**

**RECEIVED**

SEP 25 2008

CALIFORNIA  
COASTAL COMMISSION

**Contractor:**

?  
?  
?  
?  
?

**EXHIBIT NO. 11**

**APPLICATION NO.**

1-08-012 - NORTHCOAST  
REGIONAL LAND TRUST  
DRAFT STORMWATER  
POLLUTION PREVENTION  
PLAN (1 of 54)

**Project Site Location/Address:**

**0.5 miles south of Freshwater Corners, Eureka, CA. East of Myrtle Road  
between Felt Road and Pigeon Point Road**

**Contractor's Storm Water Pollution Prevention Manager**

**Don Allan**

**Natural Resources Services, Redwood Community Action Agency**

**904 G St. Eureka, Ca 95501**

**(707) 269-2063**

**SWPPP Prepared by:**

**Natural Resources Services, Redwood Community Action Agency**

**904 G Street, Eureka, CA 95501**

**Tyler S. Ledwith (707) 269-2058**

**SWPPP Preparation Date:**

**July 25, 2008**

**Estimated Project Dates:**

**Start of Construction: October 2008    Completion of Construction: November 2008**

**WDID No.:** \_\_\_\_\_

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**Storm Water Pollution Prevention Plan (SWPPP)  
Wood Creek Tidal Marsh Enhancement Project  
Contract No. COASTAL DEVELOPMENT PERMIT # XXXX  
CONDITIONAL USE PERMIT # XXXX**

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Attachment B.....	Water Pollution Control Drawings
Attachment C .....	BMP Consideration Checklist
Attachment D .....	Computation Sheet for Determining Runoff Coefficients
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**Storm Water Pollution Prevention Plan (SWPPP)  
Wood Creek Tidal Marsh Enhancement Project  
Contract No. COASTAL DEVELOPMENT PERMIT # XXXX  
CONDITIONAL USE PERMIT # XXXX**

---

Attachment I..... Trained Contractor Personnel Log  
Attachment J..... Subcontractor Notification Letter and Log  
Attachment K..... Notice of Non-Compliance  
Attachment L..... SWPPP and Monitoring Program Checklist  
Attachment M..... Annual Certification of Compliance Form  
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Attachment S..... Construction Material and Pollutant Testing Guidance Table – Non-Visible Pollutants  
Attachment T..... Discharge Reporting Log

## Section 100 SWPPP Certifications and Approval

### 100.1 SWPPP Certification by Preparer

Project Name: Wood Creek Tidal Marsh Enhancement Project

Project Number: Coastal Development Permit #  
**CONDITIONAL USE PERMIT #**

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

---

Preparer's Signature

Date

Tyler S. Ledwith  
RCAA SWPPP Preparer  
Preparer's Name and Title

(707) 269-2058  
Telephone Number

## 100.2 Owner Approval and Certification of SWPPP

**Owner's (or Authorized Representative)  
Approval and Certification of the  
Storm Water Pollution Prevention Plan**

Project Name: Wood Creek Tidal Marsh Enhancement Project

Project Number: Coastal Development Permit #  
**CONDITIONAL USE PERMIT #**

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

\_\_\_\_\_  
Owner (or Authorized Representative) Signature

\_\_\_\_\_  
Date

Ryan Wells, NRLT Project Manager

Name and Title

(707) 822-2242

Telephone Number

### **100.3 Annual Compliance Certification**

By July 1 of each year, the Owner shall complete an Annual Certification of Compliance stating compliance with the terms and conditions of the Permit and the SWPPP. The blank Annual Certification of Compliance Form is included in Attachment M. Completed Annual Certifications of Compliance and Approvals can be found in the following pages.

•

## **Section 200 SWPPP Amendments**

### **200.1 SWPPP Amendment Certification and Approval**

This SWPPP shall be amended:

- Whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4); or
- If any condition of the Permits is violated or the general objective of reducing or eliminating pollutants in storm water discharges has not been achieved. If the RWQCB determines that a Permit violation has occurred, the SWPPP shall be amended and implemented within 14-calendar days after notification by the RWQCB;
- Annually, prior to the defined rainy season; and
- When deemed necessary by the Owner.

---

The following items will be included in each amendment:

- Who requested the amendment.
- The location of proposed change.
- The reason for change.
- The original BMP proposed, if any.
- The new BMP proposed.

The amendments for this SWPPP, along with the Owner's Certification and the Owner approval, can be found in the following pages. Amendments are listed in the Amendment Log in section 200.2

INSERT ADDITIONAL RESPONSIBILITIES AND/OR NAMES HERE OR DELETE THIS LINE (Use the "FORMAT OPTIONS" button to insert subtitles and/or paragraphs)

**SWPPP Amendment No.**

Project Name: Wood Creek Tidal Marsh Enhancement Project  
Project Number: Coastal Development Permit #  
**CONDITIONAL USE PERMIT #**

---

**Preparer Certification of the  
Storm Water Pollution Prevention Plan Amendment**

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

<hr/> <p style="text-align: center;">Preparer's Signature Tyler Ledwith RCAA SWPPP Preparer</p> <hr/>	<hr/> <p style="text-align: center;">Date  (707) 269-2058</p> <hr/>
Preparer's Name and Title	Telephone Number

---

**Owner (or Owner's Authorized Representative) Approval of the  
Storm Water Pollution Prevention Plan Amendment**

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

<hr/> <p style="text-align: center;">Owner (or Authorized Representative) Signature Ryan Wells NRLT Project Manager</p> <hr/>	<hr/> <p style="text-align: center;">Date  (707) 822-2242</p> <hr/>
Name and Title	Telephone Number

---



## **Section 300**

# **Introduction and Project Description**

### **300.1 Introduction and Project Description**

The project is located north of the city of Eureka on Myrtle avenue between the town of Eureka and Freshwater Corners, Humboldt County CA. The construction site is located on the west side of Myrtle avenue between Felt Road and Pigeon Point Road can be found in Section 29 and 30, Township 5 North, Range 1 East of the Arcata South, Calif. USGS 7.5-minute quadrangle map or Latitude, Longitude (in decimal degrees): 40.784 N; 124.096 W.

Wood Creek is tributary to Freshwater Creek Slough with the confluence controlled by a tidegate. A levee separates Freshwater Slough and the project area along the western boundary and Myrtle Ave. bounds the eastern edge of the project. The project will restore tidal hydrology, expand brackish marsh habitat, and remove the Wood Creek tidegate to improve aquatic habitat. The project is anticipated to expand the brackish marsh within the construction area from 1.4 acres of existing marsh to 20.7 acres of enhanced brackish marsh and is expected to remain a tidal wetland in perpetuity. The proposed actions will utilize the existing ranching road access off Myrtle Avenue to bring an excavator, backhoe, dump truck, and possibly bulldozer onto the 23.2 acre construction area and grazed wetland pasture. A 2,800 ft long temporary access road will be designated around the perimeter of the project area, across the seasonal wetland pasture. A secondary existing access road from the neighboring parcel may be utilized for occasional access.

The primary construction activity of this project is excavation and placement of approximately 3,709 yds<sup>3</sup> of material within the construction boundary. Excavation activities will include: (1) removing material along 3,900 ft of tidal creek channel; (2) removing former dredge material excavated from Wood Creek in the past; (3) removing material from a 50 x 90 ft pond adjacent to Wood Creek and; (4) excavating fill material from an existing cattle crossing. All excavations across the seasonal wetland pasture will be done with excavator and backhoe. Excavated material will be used on-site to recreate topographic diversity across the existing seasonal wetland in the form of high marsh surfaces and tidal hummocks. The "cut" material may either be placed directly onto the seasonal wetland surface within reach of the excavator or loaded into a small dump truck and placed a short distance away. Within each proposed tidal slough channel, several pools and habitat structures will be constructed using logs and root wads to provide aquatic habitat diversity. The existing cattle crossing will be replaced with a 50 ft long bridge after the excavation work is completed, but before the channel plugs and tidegate are removed. The bridge will be set on concrete abutments and span the 20 ft wide creek. During the

bridge installation, an approximately 100 ft section of channel will be dewatered with coffer dams to minimize impacts to aquatic species and water quality (primarily turbidity).

Post construction the site will be revegetated with native salinity-tolerant vegetation. The final project construction task will remove the remaining dirt plugs left in place at the confluence of the newly excavated tidal creek channels and pond, and the main Wood Creek channel. This task will be done after all other excavations and recontouring are complete, the bridge installation is complete, and the site is ready for inundation from increased tidal prism. The excavator will remove each dirt plug, working successively downstream until all tidal creek channels are opened. Once this is complete, the Wood Creek tidegate will be removed and hauled away.

The project includes a full suite of pre-construction stormwater and non-stormwater BMPs, temporary measures to be implemented during construction activities, and permanent post-construction BMPs including hydroseeding, broadcast hand seeding, woody revegetation, straw mulching, and other long-term site stabilization BMPs.

### 300.2 Unique Site Features

CLICK AND TYPE PROJECT FEATURES HERE

### 300.3 Construction Site Estimates

The following are estimates of the construction site:

Construction site area	<u>23</u>	acres
Percentage impervious area before construction	<u>0</u>	%
Runoff coefficient before construction <sup>(1)</sup>	<u>0.24</u>	
Percentage impervious area after construction	<u>0</u>	%
Runoff coefficient after construction <sup>(1)</sup>	<u>0.24</u>	
Anticipated storm water flow on to the construction site <sup>(2)</sup>	<u>2.9</u>	cfs

<sup>(1)</sup> Calculations are shown in Attachment D

<sup>(2)</sup> Calculations are shown in Attachment E

### 300.4 Project Schedule/Water Pollution Control Schedule

Estimated project start: September 2008

Estimated completion: March 2009

Pre-project preparation September 2008

File Notice of Intent: September 2008

Mobilization of equipment and materials: October 1, 2008

Store temporary erosion and sediment control materials on site beginning on October 1, 2008

Deploy pre-construction BMPs including perimeter control, material storage and stockpile BMPs, equipment maintenance BMPs, tracking control BMPs, sediment control BMPs, and non-stormwater BMPs between October 1-8, 2008

Site preparation: grading and grubbing beginning October 8, 2008

Main construction activities including excavation of channels and pond, creation of tidal hummocks, removal of cattle crossing, removal of Wood Creek tidegate between October 8-17, 2008

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First SWPPP Inspection October 13, 2008

Rainy season begins October 15, 2008

Install post project erosion control BMPs including hydro-seeding, hand broadcast seeding, and mulching October 20 - 24, 2008

Demobilize heavy equipment October 17 - 27, 2008

Install woody revegetation (trees and shrubs) October 2008 - February 2009

Final Site cleanup March 15 - 25, 2009

Final SWPPP inspection March 26, 2009

Project complete March 31, 2009

Submt SWPPP Notice of Termination April 6, 2009

### 300.5 Contact Information/List of Responsible Parties

The Storm Water Pollution Prevention Manager (SWPPM) assigned to this project is:

Don Allan

Natural Resources Services, Redwood **Community Action Agency**  
**G St. Eureka, Ca 95501**  
**269-2063**

**904**  
**(707)**

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The SWPPM shall have primary responsibility and significant authority for the implementation, maintenance, inspection and amendments to the approved SWPPP. The SWPPM will be available at all times throughout the duration of the project. Duties of the SWPPM include but are not limited to:

- Ensuring full compliance with the SWPPP and the Permit
- Implementing all elements of the SWPPP, including but not limited to:
  - Implementation of prompt and effective erosion and sediment control measures
  - Implementing all non-storm water management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.
- Pre-storm inspections
- Storm event inspections
- Post-storm inspections
- Routine inspections as specified in the project's specifications or described in the SWPPP
- Updates/ Amendments to the SWPPP, as needed
- Preparing annual compliance certification for owner's, or owner's authorized representative, signature

- Ensuring elimination of all unauthorized discharges
- The SWPPM shall be assigned authority by the Contractor to mobilize crews in order to make immediate repairs to the control measures
- Coordinate with the Contractor to assure all of the necessary corrections/repairs are made immediately, and that the project complies with the SWPPP, the Permit and approved plans at all times
- Submitting Notices of Discharge and reports of Illicit Connections or Illegal Discharges

INSERT ADDITIONAL RESPONSIBILITIES AND/OR NAMES HERE OR DELETE THIS LINE (Use the "FORMAT OPTIONS" button to insert subtitles and/or paragraphs)

## Section 400

### References

The following documents are made a part of this SWPPP by reference:

- Project plans and specifications No. 2006-08, dated June 22, 2008, prepared by Jeff Anderson and Associates, RCE 50713. Exp. September 30 2009.
- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.
- California Stormwater BMP Handbook - Construction, January 2003
- Wood Creek Tidal Marsh Enhancement Project Biological Assessment. Prepared by McBain and Trush, Inc. October 2007
- North Coast Regional Water Quality Control Board 401 Water Quality Certification Permit #, dated xx/xx/xx pending
- California Department of Fish and Game 1601 Stream Alteration Agreement #xx, dated xx/xx/xx pending
- U.S. Army Corp of Engineers Section 33 CFR 325 Nationwide 27 Permit #xx, dated xx/xx/xx pending
- California Coastal Conservancy - Coastal Development Permit #xx, dated xx/xx/xx pending
- Humboldt Bay Harbor, Recreation and Conservation District Permit #xx, dated xx/xx/xx pending
- County of Humboldt - Conditional Use Permit #xx, dated xx/xx/xx pending
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## **Section 500**

### **Body of SWPPP**

#### **500.1 Objectives**

This Storm Water Pollution Prevention Plan (SWPPP) has six main objectives:

- Identify all pollutant sources, including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site, and
- Identify non-storm water discharges, and
- Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction, and
- Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs).
- Identify a sampling and analysis strategy and sampling schedule for discharges from construction activity which discharge directly into water bodies listed on Attachment 3 of the Permit (Clean Water Act Section 303(d) [303(d)] Water Bodies listed for Sedimentation).
- For all construction activity, identify a sampling and analysis strategy and sampling schedule for discharges that have been discovered through visual monitoring to be potentially contaminated by pollutants not visually detectable in the runoff.

This SWPPP conforms with the required elements of the General Permit No. CAS000002 issued by the State of California, State Water Resources Control Board (SWRCB). This SWPPP will be modified and amended to reflect any amendments to the Permit or any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters, groundwaters, or the municipal separate storm sewer system (MS4). The SWPPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. The SWPPP shall be readily available on-site for the duration of the project.

## **500.2 Vicinity Map**

The construction project vicinity map showing the project location, surface water boundaries, geographic features, construction site perimeter, and general topography, is located in Attachment A. The project's Title Sheet provides more detail regarding the project location and is also included in Attachment A.

## **500.3 Pollutant Source Identification and BMP Selection**

### **500.3.1 Inventory of Materials and Activities that May Pollute Storm Water**

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff (control practices for each activity are identified in the Water Pollution Control Drawings (WPCDs) and/or in Sections 500.3.4 through 500.3.9:

- Vehicle and equipment fluids, including oil, grease, petroleum, coolant, and hydraulic fluid (benzene and derivatives)
- Base and subbase materials
- Raw landscaping materials and wastes (topsoil, plant materials, fertilizers, mulch, tackifier)
- Cement materials from drilling concrete pads to secure bridge
- General litter
- BMP materials (sandbag)
- 

Construction activities that have the potential to contribute sediment to storm water discharges include:

- Clear and grubbing operations
- Grading operations
- Installation of bridge
- Removal of tidegate

- Landscaping operations
- Installation of SWPPP BMPs
- Vehicle fueling/refueling
- Dewatering to remove and construct new bridge

There is a possibility of sediment entering Wood Creek when connecting the excavated channels to Wood Creek through removal of the sediment plugs that separate them. This will be one of the last construction tasks.

Attachment C lists all Best Management Practices (BMPs) that have been selected for implementation in this project. Implementation and location of BMPs are shown on the WPCDs in Attachment B. Narrative descriptions of BMPs to be used during the project are listed by category in each of the following SWPPP sections. Attachment Q includes a list, and/or copies of the fact sheets of all the BMPs selected for this project.

### **500.3.2 Existing (pre-construction) Control Measures**

The following are existing (pre-construction) control measures encountered within the project site:

- Access bridge over Wood Creek
- Tidgegate between Wood Creek and Freshwater Creek
- Levee between project site and Freshwater Creek
- Waterman tidegate between Wood Creek and Freshwater Creek
- Vegetation
- 
- 

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### **500.3.3 Nature of Fill Material and Existing Data Describing the Soil**

Approximately 1.4 acres of the construction site is existing wetland with hydric soils. Soils on the site are characterized as Bayside silty clay loam, imperfectly drained at 0-3 percent

slopes. The groundwater table is high in the remaining pasture land and some saturation of the soil is expected.

Soil from the excavated channels will be used to create the tidal hummocks. Excavated saturated soil will be stored away from Wood Creek until dry enough to form hummocks.

There are no known detectable toxic material in the soil.

Existing site features that, as a result of past usage, may contribute pollutants to storm water (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site) include:

- None
- 
- 
- 

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#### **500.3.4 Erosion Control**

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate erosion control measures required by the contract documents, and other measures selected by the Contractor, SWPPP Manager, or Owner. This project will implement the following practices for effective temporary and final erosion control during construction:

- 1) Preserve existing vegetation where required and when feasible.
- 2) Apply temporary erosion control to remaining active and non-active areas as required by the California Stormwater BMPs Handbook - Construction, and the contract documents. Reapply as necessary to maintain effectiveness.

- 3) Implement temporary erosion control measures at regular intervals throughout the defined rainy season to achieve and maintain the contract's disturbed soil area requirements. Implement erosion control prior to the defined rainy season.
- 4) Stabilize non-active areas as soon as feasible after the cessation of construction activities.
- 5) Control erosion in concentrated flow paths by applying erosion control blankets, erosion control seeding, and lining swales as required in the contract documents.
- 6) Apply seed to areas deemed substantially complete by the Owner during the defined rainy season.
- 7) At completion of construction, apply permanent erosion control to all remaining disturbed soil areas.

Sufficient erosion control materials will be maintained on-site to allow implementation in conformance with Permit requirements and described in this SWPPP. This includes implementation requirements for active areas and non-active areas that require deployment before the onset of rain.

Implementation and locations of temporary erosion control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B and/or described in this section. The BMP Consideration Checklist in Attachment C indicates the BMPs that will be implemented to control erosion on the construction site; these are:

- EC-1, Scheduling
- EC-2, Preservation of Existing Vegetation
- EC- 4, Hydroseeding
- EC- 6, Straw Mulch
- EC-7, Geotextiles and Mats
- 

BMPs will be deployed in a sequence to prepare for and follow the progress of grading and construction according to the achedule shown in SWPPP Section 300.4. As the locations of soil disturbance change, near or retreat from Wood Creek, or increase or decrease in slope, the erosion and sediment controls will be adjusted accordingly per the professional evaluation of the SWPPM and project Owner.

EC- 1 Scheduling will be implemented throughout the project as a means of ensuring that major earth disturbing activities are pursued during the non-rainy season as much as practical. The work schedule will include BMPs for specific activities to remind the crews that the BMPs must be used whenever the related activity is begun, and must be implemented prior to beginning the work.

EC-2 Preservation of Existing Vegetation will be implemented by clearly marking the project area and areas of equipment exclusion. Grading and travel between hummocks will be conducted to minimize disturbance to existing vegetation. All personnel will be instructed to strictly observe these limits and keep within the project area.

EC-4 Hydroseeding will be employed to stabilize the slopes on four newly constructed hummocks as designated on the WCPD. The seed mix will be a compilation of native wetland, marsh, and annual grass.

EC-6 Straw mulch will be used as specified in the contract to protect bare soil and hand broadcast seeded areas on newly constructed hummocks and disturbed areas between hummocks. Straw mulch will be applied and punched in mechanically or manually at the discretion of the SWPPM.

EC-7 Geotextiles and Mats BMPs will be used on three hummocks identified on the WCPD. The geotextile, mat, or blanket type will be designated by the NRLT Project Manager and installed according to established BMPs and the discretion of the SWPPM.

### **500.3.5 Sediment Control**

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate sediment control measures required by the contract documents, and other measures selected by the Contractor, SWPPP Manager, or Owner.

Sufficient quantities of temporary sediment control materials will be maintained on-site throughout the duration of the project, to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies, in conformance with other Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

Implementation and locations of temporary sediment control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. The BMP Consideration Checklist in Attachment C indicates all the BMPs that will be implemented to control sediment on the construction site; these are:

- SE-1, Silt Fence
- SE-5, Fiber Rolls
- SE-8, Sandbag Barrier
- SE-9, Straw Bale Barrier
- 
- 
- 

Temporary and permanent sediment control will be deployed according to the schedule in SWPPP Section 300.4. Sediment control BMPs, including silt fences and fiber rolls will be placed at the site perimeter at draining points of disturbed soil areas with the potential to deliver sediment Wood Creek.

SE-1 Silt Fence and SE-5 Fiber Rolls BMPs will be installed on the banks of the bridge construction and around the two hummocks identified on the WPCD for passive revegetation to prevent sediment from entering Wood Creek during the construction process. Location and installation of silt fences and fiber rolls will be at the discretion of the SWPPM.

SE-8 Sandbags Barrier will be used in conjunction with plastic sheeting to create a coffer dam to dewater Wood Creek during bridge demolition and construction. Cofferdam and water diversion installation will follow established BMPs and/or the discretion of the SWPPM.

SE-9 Straw Bale Barrier BMP may be used to secure stockpiles to prevent sediment from entering Wood Creek.

### **500.3.6 Tracking Control**

The following BMPs have been selected to reduce sediment tracking from the construction site onto private or public roads:

- SE-7, Street Sweeping and Vacuuming
- TC-1, Stabilized Construction Entrance/Exit
- TC-3, Entrance/Outlet Tire Wash

The project as one site entrance/exit. Besides the initial deployment and removal of heavy equipment and supplies there will be little traffic entering/exiting the job site. The major earthwork is expected to be completed between 3-7 days and refueling will occur at the designated location on site. Light vehicles will be restricted in entering the pasture and excavation areas to reduce compaction and tracking of soil. At the discretion of the SWPPM, the contractor may be obligated to implement any the above listed BMPs.

### **500.3.7 Wind Erosion Control**

The following BMPs have been selected to control dust from the construction site:

- WE-1, Wind Erosion Control
- WM-3, Stockpile Management
- 

WE-1 Wind Erosion Control. Water will be applied to disturbed soil areas as needed that are susceptible to wind erosion and particularly where dry fine soil could be blown directly into Myrtle Avenue, Wood Creek, or Freshwater Slough. Water will be applied using a water truck or pumped from Wood Creek or Freshwater Slough as approved by the SWPPM.

WM-3 Stockpile Management. During windy conditions plastic covers or erosion control mats will be used to cover stockpiles susceptible to wind erosion. Wind BMPs will be installed at the discretion of the SWPPM.

### **500.3.8 Non-Storm Water Control**

An inventory of construction activities and potential non-storm water discharges is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to control non-storm water pollution on the construction site. Implementation and locations of some non-storm water

- NS-6, Illicit Connection/Illegal Discharge Detection and Reporting
- NS-8, Vehicle and Equipment Cleaning
- NS-9, Vehicle and Equipment Fueling
- NS-10, Vehicle and Equipment Maintenance
- NS-5, Clear Water Diversion
- NS-15, Demolition Adjacent to Water
- 
- 

NS-5 Clear Water Diversion BMPs will be employed during the dewatering and diversion of Wood Creek for the bridge demolition and construction. Two coffer dams will be constructed to dewater a ~ 100 ft section of the creek during bridge construction. The coffer dams will be constructed out of sandbags and covered in plastic to form a seal. Fish exclusion screens, with no greater than ¼ inch mesh, will be installed upstream of the upper coffer dam and downstream of the lower dam. Dewatering will be accomplished by pumping stream flow around the construction site and discharging it back into the creek between the downstream coffer dam and the fish screen. Groundwater seeping into the construction site will be pumped onto the pasture a minimum of 200 ft away from the creek. The pump intake will be screened to prevent the accidental intake of any aquatic species.

NS-6 Illicit Connection/Illegal Discharge Detection and Reporting. The contractor will implement NS-6 Illicit Connection/Illegal Discharge Detection and Reporting BMPs throughout the duration of the project.

NS-8 Vehicle and Equipment Cleaning BMPs will be implemented to avoid any release of potential pollutants where they might be transported to waterways. The contractor will be required to clean their vehicles at offsite locations. Equipment that remains onsite and requires cleaning will be moved to the staging area and plastic sheeting or drip pans will be placed under any places where oils, greases, or anything but sediment might be rinsed off. Oil and grease absorbent material will be used to collect such things, and then disposed of as solid waste following state and federal disposal regulations. Rinse water that only contains sediment will be contained in a sediment basin, filtered, or discharged onto an area of the pasture that is contain a surface flow path to the stream network.

NS- 9 Vehicle and Equipment Fueling BMPs will be used to direct the activities whenever equipment or vehicles must be refueled onsite. Refueling all vehicles and equipment will be conducted at the designated refueling site located on the WPCD. Drip pans or absorbent pads will be used for all vehicle and equipment maintenance activities that involve grease, oil solvents, or other vehicles fluids.

NS-10 Vehicle and Equipment Maintenance BMPs will be utilized to prevent discharges of fuel and other vehicle fluids. Minor maintenance of all vehicles and equipment will be conducted at the refueling site or staging site located on the WPCD. Major maintenance will not be performed onsite unless it must be done to make the equipment mobile. Any personnel qualified to perform maintenance will be required to employ all appropriate measures.

NS-15, Demolition Adjacent to Water BMPs will be utilized during the demolition of the existing bridge prior to construction. Debris catching devices shall be employed and emptied regularly. Debris shall be removed and stored away from the watercourse and protected from runoff and runoff. Silt fencing and/or fiber rolls are to employed to catch sediment from disturbed areas from entering Wood Creek.

### **500.3.9 Waste Management and Materials Pollution Control**

An inventory of construction activities, materials, and wastes is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to handle materials and control construction site wastes. A narrative description of each BMP follows.

- WM-1, Material Delivery and Storage
- WM- 2, Material Use
- WM-3, Stockpile Management
- WM-4, Spill Prevention and Control
- WM-5, Solid Waste Management
- WM-9, Sanitary/Septic Waste Management
- WM-6, Hazardous Waste Management
- WM-10, Liquid Waste Management

■

■

WM-1 Material Delivery and Storage, WM-2 Material Use, WM-6 Hazardous Waste Management BMPs will be implemented to prevent discharges of construction materials during delivery, storage, and use. Materials will be stored at the staging area identified in the WPCD (Appendix B). Water tight containers will be used to store hand tools, small hardware, and all fuels, solvents, grease, or other potentially deleterious materials such as fertilizers. Large items such as lumber, strawbales, and concrete pads will be stored in open flat zones in the identified staging area.

WM-3 Stockpile Management BMPs will be implemented to reduce or eliminate pollution of stormwater from stockpiles of soils, mulch, gravel or other materials. These materials will be stored on flat areas 50 ft from an existing or future watercourse. Stockpiles will be surrounded with sediment control BMPs (SE - 1 Silt Fence, SE-5 Fiber Rolls, SE-8 Sandbag Barrier, or SE-9 Straw Bale Barrier) as well as covered with plastic tarps at the discretion of the SWPPM.

WM-4 Spill Prevention and Control BMPs will be implemented to contain and clean up spills and prevent material discharges to the stream network. The Contractor will keep an emergency spill kit on site with the equipment whenever the equipment is operating. The spill kit will be the equivalent of the CDF standard materials kit sold by RSSE Corp. of Redding. This kit is capable of containing a spill of 130 gallons. The kit will also include 6 buckets of at least 5 gallon capacity with tight fitting lids to catch leaking oil, absorbent towels, and shovels to pick up contaminated soil. Soil accidentally contaminated by a fuel or oil spill will be disposed at a facility licensed to accept contaminated soil.

An on-the-ground person will be on-site whenever equipment is operating in addition to the equipment operators. This person will watch for leaks so they are detected at the first possible moment and preventative action can be taken immediately. A fire extinguisher (minimum 10 pound capacity, CO<sub>2</sub>) will also be kept on the equipment at all times to extinguish and prevent the spread of any accidental fires. Regular safety meetings will be held with crew and equipment operators to review safety procedures and emergency contingency plans. A hand held cell phone will be kept on site for communication purposes and will be used to notify appropriate emergency response personnel in the event of an emergency.

As a final preventative measure to contain any accidental releases of fuel, oil, coolant, or hydraulic fluid, a floating absorbent boom designed for containing waterborne petroleum product spills will be kept on site and deployed if needed across the channel at the closest.

location where feasible, but not farther than 100 feet downstream of the work site where the equipment is operating.

WM-5 Solid Waste Management BMPs will require that any solid waste be placed in water tight containers and protected from contact with rainfall or runoff flows. Solid waste will be stored at the designated staging area identified in the WPCD (Appendix B). Solid waste will be loaded directly into trucks for off site disposal.

WM-9 Sanitary/Septic Waste Management BMPs do not apply to this project as the construction site is located near public facilities.

WM-10 Liquid Waste Management BMPs will be employed at the discretion of the SWPPM.

### **500.3.10 Cost Breakdown for Water Pollution Control**

A cost breakdown itemizing the contract lump sum for water pollution control has been developed for this project and included in Attachment O. The cost breakdown reflects the items of work, quantities and costs for BMPs shown in the SWPPP, except for those construction site BMPs and permanent BMPs that are shown on the project plans and for which there is a contract item of work.

## **500.4 Water Pollution Control Drawings (WPCDs)**

The Water Pollution Control Drawings can be found in Attachment B of the SWPPP.

## **500.5 Construction BMP Maintenance, Inspection, and Repair**

Inspections will be conducted as follows:

- Prior to a forecast storm
- after a rain event that causes runoff from the construction site
- at 24-hour intervals during extended rain events
- at any other time(s) or intervals of time specified in the contract documents

Completed inspection checklists will be kept with the SWPPP.

A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs. A program for Maintenance, Inspection and Repair of BMPs is shown in Attachment G.

## **500.6 Post-Construction Storm Water Management**

### **500.6.1 Post-Construction Control Practices**

The following are the post-construction BMPs that are to be used at this construction site after all construction is complete:

- EC-4, Hydroseeding
- EC-6, Straw Mulch
- Broadcast Seeding
- Woody Plant Revegetation
- EC-7, Geotextiles and Mats
- 

INSERT ADDITIONAL NARRATIVE TEXT HERE OR DELETE THIS LINE (Use the "FORMAT OPTIONS" button to insert subtitles and/or paragraphs)

### **500.6.2 Operation/Maintenance after Project Completion**

The post-construction BMPs that are described above will be funded and maintained by Northcoast Regional Land Trust.

The project is designed to be self-sustaining and require a minimal long-term maintenance burden to the Northcoast Regional Land Trust.

## **500.7 Training**

Section 300.5 shows the name of the Contractor's Storm Water Pollution Prevention Manager (SWPPM). This person has received the following training:

- Don Allan is Co-Director of Natural Resources Services Division of Redwood Community Action Agency and is a California State Licenced Landscape Contractor. Mr. Allan has 30 years experience in the watershed restoration and erosion control fields.

- California State Landscape Contractor License # 518874
- President of Salmonid Restoration Federation 2004 - Present
- Hydrology and Stream Rehabilitation Courses - American Fisheries Society
- Geomorphology in River & Stream Restoration

The training log showing formal and informal training of various Contractor personnel is shown in Attachment I.

INSERT HERE ANY ADDITIONAL TEXT REGARDING TRAINING OF PERSONNEL.

This SWPPP was prepared by the Natural Resources Services Division of Redwood Community Action Agency by Tyler S. Ledwith M.S. Mr. Ledwith has twelve years experience in the watershed restoration and erosion control field and has the following experience:

Completed 24 hour SWPPP training in 2008

Wrote Spill Prevention Plan for SWPPP in 2007

Conducted over 15 workshops on BMPs for road maintenance and repair from 2006-present.

Presented at workshop on construction BMPs in 2007

Conducted seven road sediment source inventories and assessments from 1999 to present

## **500.8 List of Subcontractors**

All contractors and subcontractors will be notified of the requirement for storm water management measures during the project. A list of contractors will be maintained and included in the SWPPP. If subcontractors change during the project, the list will be updated accordingly. The subcontractor notification letter and log is included in the SWPPP as Attachment J.

## **500.9 Other Plans/Permits**

Attachment N includes copies of other local, state, and federal plans and permits. Following is a list of the plans and permits included in Attachment N:

- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.

# Section 600

## Monitoring Program and Reports

### 600.1 Site Inspections

The SWPPM will inspect the site prior to a forecast storm, after a rain event that causes runoff from the construction site, at 24-hour intervals during extended rain events, and as specified in the contract documents. The results of all inspections and assessments will be documented. Copies of the completed inspection checklists will be maintained with the SWPPP. Site inspections conducted for monitoring purposes will be performed using the inspection checklist shown in Attachment H.

The name(s) and contact number(s) of the assigned inspection personnel are listed below:

Assigned inspector: Don Allan    Contact phone: (707) 269-2063

### 600.2 Non-Compliance Reporting

If a discharge occurs or if the project receives a written notice of non-compliance, the Contractor will immediately notify the Owner and will file a written report to the Owner within 7 days of the discharge or notice. The Owner is responsible for filing a written report to the Regional Water Quality Control Board (RWQCB) within 30 days of identification of non-compliance. Corrective measures will be implemented immediately following the discharge, notice or order. A sample Notice of Non-Compliance (NONC) form is provided in Attachment K. All discharges will be documented on a Discharge Reporting Log using the example form in Attachment T.

The report to the Owner and to the RWQCB will contain the following items:

- The date, time, location, nature of operation, and type of unauthorized discharge, including the cause or nature of the notice or order,
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order,
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence, and
- An implementation and maintenance schedule for any affected BMPs

### **600.3 Record Keeping and Reports**

Records shall be retained for a minimum of three years for the following items:

- Site inspections
- Compliance certifications
- Discharge reports
- Approved SWPPP document and amendments

### **600.4 Sampling and Analysis Plan for Sediment**

This project does have the potential to discharge directly to a water body listed as impaired due to Sedimentation/Siltation and/or Turbidity pursuant to Clean Water Act, Section 303(d).

#### **600.4.1 Scope of Monitoring Activities**

This project discharges directly into Freshwater Creek, a water body listed as impaired due to sediment/siltation pursuant to Clean Water Act, Section 303(d). This Sampling and Analysis Plan (SAP) has been prepared pursuant to the requirements of the General Permit (including Resolution 2001-046). The SAP describes the sampling and analysis strategy and schedule for monitoring Turbidity] in the 303(d) listed water body and potential increases in the Turbidity] levels caused by storm water discharges from the project site.

The project has the potential for direct (concentrated) storm water discharges to Freshwater Creek at the following locations, as shown on the WPCDs in Attachment B.

- Wood Creek Tidegate
- 
- 

The project does not receive run-on with the potential to combine with storm water that discharges directly to the 303(d) listed water body.

The project receives run-on with the potential to combine with storm water that discharges directly to the 303(d) listed water body at the following locations, as shown on the WPCDs in Attachment B:

- None

## 600.4.2 Monitoring Strategy

### Sampling Schedule

Upstream, downstream, discharge, and run-on samples, if applicable, shall be collected for Turbidity during the first two hours of discharge from rain events that result in a direct discharge from the project site to Freshwater Creek. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of the year, status of the construction site, or day of the week.

All storm events that occur during daylight hours will be sampled up to a maximum of four rain events within a 30-day period. In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

### Sampling Locations

Sampling locations are based on proximity to identified discharge or run-on location(s), accessibility for sampling, personnel safety, and other factors in accordance with the applicable requirements in the General Permit. Sampling locations are shown on the WPCDs and include:

- A sample location (designated number WC -1) is upstream of all direct discharge from the construction site for the collection of a control sample to be analyzed for the prevailing condition of the receiving water without any influence from the construction site. The control sample will be used to determine the background levels of Turbidity in the 303(d) listed water body upstream of the project, if any.
  - Sample location number WC -1 is located in Freshwater Creek 50 ft upstream of the Wood Creek tidegate.
- A sample location (designated number WC-2) is immediately downstream from the last point of direct discharge from the construction site for the collection of a sample to be analyzed for potential increases in Turbidity in the 303(d) listed water body caused by the storm water discharged from the project, if any.

- Sample location number WC-2 is located in Freshwater Creek 50 ft downstream of the Wood Creek tidegate.
  
- Zero sampling location(s) (designated number(s) 00) has been identified for the collection of samples of run-on to the project site with the potential to combine with discharges from the construction site in other than MS4 to the 303(d) water body. These samples will identify potential [specify impairment: Sedimentation/Siltation and/or Turbidity] that originates off the project site and contributes to direct storm water discharges from the construction site to the 303(d) listed water body.
  - Sample location number            is located            .
  - If needed Sample location number            is located            .
  - If needed Sample location number            is located            .

### 600.4.3 Monitoring Preparation

Samples on the project site will be collected by the following Contractor sampling personnel:

Name/Telephone Number:	Don Allan (707) 269-2063
Name/Telephone Number:	Name Phone Number
Alternate(s)/Telephone Number:	Tyler Ledwith (707) 269-2058
Alternate(s)/Telephone Number:	Name Phone Number

Prior to the rainy season, all sampling personnel and alternates will review the SAP. Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I. An adequate stock of supplies and equipment for monitoring [Turbidity] will be available on the project site or provided by Natural Resources Services Division, Redwood Community Action Agency prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule.

Supplies maintained at the project site will include, but will not be limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms. The Contractor will obtain and maintain the field-testing instruments, as identified in Section 600.4.5, for analyzing samples in the field by Contractor sampling personnel. Safety practices for sample collection will be in accordance with the OSHA, EPA, and Humboldt County Department of Health requirements.

#### **600.4.4 Sample Collection and Handling**

##### **Sample Collection Procedures**

Grab samples will be collected and preserved in accordance with the methods identified in Table 600-1, "Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity" provided in Section 600.4.5. Only personnel trained in proper water quality sampling will collect samples.

Upstream samples will be collected to represent the condition of the water body upgradient of the construction site. Downstream samples will be collected to represent the water body mixed with direct flow from the construction site. Samples will not be collected directly from ponded, sluggish, or stagnant water.

Upstream and downstream samples will be collected using one of the following methods:

- Placing a sample bottle directly into the stream flow in or near the main current upstream of sampling personnel, and allowing the sample bottle to fill completely;
- OR,
- Placing a decontaminated or 'sterile' bailer or other 'sterile' collection device in or near the main current to collect the sample, and then transferring the collected water to appropriate sample bottles, allowing the sample bottles to fill completely.

Run-on samples, if applicable, will be collected to identify potential sedimentation/siltation and/or turbidity that originates off the project site and contributes to direct discharges from the construction site to the 303(d) listed water body. Run-on samples will be collected downgradient and within close proximity of the point of run-on to the project by pooling or ponding water and allowing the ponded water to spill over into sample bottles directly in the stream of water.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- Not leave the cooler lid open for an extended period of time once samples are placed inside.
- Not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Not eat, smoke, or drink during sample collection.
- Not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.
- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.
- Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water.

### **Sample Handling Procedures**

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

### **Sample Documentation Procedures**

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error

and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Sampling Activity Log and Chain of Custody form are provided in Attachment R. Sampling and field analysis activities will be documented using the following:

- Sample Bottle Identification Labels: Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:
  - Project name
  - Project number
  - Unique sample identification number and location.  
[Project Number]-[Six digit sample collection date]-[Location]  
(Example: 0G5304-081801-Upstream).  
Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation  
(Example: 0G5304-081801-DUP1).
  - Collection date/time (No time applied to QA/QC samples)
  - Analysis constituent
  
- Sampling Activity Logs: A log of sampling events will identify:
  - Sampling date
  - Separate times for sample collection of upstream, downstream, run-on, and QA/QC samples recorded to the nearest minute
  - Unique sample identification number and location
  - Analysis constituent
  - Names of sampling personnel
  - Weather conditions (including precipitation amount)
  - Field analysis results
  - Other pertinent data
  
- Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.

- Storm Water Quality Construction Inspection Checklists: When applicable, the Contractor's storm water inspector will document on the checklist that samples for sedimentation/siltation and/or turbidity were taken during a rain event.

#### **600.4.5 Sample Analysis**

Samples will be analyzed for the constituents indicated in Table 600-1, "Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity".

**Table 600-1**  
**Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity**

Constituent <sup>(1)</sup>	Analytical Method	Test to be Used?	Sample Preservation	Minimum Sample Volume	Sample Bottle	Maximum Holding Time	Reporting Limit
(a) Suspended Sediment Concentration (SSC)	ASTM D3977-97	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Store at 4° C (39.2° F)				
(b) Settleable Solids (SS)	EPA 160.5 Std Method 2540(f)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Store at 4° C (39.2° F)				ml/L/hr
(c) Total Suspended Solids (TSS)	EPA 160.2 Std Method 2540(d)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Store at 4° C (39.2° F)				mg/L
(d) Turbidity	EPA 180.1 Std Method 2130(b)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Store at 4° C (39.2° F)	10 mL	Polypropylene or Glass	48 hours	10% increase in NTU

Notes: <sup>(1)</sup> Samples shall be analyzed by using methods (b) and (c), or only method (a)

- ASTM - American Society for Testing and Materials
- °C - Degrees Celsius
- °F - Degrees Fahrenheit
- EPA - U.S. Environmental Protection Agency
- L - Liter
- mL/L/hr - Milliliters per liter per hour

- mg/L - Milligrams per liter
- mL - Milliliters
- NTU - Nephelometric Turbidity Unit
- Std Method - Per the *Standard Methods for the Examination of Water and Wastewater*, 20<sup>th</sup> Edition, American Water Works Association

For samples collected for field analysis, collection, analysis and equipment calibration will be in accordance with the field instrument manufacturer's specifications.

The following field instrument(s) will be used to analyze the following constituents:

Field Instrument	Constituent
HACH 8100 P	Suspended Sediment

- The instrument(s) will be maintained in accordance with manufacturer's instructions.
- The instrument(s) will be calibrated before each sampling and analysis event.
- Maintenance and calibration records will be maintained with the SWPPP.

#### 600.4.6 Quality Assurance/Quality Control

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples, and will be collected where contaminants are likely, and not on the upstream sample. A duplicate sample will be collected immediately after the primary sample has been collected. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

#### 600.4.7 Data Management and Reporting

A copy of all water quality analytical results and QA/QC data will be included in the on-site SWPPP within 5 days of sampling (for field analyses) and within 30 days of sampling (for laboratory analyses). Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP document.

#### 600.4.8 Data Evaluation

An evaluation of the water quality sample analytical results, including figures with sample locations, the water quality analytical results, and the QA/QC data for every event that samples are collected, will be included in the on-site SWPPP. Should the downstream sample concentrations exceed the upstream sample concentrations, the Storm Water Pollution Prevention Manager or other personnel will evaluate the BMPs, site conditions,

surrounding influences (including the run-on sample analysis), and other site factors to determine the probable cause for the increase.

As determined by the data and project evaluation, appropriate BMPs will be repaired or modified to mitigate increases in sediment concentrations in the water body. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

#### **600.4.9 Change of Conditions**

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.

### **600.5 Sampling and Analysis Plan for Non-Visible Pollutants**

This Sampling and Analysis Plan (SAP) for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in storm water discharges from the project site and off-site activities directly related to the project, in accordance with the requirements of Section B of the General Permit, including SWRCB Resolution 2001-046.

#### **600.5.1 Scope of Monitoring Activities**

The following construction materials, wastes or activities, as identified in Section 500.3.1, are potential sources of non-visible pollutants to storm water discharges from the project. Storage, use, and operational locations are shown on the WPCDs in Attachment B.

- Treated wood (copper, creosote, BOD)
- Fertilizers
- 

The following existing site features, as identified in Section 500.3.3, are potential sources of non-visible pollutants to storm water discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the WPCDs in Attachment B.

- Staging area in Northeast corner of project area
-

■

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site. Locations of soil amendment application are shown on the WPCDs in Attachment B.

- None

■

■

The project has the potential to receive storm water run-on with the potential to contribute non-visible pollutants to storm water discharges from the project. Locations of such run-on to the project site are shown on the WPCDs in Attachment B.

- Myrtle Avenue

■

■

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

## **600.5.2 Monitoring Strategy**

### **Sampling Schedule**

Samples for the applicable non-visible pollutant(s) and a sufficiently large uncontaminated background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of year, status of the construction site, or day of the week.

In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during the required inspections conducted before or during rain events:

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents storm water contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- An operational activity, including but not limited to those in Section 600.5.1, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) applicable BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- Storm water runoff from an area contaminated by historical usage of the site has been observed to combine with storm water runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

### Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, personnel safety; and other factors in accordance with the applicable requirements in the Permit. Planned sampling locations are shown on the WPCDs in Attachment B and include the following:

- Zero sampling locations have been identified for the collection of samples of runoff that drain areas where soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil will be applied.
- Not applicable Sample location number(s) is located .
- Zero sampling locations have been identified for the collection of samples of runoff that drain areas contaminated by historical usage of the site.
- Not applicable Sample location number(s) is located .

- Zero sampling locations have been identified for the collection of samples of run-on to the project site with the potential to combine with discharges being sampled for non-visible pollutants. These samples are intended to identify sources of potential non-visible pollutants that originate off the project site.
  
- Not applicable Sample location number(s)            is located            .
  
- A location has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location was selected such that the sample will not have come in contact with (1) operational or storage areas associated with the materials, wastes, and activities identified in Section 500.3.1; (2) potential non-visible pollutants due to historical use of the site as identified in Section 500.3.3; (3) areas in which soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied; or (4) disturbed soils areas.
  
- Not applicable Sample location number(s)            is located            .

If an operational activity or storm water inspection conducted 24 hours prior to or during a rain event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm sewer system that was an unplanned location and has not been identified on the WPCDs, sampling locations will be selected using the same rationale as that used to identify planned locations.

### **600.5.3 Monitoring Preparation**

Samples on the project site will be collected by the following Contractor sampling personnel:

Name/Telephone Number:	Don Allan (707) 269-2063
Name/Telephone Number:	
Alternate(s)/Telephone Number:	Tyler Ledwith (707) 269-2058
Alternate(s)/Telephone Number:	Natalie Arroyo (707) 269-2059

Prior to the rainy season, all sampling personnel and alternates will review the SAP. Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule.

Supplies maintained at the project site will include, but are not limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms. The Contractor will obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by Contractor sampling personnel.

Safety practices for sample collection will be in accordance with the OSHA, EPA, and Humboldt County Department of Health requirements.

Samples on the project site will be collected by the following Natural Resources Services, Redwood Community Action Agency:

Company Name:

Address:

Telephone Number:

Point of Contact:

Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

SWPPM will contact Don Allan 24 hours prior to a predicted rain event and if one of the triggering conditions is identified during an inspection before, during, or after a storm event to ensure that adequate sample collection personnel, supplies and field test equipment for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

North Coast Laboratories Ltd. (707) 822-4649 will obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by their sampling personnel.

## 600.5.4 Analytical Constituents

### Identification of Non-Visible Pollutants

Table 600-2 lists the specific sources and types of potential non-visible pollutants on the project site and the applicable water quality indicator constituent(s) for that pollutant.

**Table 600-2**

#### **Potential Non-Visible Pollutants and Water Quality Indicator Constituents**

Pollutant Source	Pollutant	Water Quality Indicator Constituent
Treated Wood	copper, BOD	copper, BOD

## 600.5.5 Sample Collection and Handling

### Sample Collection Procedures

Samples of discharge will be collected at the designated sampling locations shown on the WPCDs for observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples will be collected and preserved in accordance with the methods identified in the Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants," provided in Section 600.5.6. Only personnel trained in proper water quality sampling will collect samples.

Samples will be collected by placing a separate lab-provided sample container directly into a stream of water downgradient and within close proximity to the potential non-visible pollutant discharge location. This separate lab-provided sample container will be used to collect water, which will be transferred to sample bottles for laboratory analysis. The upgradient and uncontaminated background samples shall be collected first prior to collecting the downgradient to minimize cross-contamination. The sampling personnel will collect the water upgradient of where they are standing. Once the separate lab-

provided sample container is filled, the water sample will be poured directly into sample bottles provided by the laboratory for the analyte(s) being monitored.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- Not leave the cooler lid open for an extended period of time once samples are placed inside.
- Not sample near a running vehicle where exhaust fumes may impact the sample.
- Not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Not eat, smoke, or drink during sample collection.
- Not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.
- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.
- Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water.

### **Sample Handling Procedures**

Immediately following collection, sample bottles for laboratory analytical testing will be capped, labeled, documented on a Chain of Custody form provided by the analytical laboratory, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to the following California state-certified laboratory:

Laboratory Name: North Coast Laboratories, Ltd.  
Address: 5680 West End Rd  
Arcata, CA 94022  
Telephone Number: (707) 822-4649  
Point of Contact: Jerry Chaney

### Sample Documentation Procedures

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Sampling Activity Log and Chain of Custody form are provided in Attachment R.

Sampling and field analysis activities will be documented using the following:

- Sample Bottle Identification Labels: Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:
  - Project name
  - Project number
  - Unique sample identification number and location.  
[Project Number]-[Six digit sample collection date]-[Location]  
(Example: 0G5304-081801-Inlet472).  
Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation  
(Example: 0G5304-081801-DUP1).
    - Collection date/time (No time applied to QA/QC samples)
    - Analysis constituent
  
- Sampling Activity Logs: A log of sampling events will identify:
  - Sampling date

Laboratory Name: North Coast Laboratories, Ltd.  
Address: 5680 West End Rd  
Arcata, CA 94022  
Telephone Number: (707) 822-4649  
Point of Contact: Jerry Chaney

### **Sample Documentation Procedures**

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Sampling Activity Log and Chain of Custody form are provided in Attachment R.

Sampling and field analysis activities will be documented using the following:

- **Sample Bottle Identification Labels:** Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:
  - Project name
  - Project number
  - Unique sample identification number and location.  
[Project Number]-[Six digit sample collection date]-[Location]  
(Example: 0G5304-081801-Inlet472).  
Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation  
(Example: 0G5304-081801-DUP1).
  - Collection date/time (No time applied to QA/QC samples)
  - Analysis constituent
  
- **Sampling Activity Logs:** A log of sampling events will identify:
  - Sampling date

- Separate times for collected samples and QA/QC samples recorded to the nearest minute
  - Unique sample identification number and location
  - Analysis constituent
  - Names of sampling personnel
  - Weather conditions (including precipitation amount)
  - Field analysis results
  - Other pertinent data
- Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.
- Storm Water Quality Construction Inspection Checklists: When applicable, the Contractor's storm water inspector will document on the checklist that samples for non-visible pollutants were taken during a rain event.

### **600.5.6 Sample Analysis**

Samples will be analyzed for the applicable constituents using the analytical methods identified in Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" in this section.



For samples collected for field analysis, collection, analysis and equipment calibration will be in accordance with the field instrument manufacturer's specifications.

The following field instrument(s) will be used to analyze the following constituents:

Field Instrument	Constituent

- The instrument(s) will be maintained in accordance with manufacturer's instructions.
- The instrument(s) will be calibrated before each sampling and analysis event.
- Maintenance and calibration records will be maintained with the SWPPP.

### 600.5.7 Quality Assurance/Quality Control

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples. A duplicate sample will be collected at each location immediately after the primary sample has been collected. Duplicates will be collected where contamination is likely, not on the background sample. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

### 600.5.8 Data Management and Reporting

A copy of all water quality analytical results and QA/QC data will be included in the on-site SWPPP within 5 days of sampling (for field analyses) and within 30 days (for laboratory analyses).

Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP.

### 600.5.9 Data Evaluation

An evaluation of the water quality sample analytical results, including figures with sample locations, the water quality analytical results, and the QA/QC data, will be included in the on-site SWPPP.

Should the runoff/ downgradient sample show an increased level of the tested analyte relative to the background sample, the BMPs, site conditions, and surrounding influences will be assessed to determine the probable cause for the increase. As determined by the site and data evaluation, appropriate BMPs will be repaired or modified to mitigate discharges of non-visual pollutant concentrations. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

#### **600.5.10 Change of Conditions**

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations or introduce additional non-visible pollutants of concern, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.

Wood Creek Estuary, Tidal Marsh,  
and Fish Access Enhancement Project  
Freshwater, Humboldt County, California

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California Environmental Quality Act

Administrative Draft  
Initial Study  
Mitigated Negative Declaration

Prepared by:  
Humboldt County Community Development Department  
3015 H Street  
Eureka, CA 95501

Applicant:  
Don Allan  
Redwood Community Action Agency  
Natural Resources Services Division  
904 G Street  
Eureka, CA 95525

Agent:  
Aldaron Laird  
980 7<sup>th</sup> Street, Suite K  
Arcata, California  
95521

<b>EXHIBIT NO. 12</b>
<b>APPLICATION NO.</b>
1-08-012 - NORTHCOAST REGIONAL LAND TRUST
EXCERPT FROM CEQA MITIGATED NEGATIVE DECLARATION (PROPOSED MITIGATON MEASURES) (1 of 5)

February 2008

## Mitigation Measures

### Biological Resources: 4 (a)(b)(c):

1. A qualified botanist will locate and flag all populations of plant species of concern in the project area prior to construction.
2. Heavy equipment will be confined, to the maximum extent practicable, to within the proposed secondary tidal slough channels and proposed salt marsh bench footprints.
3. If it is possible populations of plant species of concern will not be disturbed during excavation or grading. If populations of these plants cannot be avoided during excavation or grading they will be removed as "wafers" (top 12 inches of vegetation/topsoil) and either transplanted immediately or stored separately on pond liners. These soils will be kept moist until they are re-placed along the new secondary tidal channels at the appropriate finished grade and in the same orientation.
4. The in-channel excavation work will be performed at low tide and at the lowest seasonal stream flows when water levels in Wood Creek are as low as possible.
5. Install fish screens upstream of the project site near Station 18+50 and downstream at the concrete tidegate structure, as well as upstream and downstream of the stream crossing.
6. Before the in-channel work is begun, an authorized fishery biologist will sweep through the area with dip-net to flush away or capture any fish that might be present. Fish rescue and relocation to suitable areas upstream will reduce the risk of adverse effects to fish species, particularly salmonid species. A survey of the de-watered area for stranded fish or amphibians shall be conducted by an authorized fishery biologist during, and immediately after de-watering.
7. Slough channels will be designs to provide habitat for fish species of concern such as tidewater goby and anadromous salmonids.
8. Fish habitat improvements structures will be designed and constructed in accordance with techniques described in CDFG's "California Salmonid Restoration Manual."
9. Installation of a salinity sill structure at the same elevation as the existing stream crossing and debris that functions as a salinity sill now to minimize any impacts to salmonid summer rearing habitat upstream of the new stream crossing that could be affected by increasing the tidal prism.
10. Exclusionary cattle fencing will be installed to protect vegetation in the project area.

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**Geology and Soils 6 (b):**

1. Construction will only occur between July 1<sup>st</sup> and October 31<sup>st</sup> when the ground surface is dry and to reduce the chance of stormwater runoff occurring during construction.
2. Minimize the disturbance footprint.
3. During construction a silt fence will be deployed along the top of bank north of Wood Creek to trap suspended sediment that might leave the construction site if stormwater runoff were to occur. If the silt fence is not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. Turbid water shall be contained and prevented from being transported to the slough in amounts that could violate state pollution laws.
4. Areas identified by a consulting engineer as having “wet” or “soft” soils: (a) shall be covered with heavy synthetic mats or other acceptable non-toxic material and gravel that can be readily laid down and immediately removed following construction, and (b) shall be the minimum width and length necessary to allow movement of equipment to and from the project site.
5. Following completion of grading of the seasonal wetlands all disturbed ground will be mulched and planted with grass seed for immediate erosion control and appropriate salt marsh plants as per the planting discussion in Section 8.
6. Exclusionary cattle fencing will be installed around the entire project area to protect the salt marsh vegetation.

**Hazards and Hazardous Materials 7 (a)(h):**

1. Heavy equipment that will be used in the project will be in good condition and will be inspected for leakage of coolant and petroleum products and repaired, if necessary, before work is started.
2. Equipment operators will be trained in the procedures to be taken should an accident occur.
3. Prior to the onset of work the contractor will prepare a plan for the prompt and effective response to any accidental spills.
4. Absorbent materials designed for spill containment and cleanup will be kept at that project site for use in case of an accidental spill.
5. Refueling of equipment will occur off-site.
6. If equipment must be washed, washing will occur off-site.
7. Stationary equipment will be positioned over drip pans.

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8. All internal combustion engines shall be fitted with spark arrestors.
9. The contractor shall have an appropriate fire extinguishers and fire fighting tools present at all times when there is a risk of fire.
10. Vehicles shall not be parked in tall grass or any other location where heat from the exhaust system could ignite a fire.
11. Refueling of equipment will occur off-site.
12. All internal combustion engines shall be fitted with spark arrestors.
13. The equipment operators shall have an appropriate fire extinguishers and fire fighting tools present at all times when there is a risk of fire.
14. Vehicles shall not be parked in tall grass or any other location where heat from the exhaust system could ignite a fire.

**Hydrology and Water Quality 8 (a):**

1. Excavated slough channels will not be connected to Wood Creek until the end of the project when the tidegate is to be removed.
  2. If vehicular equipment encounter wet areas in the pasture then geotex mats and crushed rock will be placed in these areas to minimize compaction, and all material will be removed on completion of the project.
  3. Appropriate Erosion and Sediment Control BMP shall be implemented to protect and stabilize soils and stream banks disturbed by project activities, prevent entry of storm water runoff into the excavation site, the entrainment of excavated contaminated materials leaving the site, and to prevent the entry of polluted storm water runoff into coastal waters during the transportation and storage of excavated contaminated materials.
- Construction will only occur between July 1<sup>st</sup> and October 31<sup>st</sup> when the ground surface is dry and to reduce the chance of stormwater runoff occurring during construction.
  - During construction a combination of silt fence or fiber rolls will be deployed along the top of bank on the north side of Wood Creek to trap suspended sediment that might leave the construction site if stormwater runoff were to occur. If the silt fence or fiber rolls are not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below.
  - A silt fence will also installed in Wood Creek below the confluences of the new tidal slough channels.
  - Silt fences will be installed downstream of the in-channel work at the bridge and downstream of the excavation of the backwater pool.

- A 100 foot segment of Wood Creek, upstream and downstream of the stream crossing, will be temporarily dammed with coffer dams or sand bags and dewatered, to permit the removal of existing collapsed culvert and concrete in the stream bed, as well as during construction of a new stream crossing.
- No construction materials, debris, or waste, shall be placed or stored where it may be allowed to enter into or be placed where it may be washed by rainfall into waters of the U.S./State.
- When the project surfaces have been recontoured all exposed surfaces will be straw mulched or hydro-mulched and seeded with appropriate grass seed.
- The project will plant 11.4 acres of the 23 to 29 acre of the tidewater inundation zone is proposed to be manually planted with plugs, installed on a maximum of 18 to 24 in centers. As much as 4.5 acres will be seeded with Lyngbye's sedge and hairgrass seed applied at a rate of 155 lbs/acres. The remaining 6.8 acres of wetland area closest to the tidegate will be allowed to recolonize passively. The revegetation will take place in the first fall after the project construction is complete
- Exclusionary cattle fencing will be installed to protect vegetation planted in the project area.
- All temporary fill, synthetic mats and silt fences will be removed from wetlands and waters of the U.S./State immediately on cessation of construction.
- Following completion of work all disturbed grazed seasonal wetlands around the perimeter of the project area will be de-compacted and seeded as needed, with a commercially available seed mixture composed of the same grass species that dominate the area at the present time.

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Simpson-Vance House 1892

# Redwood Community Action Agency

**ADMINISTRATION**  
Information & Referral  
(707) 269-2002

**AMERICORPS PROGRAMS**  
AFACTR  
(707) 269-2020

**STRAIGHT UP AMERICORPS**  
(707) 269-2024

**AMERICORPS VISTA**  
(707) 269-2052

**ENERGY SERVICES**  
(707) 444-3831

Consumer Education, **Ext 201**  
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Lead Based Paint Hazard  
Reduction & Inspection, **Ext 201**  
Home Energy Assistance Program  
(HEAP) - (707) 444-3834

**FAMILY SERVICES**  
(707) 269-9590

Family Shelter Program  
**Ext 209**  
Multiple Assistance Center  
**269-9592**  
Emergency Shelter Office  
(707) 269-2075

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LOAN PROGRAM**  
(707) 269-2034

**NATURAL RESOURCES  
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License #518874

**NORTHCOAST MENTOR  
PROGRAM**  
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**YOUTH SERVICE BUREAU**  
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(707) 444-CARE

YSB Administration  
Launch Pad TLP  
Our House Emergency Shelter  
(707) 443-8322  
Raven Street Outreach Program  
(707) 443-7099  
YSB Thrift Store  
(707) 445-4217

May 13, 2008

Ms. Melissa B. Kraemer  
California Coastal Commission  
710 E Street, Suite 200,  
Eureka, CA 95501

Subject: Fee Increase for Coastal Development Permit  
Application No. 1-08-012 for Wood Creek Tidal Marsh  
Enhancement Project, Humboldt County (APN 402-291-  
15).

Dear Ms. Kraemer:

I would like to respectfully request a resolution to waive  
the fee increase for the Wood Creek project. I understand  
that the fee increase can be waived by resolution of the  
Commission as stated below:

"Title 14, Article 4, Schedule of Filing Fees for Processing  
Permit Applications and Other Filings, Section 13055 Fees,  
Item (a) h (1) (h) "The fees specified in sections (a) and  
(b) may be modified under the following circumstances:

- (1) The executive director shall waive the application fee  
where requested by resolution of the commission."

The project is grant-funded by three funding programs:  
the California Department of Fish and Game, the US Fish &  
Wildlife Service, and the Nature Conservancy through a  
program funded by the National Oceanic & Atmospheric  
Administration. Grant applications to fund this estuary  
enhancement project that seeks to restore coastal  
dependent uses while maintaining grazing where  
compatible with restoration objectives, were submitted in  
2005 and 2006. The budgets are set and finite - they  
cannot be augmented or amended. The fee increase

from \$600 to \$5000 cannot be accommodated without  
reducing or eliminating some of the implementation  
actions. The re-vegetation effort will be the portion of the

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MAY 15 2008

CALIFORNIA  
COASTAL COMM

EXHIBIT NO. 13
APPLICATION NO. 1-08-012
NORTHCOAST REGIONAL LAND TRUST
FEE WAIVER REQUEST (1 of 2)



# Redwood Community Action Agency

Ms. Melissa B. Kraemer  
California Coastal Commission  
May 13, 2008  
Page Two

project that suffers and re-vegetation is important for controlling sheet erosion of newly created tidal hummocks and re-establishing native brackish marsh vegetation so invasive species do not colonize the site.

I respectfully request that the Coastal Commission waive the fee increase for this project. If you have any further questions, please feel free to contact me at (707) 269-2009.

Sincerely,

A handwritten signature in black ink, appearing to read 'Val Martinez', with a long horizontal flourish extending to the right.

Val Martinez  
Executive Director

Cc: Don Allen, RCAA Natural Resources Co-Director

Handwritten initials or a number '2072' in black ink, located at the bottom center of the page.