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Th8a

MEMORANDUM

Date: May 9, 2012

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To: Commissioners and Interested Parties

From: Charles Lester, Executive Director
Robert Merrill, District Manager – North Coast District
Melissa Kraemer, Coastal Program Analyst – North Coast District

Subject: **Addendum to Commission Meeting for Thursday, May 10, 2012**
North Coast District Item Th8a
CDP 1-11-007 (Union Pacific Railroad Company)

Staff is making certain changes to the April 26, 2012 staff recommendation on CDP Application 1-11-007. Since publication of the staff report, the applicant has requested changes to various special conditions. The reasons for the applicant's suggested changes generally are related to timing issues and/or technical aspects of Special Conditions 1, 4, 5, 7, 9, 11, 13, 14, and 17.

To enable the applicant to complete the proposed contaminated soil and sediment remediation project during this summer's construction season, the applicant is requesting that many of the special conditions that require submittal of plans or documents prior to permit issuance instead be changed to require submittal of plans or documents prior to backfilling activities or prior to commencement of the authorized development below the high tide line. This change would provide the applicant more time to prepare the various plans and documents required by Special Conditions 4, 7, 9, 11, 13, 14, and 17 while at the same time expedite permit issuance (assuming Commission approval of the project at the May 10, 2012 hearing) so that the applicant is able to commence the approved development on the upland portion of the property by June 1, 2012. The applicant maintains that any delays in the target start date would make it infeasible to complete the entire project scope within a single construction season and would therefore require postponement of the proposed remediation project at least until 2013, with continued exposure of the environment to contamination. The applicant just found out since publication of the staff report that it will be necessary to obtain a water quality certification (WQC) for the proposed work from the North Coast Regional Water Quality Control Board (RWQCB). The applicant had previously believed that a programmatic WQC would be issued concurrently with the new nationwide permit 38 that will be issued by the Army Corps of Engineers for the proposed work below the high tide line. However, the programmatic WQC for the new nationwide permits,

which were just updated in the past couple of months, has not yet been completed so it will be necessary to apply for and obtain from the RWQCB a WQC for the proposed work below the high tide line.

Staff understands the applicant's timing concern and agrees that any delays in the project start date could make it infeasible to complete the entire project scope within a single construction season and could result in the postponement of the remediation work for at least a year. Thus, staff is recommending that the prior-to-issuance plan submittal requirements of Special Conditions 4, 11, 13, and 14 be changed to instead allow for plan submittal by July 1 and prior to commencement of authorized development below the high tide line. This change would align the plan/document submittal requirement of the four conditions with plans related to work below the high tide line with the restrictions on timing of work imposed by Special Condition 6, which allows for development below the high tide line to commence as early as July 1. Staff recommends that the prior-to-issuance submittal requirement of Special Condition 7 (final sediment and turbidity control plan for waterfront work) not be tied to the July 1 date, since the condition requires submittal of a site plan depicting the mapped eelgrass areas from the 2012 eelgrass survey which must be conducted no more than 30 days prior to in-water construction, which, according to the applicant, may not commence until late August. Instead, staff recommends that the condition be changed to require submittal of the plan at least two weeks prior to commencement of development below the high tide line. Staff recommends that the prior-to-issuance submittal requirements of Special Conditions 9 and 17, which don't strictly relate to work below the high tide line, be changed to allow for plan submittal prior to authorized backfilling activities (which will occur within both upland and tidal areas) and prior to July 1 (for consistency's sake), respectively. Finally, staff recommends that that the requirement of Special Condition 1 for submittal of the necessary project approval by the RWQCB, which will not require substantial review time by Commission staff, be changed to allow for submittal of the Board's approval prior to commencement of development below the high tide line.

The applicant has also suggested in discussion with staff other changes to Special Conditions 4, 5, 9, 13, and 14 for various technical reasons. Staff believes that many of the applicant's suggested technical clarifications are appropriate and has therefore added various revisions to these conditions. The changes to Special Condition 4 (final restoration monitoring plan) clarify the success standards for restoration of the benthic habitat and the sampling and analysis requirements. The changes to Special Condition 5 (construction requirements) are intended to promote clarity or consistency with other agency requirements and recommendations (e.g., DFG commented that any piles within the tidal work area shall not be removed but rather remain in situ cut off below the mud line). The changes to Special Condition 9 (final backfill material plan) promote clarity and also allow for a slight modification to the range of acceptable backfill grain sizes. The changes to Special Condition 13 (upland protection structure monitoring program) slightly lesson the frequency of required monitoring for the upland protection structure and modify the methods and parameters to be specified in the monitoring plan, while still requiring monitoring of the integrity of the upland protection structure to ensure it will continue to help prevent upland contaminants from migrating into coastal waters. The changes to Special Condition 14 (final revised eelgrass monitoring and mitigation plan) provide greater clarity. The

applicant has indicated they accept the special conditions as revised by staff, and staff is recommending that the application be moved to the North Coast District consent calendar.

Staff continues to recommend that the Commission approve the project with the special conditions included in the staff recommendation of April 26, 2012, as modified by the revisions described below.

I. REVISIONS TO RECOMMENDED SPECIAL CONDITIONS

Staff is recommending modifications to the text of Special Conditions 1, 4, 5, 7, 9, 11, 13, 14, and 17 on pages 5-17 of the April 26, 2012 staff report as follows (text to be deleted is shown in ~~strikethrough~~; text to be added appears in **bold double-underline**):

1. North Coast Regional Water Quality Control Board Approval

PRIOR TO ~~ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT~~ COMMENCEMENT OF AUTHORIZED DEVELOPMENT BELOW THE HIGH TIDE LINE, the applicant shall provide to the Executive Director a copy of a Water Quality Certification and/or other necessary approval issued by the North Coast Regional Water Quality Control Board ("RWQCB"), or evidence that no certification or other approval is required. The applicant shall inform the Executive Director of any changes to the project required by the RWQCB. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

4. Final Restoration Monitoring Plan

(A) **PRIOR TO ~~ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT~~ JULY 1 AND COMMENCEMENT OF AUTHORIZED DEVELOPMENT BELOW THE HIGH TIDE LINE**, the applicant shall submit for review and written approval of the Executive Director, a final restoration monitoring plan designed by a qualified biologist or ecologist for monitoring the tidal remediation area following completion of the authorized tidal remediation work to ensure that the area bayward of the high tide line is fully restored to functional tidal habitat. The plan shall at a minimum include the following:

(1) Performance standards for achieving the marine restoration goals of (a) providing a benthic habitat in the tidal remediation area that supports an infaunal community similar in ~~composition and extent~~ **biomass density (biomass/surface area sampled)** to the infaunal community that was present prior to remediation, as adjusted for natural changes observed in a nearby reference area with comparable locations and distributions of infaunal biomass, and (b) providing a marine bottom substrate that is ~~similar in contour and particle size to that present before the authorized remediation work and that is~~ not subject to unusual erosion;

(2) Provisions for monitoring both the tidal remediation area and a nearby reference area before and after the authorized remediation work with the following comparable characteristics: (a) infaunal biomass within the upper 15 centimeters (cm) of bottom sediments, with **visual** estimates of the proportions of broad taxonomic categories (e.g., polychaetes, amphipods, bivalve mollusks, etc.) **and analysis of bivalve mollusks separately**; (b) particle size distribution within the upper 15 cm of the bottom sediments; and (c) elevational changes of the bottom substrate;

(3) Provisions for (a) sampling at a frequency of at least once annually at approximately the same time of year for each year of the required monitoring; (b) sampling **either (i)** with sufficient replication to detect a 20% change in benthic infaunal biomass with 80% power (1-β) and α (alpha) = 0.2**, or (ii) taking at least 30 replicate samples at each site;** and (c) ~~analyzing samples from intertidal areas and subtidal areas separately~~; **conducting samples along replicate transects within the impact site and within at least one control site. Transects shall be placed perpendicular to the shoreline and extend from the highest reach of the tides to 2 meters beyond the lowest elevation at which the substrate will be disturbed by the remediation activities. Along each transect, 6 infaunal cores shall be collected at equally spaced intervals and composited to form a single replicate. The test variable shall be biomass density (biomass/surface area sampled). All sites shall be sampled before remediation begins. Control sites shall be similar in biomass density to the pre-remediation impact site.**

(4) Provisions for submittal within 60 days of completion of the tidal remediation work of "as-built" plans demonstrating that the authorized remediation work has been completed in accordance with the approved final plans;

(5) Provisions for monitoring the tidal remediation area in accordance with the approved final restoration monitoring plan for a period of 5 years;

(6) Provisions for submittal of annual monitoring reports to the Executive Director by December 31 of each year for the duration of the required monitoring period, beginning ~~the first~~ **one** year **following completion of project activities** after submittal of the "as-built" assessment; and

(7) Provisions for submittal of a final monitoring report to the Executive Director at the end of the 5-year monitoring and reporting period. The final report must be prepared in conjunction with a qualified biologist. The report must evaluate whether the tidal remediation site conforms to the goals, objectives, and performance standards set forth in the approved final restoration program. The report must address all of the monitoring data collected over the 5-year period.

(B) If the final report indicates that the restoration project has been unsuccessful, in part or in whole, based on the approved performance standards, the permittee shall submit, within 90 days, a revised or supplemental restoration program, or mitigation program if remediation is not feasible, to compensate for those portions of the original program

which did not meet the approved performance standards. The revised restoration program shall be processed as an amendment to this coastal development permit, unless the Executive Director determines that an amendment is not legally required.

(C) The permittee shall monitor the restoration site 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 no amendment is legally required.

5. Construction Requirements

PRIOR TO COMMENCEMENT OF AUTHORIZED DEVELOPMENT, it is the permittee's responsibility to ensure that all on-site workers and contractors understand and agree to observe the standards for work outlined in this permit. Construction requirements shall include, but shall not be limited to, the following:

(A) Prior to building demolition and prior to woody vegetation removal during the avian breeding/nesting season (February 1 through August 31), and no more than seven days prior to building demolition and vegetation removal, a survey for nesting birds in the project area shall be conducted by a qualified biologist consistent with Special Condition 15. If any nesting habitat is identified, a minimum 100-foot exclusionary buffer area shall be established consistent with Special Condition 15, and a subsequent bird survey shall be conducted to confirm that the young have fledged prior to commencement of development in the area;

(B) Prior to demolition of the existing ~7,000-square-foot warehouse on the property, a survey for asbestos and lead-based paint shall be conducted as proposed in the project description included with CDP Application 1-11-007 and the final Remedial Action Plan (RAP) approved by the North Coast Water Quality Control Board (RWQCB) in March 2011. Any asbestos-containing materials shall be abated by a licensed asbestos abatement contractor as proposed, and asbestos abatement methods shall be used in compliance with Cal/OSHA regulations;

(C) No more than 30 days prior to commencement of in-water remediation work, an eelgrass survey shall be conducted consistent with the final eelgrass mitigation and monitoring plan required by Special Condition 14;

(D) Construction activities within tidal and upland work areas shall not commence until all sediment, turbidity, and runoff control measures as appropriate have been properly installed in and around active work areas consistent with the final plans required by Special Condition 7 and 8;

(E) The installation and removal of sediment and turbidity control devices in the tidal mudflat shall be consistent with the final Sediment and Turbidity Control Plan approved pursuant to Special Condition 7;

(F) In tidal work areas where silt fencing is used pursuant to the final Sediment and Turbidity Control Plan required by Special Condition 7, excavation and backfilling shall take place only during periods of low tides;

(G) Excavation and backfilling activities shall occur only during the non-rainy season (i.e., only between April 1 and October 15), and all construction activities below the high tide line shall occur only between July 1 and October 15, consistent with Special Condition 6.

(H) Heavy equipment used below or ~~adjacent to~~ **within 5 feet of** the high tide line shall use biologically-based hydraulic fluids made from vegetable oils or synthetic esters. Petroleum-based hydraulic fluids made from mineral oils or polyalkylene glycols shall not be used;

(I) All stockpiles of construction debris, waste materials, excavated soils and sediments, and other materials and debris associated with or generated by the authorized work shall be **either placed within the excavation areas, or where that is not feasible,** underlain by heavy-duty plastic sheeting or other impervious surface~~,~~ **and** contained with berms or other sediment and runoff control devices~~,~~**. Stockpiles shall be** ~~and~~ covered with heavy-duty plastic sheeting or temporary roofs as appropriate ~~at all times~~ **and when not in active use** to minimize the potential for migration of contaminants and sediment-entrained stormwater runoff;

(J) During construction, all trash shall be properly contained, removed from the work site, and disposed of on a regular basis to avoid contamination of habitat during construction activities. Following construction, all trash shall be removed from work area and disposed of properly;

(K) Any piles within the tidal work area ~~that cannot be completely removed~~ shall be cut off at least one foot below the mudflat surface;

(L) Where feasible, perform fueling and maintenance of construction equipment off-site. Any necessary on-site fueling or maintenance of construction equipment shall only occur onshore within designated areas located at least 100 feet from the high tide line. Designated fueling areas shall have containment berms designed to prevent run-on and runoff, and to fully contain any potential spill. Drip pans or absorbent pads shall be used during equipment fueling and maintenance, unless performed over an impermeable surface at a designated fueling area;

(M) Fuels, lubricants, and solvents shall not be allowed to enter the coastal waters or wetlands, and all equipment used during construction shall be free of leaks at all times;

(N) Where feasible, perform washing of construction equipment off-site. Any necessary onsite washing of construction equipment shall only occur onshore within designated areas at least 100 feet from the high tide line. Designated fueling areas shall not be also used for equipment washing areas. Designated equipment washing areas shall be bermed to contain the wash water for percolation or evaporative drying, and wash water shall not be discharged to the storm drain system, waterways, or the bay. Cleaning of equipment with soap, solvents, or steam shall not occur on the project site unless resulting wastes are fully contained and disposed of;

(O) Hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site during construction, and a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call;

(P) An on-site spill prevention and control response program, consisting of BMPs for the storage of clean-up materials, training, designation of responsible individuals, and reporting protocols to the appropriate public and emergency services agencies in the event of a spill, shall be implemented at the project site, consistent with the program required by Special Condition 8(A)(3), to capture and clean-up any accidental releases of oil, grease, fuels, lubricants, or other hazardous materials;

(Q) Any and all construction and demolition debris and excavated spoils resulting from construction/remediation activities shall be removed from the work site on a regular basis and disposed of at appropriate licensed facilities as proposed in the final RAP approved by the RWQCB and the RAP addendum dated August 24, 2011;

(R) Water quality shall be monitored during construction consistent with the final Water Quality Monitoring Plan contained in the final RAP approved by the North Coast Regional Water Quality Control Board in March 2011 and Special Condition 7;

(S) Portable matting designed to support heavy equipment on soft soils shall be used where it is necessary for equipment operation to occur on the mudflat substrate (e.g., to excavate isolated contaminated "hot spots" adjacent to or under the public boardwalk/City pier);

(T) Soil and sediment stockpile areas, including hazardous waste and debris and concrete storage areas, shall be located onshore a minimum of 50 feet from the high tide line **except where contaminated soil excavation takes place within the area 50 feet from the high tide line**;

(U) If a temporary rolled erosion control product (such as mulch control netting, erosion control blanket, or mat) is used to stabilize soils until vegetation is established, only products manufactured from 100% biodegradable (not photodegradable) materials shall be used. If temporary erosion control products that have a netting component are used, the netting shall be loose-weave natural-fiber netting. Products with plastic netting, including but not limited to polypropylene, nylon, polyethylene, and polyester shall not be used. If fiber rolls (wattles) are used for temporary sediment control, the netting component of these products shall be made of loose-weave natural-fiber (not plastic) netting.; and

(V) Traffic controls shall be implemented to minimize impacts from construction traffic on adjacent public roads consistent with Special Condition 19.

7. Final Sediment and Turbidity Control Plan for Waterfront Work

(A) ~~**PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**~~ **AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF AUTHORIZED DEVELOPMENT BELOW THE HIGH TIDE LINE**, the applicant shall submit, for

the review and written approval of the Executive Director, a final Sediment and Turbidity Control Plan.

(1) The plan shall demonstrate all of the following:

(a) Construction activities within tidal work areas will not occur until all temporary sediment and turbidity control measures as appropriate have been properly installed around active work areas;

(b) Temporary sediment and turbidity control barriers will include a combination of a Portadam™ system and silt fences as proposed in the RAP Addendum dated August 24, 2011;

(c) Temporary sediment and turbidity control barriers will be installed and removed in a manner that avoids fish entrapment, prevents fish from entering excavation areas, and avoids sedimentation of adjacent eelgrass beds and coastal waters;

(d) Temporary sediment and turbidity control barriers will be installed in a manner that avoids direct impacts to areas of eelgrass to the maximum extent feasible; and

(e) The water quality of bay waters adjacent to the project work area will be monitored throughout the course of the authorized remediation work to confirm that turbidity will not be increased by more than 20 percent above naturally occurring background levels, as directed by the North Coast RWQCB.

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

(a) A site plan showing the location of all turbidity control measures relative to water levels, bathymetry, and updated eelgrass occurrences (based on the pre-construction eelgrass survey conducted pursuant to Special Condition 14);

(b) A water quality monitoring plan consistent with the final Water Quality Monitoring Plan contained in the final RAP approved by the North Coast Regional Water Quality Control Board in March 2011 that provides for water quality monitoring during in-water construction activities to confirm that turbidity increases are not occurring outside the work area and to ensure that turbidity will not be increased by more than 20 percent above naturally occurring background levels, as directed by the North Coast RWQCB;

(c) A water quality monitoring plan that includes a description of procedural, notification, and contingency measures to be taken in the event that the specified limit is exceeded; and

(d) A schedule for the installation and removal of the proposed sediment and turbidity control measures and for the water quality monitoring activities.

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

9. Final Backfill Material Plan

(A) **PRIOR TO ~~ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT~~ COMMENCEMENT OF AUTHORIZED BACKFILLING ACTIVITIES**, the applicant shall submit, for the review and written approval of the Executive Director, a final plan for the imported backfill material proposed to be placed on the upland and tidal portions of the property.

(1) The plan shall include provisions for all of the following:

(a) Imported backfill material for on-site use will have the following grain diameter characteristics: $d_{90} \leq$ ~~4~~**5** mm, $d_{10} \geq 0.$~~2~~**1** mm and d_{50} such that ~~1~~**2** mm $\geq d_{50} \geq 0.7$ mm (where d_X is the grain diameter at which X% of the sediment by weight is finer)**, with the exception of the material specified as "Crushed Stone," to be used in the bottom of excavations located above the high tide line where the excavation extends below the water table**;

(b) Identification, sampling, and analysis of the imported backfill material for constituents of potential concern prior to on-site use, per the California Department of Toxic Substances Control October 2001 Information Advisory on Clean Imported Fill Material;

(c) Approval of the imported backfill material by the North Coast Regional Water Quality Control Board prior to on-site use; and

(d) The imported backfill material for use seaward of the proposed gabion structure shall be clean fill, screened to remove all trash, debris, organics, and any materials greater than or equal to 10 mm diameter.

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

(a) A grain-size distribution graph of the grain diameter characteristics of the imported backfill;

(b) A narrative description of the source(s) of the imported backfill material and the methods for sampling and analysis of the imported backfill material for constituents of potential concern prior to on-site use;

(c) A schedule for the import and placement of the backfill material on the subject property; and

(d) Evidence of approval of the imported backfill material by the North Coast Regional Water Quality Control Board prior to on-site use.

(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.

11. Final Plans for the Upland Protection Structure

(A) **PRIOR TO JULY 1 AND COMMENCEMENT OF AUTHORIZED DEVELOPMENT BELOW THE HIGH TIDE LINE,** the applicant shall submit, for the review and approval of the Executive Director, final plans for the upland protection structure, including the authorized marine mattress and gabion baskets, that substantially conform with the conceptual and typical plans proposed in Exhibit 9.

(1) The plans shall demonstrate that no portion of the marine mattress will be placed bayward of the existing high tide line.

(2) The plans shall include:

(a) Detailed specifications on sizes and number of marine mattresses and gabion baskets to be installed, rock sizes to be used in the marine mattress and gabion basket structures, and type and number of willow fascines to be planted.

(b) Excavation and backfilling cross sections for the length of the shoreline area where the proposed upland protection structure will be installed;

(c) A revised final grading plan (Exhibit 8) depicting all portions of the marine mattress above the existing high tide line; and

(d) A schedule for the installation of the marine mattress, gabion baskets, and willow fascines/coir matting.

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

13. Upland Protection Structure Monitoring Program

(A) **PRIOR TO ~~ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT~~ JULY 1 AND COMMENCEMENT OF AUTHORIZED DEVELOPMENT BELOW THE HIGH TIDE LINE**, the applicant shall submit to the Executive Director for review and written approval, an upland protection structure monitoring program prepared by a licensed civil engineer or geotechnical engineer and ecologist to monitor the performance of the protection structure, including the authorized marine mattress and gabion baskets. The monitoring program shall include provisions for all of the following:

(1) An annual evaluation of the condition and performance of the marine mattress and gabion baskets (hereafter "Structures"). The evaluation should identify conditions that may cause a failure of or scour around the Structures or that may expose residual contaminants in upland soils to erosion. The evaluation should be used to make decisions about ongoing maintenance to the Structures, and to determine if the Structures need to be repaired or replaced to continue their function. Each report shall contain recommendations, if any, for necessary maintenance, repair, changes, or modifications to the project. If a monitoring report contains recommendations for repair, maintenance, or other work, the permittee shall implement such activities consistent with the requirements of Special Condition 12.

(2) The monitoring plan shall identify changes to the area that could require some type of repair, maintenance, or supplemental work in order to maintain the protection structure in its approved state. Such changes could include, but not be limited to, the following:

(a) Any significant erosion feature that is more than 12 inches deep **and more than 50 square feet in area**;

~~(b) Movement of the marine mattress by more than 6 inches;~~

(~~c~~**b**) Exposure of **greater than a 5-square-foot area of** any part of the marine mattress; and

(~~d~~**c**) **Within any exposed area,** ~~Breakdown~~ **significant failure (3 square feet or more)** of the wire mesh supporting the marine mattress and/or gabion baskets.

(3) The report shall also ~~analyze trends such as~~ **include the results of land surveying or other equivalent method used to identify significant** erosion of the shoreline **within the area of the protection structures as described in (2) above. The report shall also include physical observation of the condition of the** ~~or changes in sea level and the stability of the overall shoreline face, including the upper shoreline area, and the impact of the Structure on~~ shoreline areas adjacent to the ends of the Structure.

(4) If any changes necessary to maintain the protection structure in its approved state are identified during the annual monitoring, the permittee shall, within 60 days of the identification of any such changes, propose a coastal development permit amendment to correct the identified problem. If more immediate action is needed to maintain the integrity of the Structures, the permittee shall propose temporary maintenance measures while longer term options are developed.

(5) Provisions for submittal of an annual monitoring report to the Executive Director by May 1 of each year (beginning the first year after construction of the project is completed) for a period of ~~10~~ **5 (five)** years and then, each third year following the last the annual report, for the life of the approved Structure. However, reports shall be submitted immediately following either (1) a large storm event – equal to

or greater than a 20-year storm, and/or (2) a tsunami event that triggers a local tsunami warning. **If a report has been submitted following either of the latter events, the next required report shall be submitted three years later.** Each report shall be prepared by a licensed civil engineer, geotechnical engineer, or geologist. The report shall contain the evaluation required above.

(B) Within ~~30~~ **60** days after completion of construction of the ~~upland protection device~~ **authorized development**, the permittee shall provide "as built" plans showing the location of the permitted structure in relation to existing topography in plan view and cross section using the California coordinate system.

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

14. Final Revised Eelgrass Monitoring & Mitigation Plan

(A) **PRIOR TO ~~ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT~~ JULY 1 AND COMMENCEMENT OF AUTHORIZED DEVELOPMENT BELOW THE HIGH TIDE LINE**, the applicant shall submit, for the review and written approval of the Executive Director, a final revised eelgrass monitoring and mitigation plan prepared by a qualified biologist or ecologist. The final plan must include provisions for all of the following:

(1) A pre-construction eelgrass survey shall be completed during the months of May through August during periods of low tides only. The pre-construction survey shall be completed prior to the beginning of construction **below the high tide line** and shall be valid for 60 days or until the next period of active growth if construction takes place after the end of the active growth period. The survey shall be in ~~compliance~~ **substantial conformance** with survey recommendations in Appendix B, "Recommendations Concerning Surveys for Assessing Impacts to Eelgrass," of the Draft California Eelgrass Mitigation Policy prepared by the National Marine Fisheries Service (NMFS), Southwest Region dated December 7, 2011 (published in the Federal Register March 9, 2012).

(2) Direct and indirect impacts to eelgrass **plants** shall be avoided to the maximum extent feasible.

(3) A post-construction eelgrass survey shall be completed within the first 30 days of completion of construction, or within the first 30 days of the next active growth period following completion of construction that occurs outside of the active growth period. The survey shall be in ~~compliance~~ **substantial conformance** with survey recommendations in Appendix B, "Recommendations Concerning Surveys for Assessing Impacts to Eelgrass," of the Draft California Eelgrass Mitigation Policy prepared by NMFS, Southwest Region dated December 7, 2011.

(4) Density and extent of vegetative cover shall be estimated at ~~reference~~ **control** areas during pre-construction surveys, post-construction surveys, and during annual monitoring. Changes in density and extent of vegetated cover of the **surveyed** control areas shall be used to account for natural variability **of eelgrass growth in interpreting site survey results**. Selection of an appropriate control site shall be performed in consultation with staff from the Department of Fish and Game, NMFS, and the Coastal Commission.

(5) The post-construction survey shall document adverse impacts to eelgrass **plants.** Adverse impacts to eelgrass shall be measured as the difference between the pre-construction and post-construction estimates of eelgrass cover and density within and adjacent to the remediation areas.

(6) If post-construction survey results demonstrate to the satisfaction of the Executive Director that eelgrass densities have not decreased and there has been no loss of extent of vegetated cover, then no further monitoring or mitigation is required.

(7) If post-construction survey results indicate any decrease in eelgrass density or cover in eelgrass beds or patches within and adjacent to the remediation areas, then an eelgrass mitigation and monitoring plan shall be prepared and submitted for the review and approval of the Executive Director. The mitigation methods, the location of the mitigation sites, and the monitoring plan shall be in ~~compliance~~ **substantial conformance** with the recommendations in Appendix D, "Recommended Measures for Eelgrass Impact Mitigation," of the Draft California Eelgrass Mitigation Policy prepared by NMFS, Southwest Region dated December 7, 2011 and shall provide for the following:

(a) The plans shall provide for an initial transplant area to impact area ratio of 4.82 to 1.

(b) Within three years of completion of transplanting, the eelgrass mitigation site shall have a minimum of 40% of the coverage of eelgrass and 20% of the density of the ~~reference~~ **control** site over an area not less than 1.2 times the area of impact.

(c) The plan shall provide for mitigation site identification, planting methods, monitoring methods, and schedule. Specific success and monitoring criteria are as follows:

i. A minimum of 40% of the coverage of eelgrass and 20% of the density of the ~~reference~~ **control** site over an area not less than 1.2 times the area of impact in the first year;

ii. A minimum of 85% of the coverage of eelgrass and 70% of the density of the ~~reference~~ **control** site over an area not less than 1.2 times the area of impact in the second year;

iii. A minimum 100% of the coverage of eelgrass and 85% of the density of the ~~reference~~ **control** site over an area not less than 1.2 times the area of impact in years three through five.

(d) Monitoring methods shall include mapping and random sampling of the eelgrass areas using a sampling size adequate to obtain representative data for the entire ~~project site~~ **mitigation area and control area** to determine bed size, percent cover, and shoot density.

(e) A detailed monitoring schedule shall be provided that indicates when each of the required monitoring events will be completed. Monitoring reports shall be provided to the Executive Director, DFG, and NMFS ~~within 30 days of completion of each required monitoring period~~ **by December 31 of the year in which they are conducted**;

(f) If the impacted eelgrass areas have not met the recovery standard in subsection (c) in five years, the permittee shall submit an application for an amendment to coastal development permit 1-11-007 proposing additional mitigation to ensure all performance criteria are satisfied consistent with all terms and conditions of this permit.

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

17. Deed Restriction

PRIOR TO ~~ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT~~ JULY 1, the applicants shall submit to the Executive Director for review and written approval documentation demonstrating that the landowners have executed and recorded a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property (hereinafter referred to as the "Standard and Special Conditions"); and (2) imposing all Standard and Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the applicant's entire parcel or parcels. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

II. REVISIONS TO RELATED FINDINGS

To accurately reflect the recommended changes to the special conditions discussed above, staff also recommends corresponding modifications to the related findings of the staff report as follows (text to be deleted is shown in ~~strikethrough~~; text to be added appears in **bold double-underline**):

- ***Modify the text to Finding IV-C on pages 29-30 as follows:***

North Coast Regional Water Quality Control Board: The RWQCB directed the preparation of the Remedial Action Plan (RAP) for the project site pursuant to Cleanup and Abatement Order #R1-2002-0095 issued to the applicant by the Board in 2002 (explained in more detail in Appendix C). The RWQCB approved the RAP dated January 2011 on March 22, 2011. The RWQCB also approved an August 24, 2011 addendum to the RAP. In addition, the project also requires a General Construction Activity Storm Water Permit from the RWQCB, which is pending. The applicant plans to prepare a Storm Water Pollution and Prevention Plan (SWPPP) to satisfy the requirements of the Storm Water permit.

It is unclear whether or not the proposed project requires a Water Quality Certification from the RWQCB pursuant to Section 401 of the federal Clean Water Act and/or Porter-Cologne Water Quality Control Act authority. To ensure that the project ultimately approved by the RWQCB is the same as the project authorized herein, the Commission attaches **Special Condition 1**, which requires the applicant, prior to **commencement of authorized development below the high tide line** ~~issuance of the permit~~, to demonstrate that all necessary approvals from the RWQCB for the proposed project have been obtained.

- ***Modify the text to Finding IV-F(1) in the third full paragraph on page 35 as follows:***

To ensure that the area bayward of the high tide line is fully restored to functional tidal habitat and that the project does not result in the permanent reduction in benthic fauna in the project area, the Commission attaches **Special Condition 4**. This condition requires the applicant to submit a final restoration monitoring plan for monitoring the tidal remediation site following completion of the authorized work. The plan is required to include performance standards for achieving the marine restoration goals of (a) providing a benthic habitat in the tidal remediation area that supports an infaunal community similar in ~~composition and extent~~ **biomass density** to the infaunal community that was present prior to remediation, and (b) providing a marine bottom substrate that is ~~similar in contour to that present before the authorized remediation work and that is~~ not subject to unusual erosion. The plan must include provisions for monitoring infaunal biomass and particle size distribution within the upper 15 cm of bottom sediments as well as elevational changes of the bottom substrate. Furthermore, Special Condition 4 requires the monitoring plan to include provisions for remediation to ensure that the goals and objectives of the restoration project are met.

- ***Modify the text to Finding IV-F(3)(a) in the last paragraph on page 40 as follows:***

To guard against potential water quality impacts associated with waste material stockpiling, the Commission attaches **Special Condition 5(I)**, which requires that all stockpiles of construction debris, waste materials, excavated soils and sediments, and other materials and debris associated with or generated by the authorized work be **either placed within the excavation areas, or where that is not feasible,** underlain by and covered with heavy-duty plastic sheeting or temporary roofs as appropriate **when not in active use** and contained with berms or other sediment and runoff control devices ~~at all times~~ to minimize the potential for migration of contaminants and sediment-entrained stormwater runoff. In addition, **Special Condition 5(T)** requires that soil and sediment stockpile areas, including hazardous waste and debris and concrete storage areas, be located a minimum of 50 feet from the high tide line **except where contaminated soil excavation takes place within the area 50 feet from the high tide line**. Furthermore, **Special Condition 5(Q)** requires that any and all construction and demolition debris and excavated spoils resulting from construction/remediation activities be removed from the work site on a regular basis and disposed of at appropriate licensed facilities as proposed in the final RAP and RAP addendum.

- ***Modify the text to Finding IV-F(3)(a) in the second full paragraph on page 41 as follows:***

To ensure that the backfill material placed in the bay mudflat is appropriate in grain size and free of contaminants, the Commission attaches **Special Condition 9**. This condition requires submittal of a final Backfill Material Plan prior to ~~permit issuance~~ **authorized backfilling activities** for the Executive Director's review and approval. The plan must include provisions for all of the following: (a) identification, sampling, and analysis of the imported backfill material for constituents of potential concern prior to on-site use, per the California Department of Toxic Substances Control October 2001 Information Advisory on Clean Imported Fill Material; (b) approval of the imported backfill material by the RWQCB prior to on-site use; and (c) the imported backfill material for use seaward of the proposed gabion structure must be clean fill, screened to remove all trash, debris, organics, and any materials greater than or equal to 10 mm diameter. In addition, the final SWPPP required by **Special Condition 8** is required to include provisions for preventing backfill material placed in the upland area from entraining in stormwater runoff. Furthermore, the applicant has proposed to seed backfilled areas above the mean high tide line with native grasses to assist in erosion-control and to revegetate the area. As specified in the hydroseeding specification included as Attachment 2 to the RAP Implementation Plan, tufted hairgrass (*Deschampsia caespitosa*), molate fescue (*Festuca rubra*), meadow barley (*Hordeum brachyantherum*), and three weeks fescue (*Vulpia microstachys*) will be seeded across the site following construction. To ensure that the applicant undertakes seeding using native species as proposed, **Special Condition 10** requires submittal of a revegetation plan subject to certain revegetation standards, including in part (a) only native plant species shall be used on the property, including in erosion-control seed mixes, and (b) all erosion-control seeding shall be applied within 30 days after the close of the construction.

- ***Modify the text to Finding IV-F(3)(b) beginning with the last full paragraph on pages 44-45 as follows:***

The Commission's staff ecologist, Dr. John Dixon, reviewed the proposed plan, as revised by the January 18, 2012 e-mail from Arcadis, and recommends that the proposed plan be further revised to the extent necessary to bring the standards, protocols, and other specifications for eelgrass surveys, mitigation, and monitoring in ~~complete~~ conformance with the **provisions of** December 7, 2011 NOAA-Fisheries Draft California Eelgrass Mitigation Policy. The draft policy was published in the Federal Register on March 9, 2012, and contains minimum requirements the Commission considers necessary for the protection of eelgrass habitat within on-site tidal wetlands. **The NOAA-Fisheries draft policy provides suitable guidelines for conducting eelgrass surveys, assessing eelgrass impacts, and developing eelgrass mitigation plans consistent with the requirements of Sections 30230, 30231, and 30233 that the project maintain, increase, and enhance the biological productivity and functional capacity of the habitat.** Since its publication, the Commission has required adherence to **certain provisions of** the draft policy for CDP applications on the North Coast with potential eelgrass impacts (e.g., CDP Nos. 1-12-004 and 1-10-035-A).

Therefore, **Special Condition No. 14** requires the applicant to submit a final revised eelgrass mitigation and monitoring plan for the Executive Director's review and approval prior to ~~permit issuance~~ **July 1 and commencement of authorized development below the high tide line**. The final plan must include provisions for, in part, the following: (1) a pre-construction eelgrass survey to be completed during the months of May through August in ~~compliance~~ **substantial conformance** with survey recommendations in Appendix B, "Recommendations Concerning Surveys for Assessing Impacts to Eelgrass," of the Draft California Eelgrass Mitigation Policy prepared by the National Marine Fisheries Service (NMFS), Southwest Region dated December 7, 2011 (published in the Federal Register March 9, 2012); (2) a post-construction eelgrass survey to be completed within the first 30 days of completion of construction, or within the first 30 days of the next active growth period following completion of construction that occurs outside of the active growth period; (3) if post-construction survey results indicate any decrease in eelgrass density or cover in eelgrass beds or patches within and adjacent to the remediation areas, then an eelgrass mitigation and monitoring plan is to be prepared and submitted for the review and approval of the Executive Director; (4) the mitigation methods, the location of the mitigation sites, and the monitoring plan are to be in ~~compliance~~ **substantial conformance** with the recommendations in Appendix D, "Recommended Measures for Eelgrass Impact Mitigation," of the Draft California Eelgrass Mitigation Policy prepared by NMFS, Southwest Region dated December 7, 2011, including, in part, (a) an initial transplant area to impact area ratio of 4.82 to 1; and (b) within three years of completion of transplanting, the eelgrass mitigation site must have a minimum of 40% of the coverage of eelgrass and 20% of the density of the reference site over an area not less than 1.2 times the area of impact; (5) a detailed monitoring schedule; and (6) if the impacted eelgrass areas have not met the recovery standard in five years, the permittee shall submit an application for an amendment to CDP 1-11-007 proposing additional mitigation to ensure all performance criteria are satisfied consistent with all terms and conditions of this permit.

The requirements of the special condition differ from the NOAA-Fisheries draft policy in that Special Condition No. 14 requires mitigation for impacts to eelgrass habitat totaling less than 10 square meters in size whereas the NOAA-Fisheries draft policy does not necessarily require mitigation for such smaller amount of eelgrass habitat impact. The Commission finds that even the loss of eelgrass habitat less than 10 square meters in size still constitutes a significant adverse impact and the Commission has consistently required eelgrass mitigation for even the loss of small amounts of eelgrass. NOAA Fisheries' standard relates to whether the loss of a certain amount of habitat would jeopardize the continued existence of certain threatened and endangered species like salmon. Eelgrass habitat is protected only in relation to the need to sufficiently protect habitat for endangered or threatened species to prevent jeopardizing the continued existence of the targeted species. Therefore, some impacts to eelgrass habitat that do not threaten the targeted threatened or endangered species are acceptable under the NOAA-Fisheries draft policy. The Coastal Act includes different standards for the protection of eelgrass habitat. Sections 30230, 30231, and 30233 of the Coastal Act require that approved wetland dredging and filling projects provide "feasible mitigation to minimize adverse environmental effects" and that development maintain "the biological productivity and quality of coastal waters, estuaries, and wetlands." The Coastal Act protects the entire wetland habitat, not just endangered species, and mitigation for eelgrass impacts of less than 10 square meters is still necessary to find that adverse environmental effects will be minimized and biological productivity maintained.

- ***Modify the text to Finding IV-F(3)(c) on pages 45-46 as follows:***

a. MITIGATION MEASURES TO PROTECT MUDFLAT HABITAT AND SENSITIVE FISH SPECIES

The proposed remediation site within Humboldt Bay is located on the east side of the Eureka Inner Channel in ~~an area that may be~~ **a mudflat habitat area that is also** used by various sensitive fish species for migrating, rearing, foraging, and/or spawning, including several species of juvenile and adult salmonids, green sturgeon, eulachon, long-fin smelt, and various other species. Both NOAA-Fisheries and DFG staff commented on the proposed project to address the project's potential impacts on sensitive fish and other marine resources of the bay.

NOAA-Fisheries wrote an informal consultation letter pursuant to the federal Endangered Species Act dated January 17, 2012 to address the project's potential impacts to federally listed fish species and essential fish habitat (EFH) (Exhibit 13). The NOAA-Fisheries letter states that since the proposed dredging and filling associated with the proposed remediation project will occur at low tides when mudflat areas are exposed, because the work is proposed to occur within the confines of a sediment barrier, and because fill material will not be placed directly in coastal waters outside of the sediment barriers, sensitive fish will not be directly exposed to the proposed dredging and backfilling activities within the sediment barrier area. The letter further states that any indirect impacts to sensitive fish in the area, such as increases in turbidity associated with work in the bay or reduction in prey (benthic fauna) related to dredging and backfilling, are

expected to be temporary and insignificant. With respect to the use of heavy equipment adjacent to the channel and the potential for the accidental spill of fuel, lubricants, hydraulic fluid, etc., the letter concludes that this impact is unlikely due to the mitigation measures proposed with the project including that all equipment will be leak-free, all refueling will occur at least 100 feet from the water, and machinery will be operated from the shoreline. NOAA-Fisheries concludes that the project may affect but is not likely to adversely affect salmonids, green sturgeon, or eulachon or their designated critical habitats. The letter further concludes that while the project would affect salmon EFH, "…the proposed project contains adequate measures to avoid, minimize, mitigate, or otherwise offset the adverse effects to EFH."

DFG's comments on the project were informal (e.g., provided through e-mail correspondence or during interagency meetings with the applicant on the project) and related primarily to (1) the use of the proposed Portadam™ and the potential for impacts to sensitive fish species if the structure were to be installed when water is present in the area; (2) the need to restrict the work window for work below the high tide line to July through September to avoid out-migrating salmon smolts and longfin smelt, which may be present in the adjacent channel during the earlier part of the non-rainy season; and (3) appropriate eelgrass survey methods and mitigation requirements.

The development will involve the excavation and subsequent restoration of approximately one half acre of mudflat habitat in the intertidal zone. Mudflats provide habitat for a variety of invertebrate organisms including polychaetes, amphipods, bivalve mollusks, and others. The habitat of the affected area will be completely removed by the excavation required to remediate contamination. As discussed in Finding IV-A above, the applicant will be replacing the excavated sediments from the mudflat with a coarser grained material to minimize the potential for erosion and re-suspension into the tidal environment. It is anticipated that invertebrates will recolonize the affected area once the new substrate is placed at the site.

To ensure that the area bayward of the high tide line is fully restored to functional tidal habitat and that the project does not result in the permanent reduction in benthic fauna in the project area, the Commission attaches Special Condition 4. This condition requires the applicant to submit a final restoration monitoring plan for monitoring the tidal remediation site following completion of the authorized work. The plan is required to include performance standards for achieving the marine restoration goals of (a) providing a benthic habitat in the tidal remediation area that supports an infaunal community similar in biomass density to the infaunal community that was present prior to remediation, and (b) providing a marine bottom substrate that is not subject to unusual erosion. The plan must include provisions for monitoring infaunal biomass and particle size distribution within the upper 15 cm of bottom sediments as well as elevational changes of the bottom substrate. Furthermore, Special Condition 4 requires the monitoring plan to include provisions for remediation to ensure that the goals and objectives of the restoration project are met.

To ensure that the project incorporates the mitigation measures and BMPs deemed necessary by NOAA-Fisheries and DFG, and which the Commission itself determines are necessary to minimize the project's adverse effects on sensitive fish and marine resources, the Commission imposes **Special Conditions 4-9** and **14** (previously described in earlier findings).

Therefore, the Commission finds that as conditioned, the project provides feasible mitigation measures to minimize the project's potential impacts on **mudflat habitat** and sensitive fish and other marine organisms, as required by Sections 30230, 30231, and 30233(a) of the Coastal Act.

- ***Modify the text to Finding IV-H in the third paragraph on page 50 as follows:***

Secondly, the development as proposed will neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. As previously discussed, **Special Condition 13** requires annual monitoring of the upland protection structure, including an annual evaluation of any conditions that may cause a failure of or scour around the structure or that may expose residual contaminants in upland soils to erosion. The site must be monitored for any significant erosion features that is more than 12 inches deep **and more than 50 square feet in area**, ~~movement of the marine mattress by more than 6 inches,~~ exposure of **greater than a 5-square-foot area of** any part of the marine mattress; and **within any exposed area** breakdown of **3 square feet or more of** the wire mesh supporting the marine mattress and/or gabion baskets. Therefore, the Commission finds that the proposed development, as conditioned, will neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area, consistent with Section 30253.

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Filed:	January 20, 2012
180th day:	July 18, 2012
Staff:	M. Kraemer-E
Staff Report:	April 26, 2012
Hearing Date:	May 10, 2012

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.:	**CDP 1-11-007**
APPLICANT:	**Union Pacific Railroad Company**
AGENTS:	Arcadis U.S., Inc. and Pillsbury Winthrop Shaw Pittman LLP
LOCATION:	Along the Humboldt Bay shoreline at 701 First Street, Eureka (APNs 001-121-017, -018, & -022).
PROJECT DESCRIPTION:	Remove via excavation heavy-metal contaminated intertidal mudflat sediment and upland soils and install shoreline stabilization materials below final grade within upland areas along the ~550-foot length of the site.
STAFF RECOMMENDATION:	Approval with Conditions.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **approval** with conditions of the coastal development permit application for the proposed site remediation project on the basis that the proposed project, as conditioned, is consistent with all applicable Chapter 3 policies of the Coastal Act.

The subject site, known as the former G & R Metals property, is located on the Humboldt Bay waterfront at 701 First Street in Eureka (Exhibits 1-2) and contains contaminated soils and offshore sediments (primarily polychlorinated biphenyls, polycyclic aromatic hydrocarbons, and various metals) due to the historic use of the subject site for metal salvage operations (Exhibit 14).

The property consists of two distinct geographic areas: an approximately 1-acre tidal mudflat area below the high tide line and an approximately 3-acre upland area.

The applicant proposes to implement a Remedial Action Plan (RAP) approved by the North Coast Regional Water Quality Control Board (in response to a Cleanup and Abatement Order issued by the Board in 2002). The project involves excavating and removing approximately 4,350 cubic yards of intertidal mudflat sediments and approximately 13,580 cubic yards of upland soils, removing an existing shoreline berm, backfilling the excavated areas with clean imported earthen material, and installing shoreline stabilization materials buried below final grade within upland areas along the ~550-foot length of the site.

Significant Coastal Act issues raised by this project include: a) diking, dredging, and filling in coastal wetlands and waters; b) potential short-term adverse impacts to water quality related to construction activities; c) temporary loss of mudflat benthic infauna related to dredging and backfilling of the tidal remediation area; d) potential impacts to eelgrass habitat; e) removal of trees and shrubs that may serve as nesting sites for resident and migratory songbirds; and f) potential temporary impacts to public access. Staff believes that the project if conditioned as recommended below (Special Conditions 1-22) would be carried out consistent with the Coastal Act's wetland, marine resources, water quality, ESHA, hazards, and public access protection policies.

With the inclusion of recommended Special Conditions 1 through 22, staff recommends that the Commission approve coastal development permit application 1-11-007. The recommended motion and resolution are shown on page 4.

TABLE OF CONTENTS

I. MOTION AND RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve coastal development permit 1-11-007 pursuant to the staff recommendation.

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

Resolution to Approve Permit with Conditions:

The Commission hereby approves coastal development permit 1-11-007 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 and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

See Appendix A.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. North Coast Regional Water Quality Control Board Approval

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall provide to the Executive Director a copy of a Water Quality Certification and/or other necessary approval issued by the North Coast Regional Water Quality Control Board ("RWQCB"), or evidence that no certification or other approval is required. The applicant shall inform the Executive Director of any changes to the project required by the RWQCB. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

2. U.S. Army Corps of Engineers Approval

PRIOR TO COMMENCEMENT OF AUTHORIZED DEVELOPMENT BELOW THE HIGH TIDE LINE, the applicant shall provide to the Executive Director a copy of a permit issued by the U.S. Army Corps of Engineers ("Corps"), or letter of permission, or evidence that no permit or permission is required. The applicant shall inform the Executive Director of any changes to the project required by the Corps. 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.

3. North Coast Unified Air Quality Management District Approval

PRIOR TO COMMENCEMENT OF AUTHORIZED DEVELOPMENT, the applicant shall provide to the Executive Director a copy of all permits, licenses, grants of authority as required to be secured from the North Coast Unified Air Quality Management District ("Air District"), or evidence that no Air District permit or authorization is required. The applicant shall inform the Executive Director of any changes to the project required by the District. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

4. Final Restoration Monitoring Plan

(A) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit for review and written approval of the Executive Director, a final restoration monitoring plan designed by a qualified biologist or ecologist for monitoring the tidal remediation area following completion of the authorized tidal remediation work to ensure that the area bayward of the high tide line is fully restored to functional tidal habitat. The plan shall at a minimum include the following:

(1) Performance standards for achieving the marine restoration goals of (a) providing a benthic habitat in the tidal remediation area that supports an infaunal community similar in composition and extent to the infaunal community that was present prior to remediation, as adjusted for natural changes observed in a nearby reference area with comparable locations and distributions of infaunal biomass, and (b) providing a marine bottom substrate that is similar in contour and particle size to that present before the authorized remediation work and that is not subject to unusual erosion;

(2) Provisions for monitoring both the tidal remediation area and a nearby reference area before and after the authorized remediation work with the following comparable characteristics: (a) infaunal biomass within the upper 15 centimeters (cm) of bottom sediments, with estimates of the proportions of broad taxonomic categories (e.g., polychaetes, amphipods, bivalve mollusks, etc.); (b) particle size distribution within the upper 15 cm of the bottom sediments; and (c) elevational changes of the bottom substrate;

(3) Provisions for (a) sampling at a frequency of at least once annually at approximately the same time of year for each year of the required monitoring; (b) sampling with sufficient replication to detect a 20% change in benthic infaunal biomass with 80% power (1-β) and α (alpha) = 0.2; and (c) analyzing samples from intertidal areas and subtidal areas separately;

(4) Provisions for submittal within 60 days of completion of the tidal remediation work of "as-built" plans demonstrating that the authorized remediation work has been completed in accordance with the approved final plans;

(5) Provisions for monitoring the tidal remediation area in accordance with the approved final restoration monitoring plan for a period of 5 years;

(6) Provisions for submittal of annual monitoring reports to the Executive Director by December 31 of each year for the duration of the required monitoring period, beginning the first year after submittal of the "as-built" assessment; and

(7) Provisions for submittal of a final monitoring report to the Executive Director at the end of the 5-year monitoring and reporting period. The final report must be prepared in conjunction with a qualified biologist. The report must evaluate whether the tidal remediation site conforms to the goals, objectives, and performance standards set forth in the approved final restoration program. The report must address all of the monitoring data collected over the 5-year period.

(B) If the final report indicates that the restoration project has been unsuccessful, in part or in whole, based on the approved performance standards, the permittee shall submit, within 90 days, a revised or supplemental restoration program, or mitigation program if remediation is not feasible, to compensate for those portions of the original program which did not meet the approved performance standards. The revised restoration program shall be processed as an amendment to this coastal development permit, unless the Executive Director determines that an amendment is not legally required.

(C) The permittee shall monitor the restoration site 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 no amendment is legally required.

5. <u>Construction Requirements</u>

PRIOR TO COMMENCEMENT OF AUTHORIZED DEVELOPMENT, it is the permittee's responsibility to ensure that all on-site workers and contractors understand and agree to observe the standards for work outlined in this permit. Construction requirements shall include, but shall not be limited to, the following:

(A) Prior to building demolition and prior to woody vegetation removal during the avian breeding/nesting season (February 1 through August 31), and no more than seven days prior to building demolition and vegetation removal, a survey for nesting birds in the project area shall be conducted by a qualified biologist consistent with Special Condition 15. If any nesting habitat is identified, a minimum 100-foot exclusionary buffer area shall be established consistent with Special Condition 15, and a subsequent bird survey shall be conducted to confirm that the young have fledged prior to commencement of development in the area;

(B) Prior to demolition of the existing ~7,000-square-foot warehouse on the property, a survey for asbestos and lead-based paint shall be conducted as proposed in the project description included with CDP Application 1-11-007 and the final Remedial Action Plan (RAP) approved by the North Coast Water Quality Control Board (RWQCB) in March 2011. Any asbestos-containing materials shall be abated by a licensed asbestos abatement contractor as proposed, and asbestos abatement methods shall be used in compliance with Cal/OSHA regulations;

(C) No more than 30 days prior to commencement of in-water remediation work, an eelgrass survey shall be conducted consistent with the final eelgrass mitigation and monitoring plan required by Special Condition 14;

(D) Construction activities within tidal and upland work areas shall not commence until all sediment, turbidity, and runoff control measures as appropriate have been properly installed in and around active work areas consistent with the final plans required by Special Condition 7 and 8;

(E) The installation and removal of sediment and turbidity control devices in the tidal mudflat shall be consistent with the final Sediment and Turbidity Control Plan approved pursuant to Special Condition 7;

(F) In tidal work areas where silt fencing is used pursuant to the final Sediment and Turbidity Control Plan required by Special Condition 7, excavation and backfilling shall take place only during periods of low tides;

(G) Excavation and backfilling activities shall occur only during the non-rainy season (i.e., only between April 1 and October 15), and all construction activities below the high tide line shall occur only between July 1 and October 15, consistent with Special Condition 6.

(H) Heavy equipment used below or adjacent to the high tide line shall use biologically-based hydraulic fluids made from vegetable oils or synthetic esters. Petroleum-based hydraulic fluids made from mineral oils or polyalkylene glycols shall not be used;

(I) All stockpiles of construction debris, waste materials, excavated soils and sediments, and other materials and debris associated with or generated by the authorized work shall be underlain by heavy-duty plastic sheeting or other impervious surface, contained with berms or other sediment and runoff control devices, and covered with heavy-duty plastic sheeting or temporary roofs as appropriate at all times to minimize the potential for migration of contaminants and sediment-entrained stormwater runoff;

(J) During construction, all trash shall be properly contained, removed from the work site, and disposed of on a regular basis to avoid contamination of habitat during construction activities. Following construction, all trash shall be removed from work area and disposed of properly;

(K) Any piles within the tidal work area that cannot be completely removed shall be cut off at least one foot below the mudflat surface;

(L) Where feasible, perform fueling and maintenance of construction equipment off-site. Any necessary on-site fueling or maintenance of construction equipment shall only occur onshore within designated areas located at least 100 feet from the high tide line. Designated fueling areas shall have containment berms designed to prevent run-on and runoff, and to fully contain any potential spill. Drip pans or absorbent pads shall be used during equipment fueling and maintenance, unless performed over an impermeable surface at a designated fueling area;

(M) Fuels, lubricants, and solvents shall not be allowed to enter the coastal waters or wetlands, and all equipment used during construction shall be free of leaks at all times;

(N) Where feasible, perform washing of construction equipment off-site. Any necessary onsite washing of construction equipment shall only occur onshore within designated areas at least 100 feet from the high tide line. Designated fueling areas shall not be also used for equipment washing areas. Designated equipment washing areas shall be bermed to contain the wash water for percolation or evaporative drying, and wash water shall not be discharged to the storm drain system, waterways, or the bay. Cleaning of equipment with soap, solvents, or steam shall not occur on the project site unless resulting wastes are fully contained and disposed of;

(O) Hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site during construction, and a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call;

(P) An on-site spill prevention and control response program, consisting of BMPs for the storage of clean-up materials, training, designation of responsible individuals, and reporting protocols to the appropriate public and emergency services agencies in the event of a spill, shall be implemented at the project site, consistent with the program required by Special Condition 8(A)(3), to capture and clean-up any accidental releases of oil, grease, fuels, lubricants, or other hazardous materials;

(Q) Any and all construction and demolition debris and excavated spoils resulting from construction/remediation activities shall be removed from the work site on a regular basis and disposed of at appropriate licensed facilities as proposed in the final RAP approved by the RWQCB and the RAP addendum dated August 24, 2011;

(R) Water quality shall be monitored during construction consistent with the final Water Quality Monitoring Plan contained in the final RAP approved by the North

Coast Regional Water Quality Control Board in March 2011 and Special Condition 7;

(S) Portable matting designed to support heavy equipment on soft soils shall be used where it is necessary for equipment operation to occur on the mudflat substrate (e.g., to excavate isolated contaminated "hot spots" adjacent to or under the public boardwalk/City pier);

(T) Soil and sediment stockpile areas, including hazardous waste and debris and concrete storage areas, shall be located onshore a minimum of 50 feet from the high tide line;

(U) If a temporary rolled erosion control product (such as mulch control netting, erosion control blanket, or mat) is used to stabilize soils until vegetation is established, only products manufactured from 100% biodegradable (not photodegradable) materials shall be used. If temporary erosion control products that have a netting component are used, the netting shall be loose-weave natural-fiber netting. Products with plastic netting, including but not limited to polypropylene, nylon, polyethylene, and polyester shall not be used. If fiber rolls (wattles) are used for temporary sediment control, the netting component of these products shall be made of loose-weave natural-fiber (not plastic) netting.; and

(V) Traffic controls shall be implemented to minimize impacts from construction traffic on adjacent public roads consistent with Special Condition 19.

6. <u>Restrictions on Timing of Work</u>

The authorized development must not commence before April 1st and must be completed by October 15th of the year in which the development is commenced. Construction activities below the high tide line must not commence until July 1st. The Executive Director may approve either a one or two week extension of authorized activities beyond October 15th to as late as November 1st if the permittee has submitted a request for an extension in writing, the Executive Director determines that dry weather conditions are forecast for the extension period, and any necessary extensions of time for work below the high tide line have been granted by the Department of Fish and Game, the Corps, NOAA-Fisheries, and the Humboldt Bay Harbor, Recreation, and Conservation District. No activities shall occur after October 15th unless the permittee has first received approval of an extension of time in writing from the Executive Director.

7. <u>Final Sediment and Turbidity Control Plan for Waterfront Work</u>

(A) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and written approval of the Executive Director, a final Sediment and Turbidity Control Plan.

(1) The plan shall demonstrate all of the following:

(a) Construction activities within tidal work areas will not occur until all temporary sediment and turbidity control measures as appropriate have been properly installed around active work areas;

(b) Temporary sediment and turbidity control barriers will include a combination of a Portadam™ system and silt fences as proposed in the RAP Addendum dated August 24, 2011;

(c) Temporary sediment and turbidity control barriers will be installed and removed in a manner that avoids fish entrapment, prevents fish from entering excavation areas, and avoids sedimentation of adjacent eelgrass beds and coastal waters;

(d) Temporary sediment and turbidity control barriers will be installed in a manner that avoids direct impacts to areas of eelgrass to the maximum extent feasible; and

(e) The water quality of bay waters adjacent to the project work area will be monitored throughout the course of the authorized remediation work to confirm that turbidity will not be increased by more than 20 percent above naturally occurring background levels, as directed by the North Coast RWQCB.

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

(a) A site plan showing the location of all turbidity control measures relative to water levels, bathymetry, and updated eelgrass occurrences (based on the pre-construction eelgrass survey conducted pursuant to Special Condition 14);

(b) A water quality monitoring plan consistent with the final Water Quality Monitoring Plan contained in the final RAP approved by the North Coast Regional Water Quality Control Board in March 2011 that provides for water quality monitoring during in-water construction activities to confirm that turbidity increases are not occurring outside the work area and to ensure that turbidity will not be increased by more than 20 percent above naturally occurring background levels, as directed by the North Coast RWQCB;

(c) A water quality monitoring plan that includes a description of procedural, notification, and contingency measures to be taken in the event that the specified limit is exceeded; and

(d) A schedule for the installation and removal of the proposed sediment and turbidity control measures and for the water quality monitoring activities.

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

8. <u>Final Storm Water Pollution Prevention Plan</u>

(A) **PRIOR TO COMMENCEMENT OF AUTHORIZED DEVELOPMENT**, the applicant shall submit, for the review and approval of the Executive Director, a final Storm Water Pollution Prevention Plan (SWPPP) for the proposed project that includes provisions for all of the following:

(1) Runoff from the project site shall not result in sediment or other pollutants entering coastal waters or tidal areas during construction or post-construction;

(2) Best Management Practices (BMPs) shall be used to prevent the entry of polluted stormwater runoff into coastal waters and wetlands during construction and post-construction, including use of relevant BMPs as detailed in the current California Storm Water Quality Best Management Handbooks (http://www.cabmphandbooks.com);

(3) A spill prevention and contingency plan, consisting of BMPs for the storage of clean-up materials; training; designation of responsible individuals; and reporting protocols to the appropriate public and emergency services agencies in the event of a spill, shall be implemented at the project site to capture and clean-up any accidental releases of oil, grease, fuels, lubricants, and other hazardous materials;

(4) A schedule for installation and maintenance of appropriate construction source-control BMPs to prevent entry of stormwater runoff into the construction site and the entrainment of excavated materials into runoff leaving the construction site; and

(5) The SWPPP shall be consistent with the provisions of Special Condition 5 and all other terms and conditions of coastal development permit 1-11-007.

(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.

9. Final Backfill Material Plan

(A) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and written approval of the Executive Director, a final plan for the imported backfill material proposed to be placed on the upland and tidal portions of the property.

(1) The plan shall include provisions for all of the following:

(a) Imported backfill material for on-site use will have the following grain diameter characteristics: $d_{90} \leq 4$ mm, $d_{10} \geq 0.2$ mm and d_{50} such that 1 mm $\geq d_{50} \geq 0.7$ mm (where d_X is the grain diameter at which X% of the sediment by weight is finer);

(b) Identification, sampling, and analysis of the imported backfill material for constituents of potential concern prior to on-site use, per the California Department of Toxic Substances Control October 2001 Information Advisory on Clean Imported Fill Material;

(c) Approval of the imported backfill material by the North Coast Regional Water Quality Control Board prior to on-site use; and

(d) The imported backfill material for use seaward of the proposed gabion structure shall be clean fill, screened to remove all trash, debris, organics, and any materials greater than or equal to 10 mm diameter.

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

(a) A grain-size distribution graph of the grain diameter characteristics of the imported backfill;

(b) A narrative description of the source(s) of the imported backfill material and the methods for sampling and analysis of the imported backfill material for constituents of potential concern prior to on-site use;

(c) A schedule for the import and placement of the backfill material on the subject property; and

(d) Evidence of approval of the imported backfill material by the North Coast Regional Water Quality Control Board prior to on-site use.

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

10. <u>Revegetation Plan</u>

(A) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and written approval of the Executive Director, a final revegetation plan for the imported backfill material proposed to be placed on the upland and tidal portions of the property.

(1) The plan shall demonstrate that:

(a) Hooker willow (*Salix hookeriana*) plants shall be planted along the length of the property parallel to the shoreline above the buried marine mattress as proposed;

(b) Only native plant species shall be used on the property, including in erosion-control seed mixes. 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 State of California or the federal government shall be utilized within the property; and

(c) All erosion-control seeding shall be applied within 30 days after the close of the construction.

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

(a) A final landscape site plan depicting the species, size, and location of all plant materials to be planted on the property, any irrigation system, and all other landscape features; and

(b) A schedule for the proposed planting.

(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.

11. <u>Final Plans for the Upland Protection Structure</u>

(A) **PRIOR TO COMMENCEMENT OF AUTHORIZED DEVELOPMENT,** the applicant shall submit, for the review and approval of the Executive Director, final plans for the upland protection structure, including the authorized marine mattress and gabion baskets, that substantially conform with the conceptual and typical plans proposed in Exhibit 9.

(1) The plans shall demonstrate that no portion of the marine mattress will be placed bayward of the existing high tide line.

(2) The plans shall include:

(a) Detailed specifications on sizes and number of marine mattresses and gabion baskets to be installed, rock sizes to be used in the marine mattress and gabion basket structures, and type and number of willow fascines to be planted.

(b) Excavation and backfilling cross sections for the length of the shoreline area where the proposed upland protection structure will be installed;

(c) A revised final grading plan (Exhibit 8) depicting all portions of the marine mattress above the existing high tide line; and

(d) A schedule for the installation of the marine mattress, gabion baskets, and willow fascines/coir matting.

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

12. Future Maintenance of the Upland Protection Structure

The permittee shall maintain the approved upland protection structure in its approved state. No expansion or enlargement of the approved structure is permitted. Any change in the design of the upland protection structure or future additions/reinforcement of the upland protection structure beyond exempt repair and maintenance as defined in Section 13252 of Title 14 of the California Code of Regulations will require a coastal development permit amendment. The permittee shall apply for a coastal development permit amendment for all non-exempt repair and maintenance activities needed to maintain the upland protection structure in its approved state as soon as possible but no later than 60 days after discovery of the need for the repair and maintenance activity.

13. Upland Protection Structure Monitoring Program

(A) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, an upland protection structure monitoring program prepared by a licensed civil engineer or geotechnical engineer and ecologist to monitor the performance of the protection structure, including the authorized marine mattress and gabion baskets. The monitoring program shall include provisions for all of the following:

(1) An annual evaluation of the condition and performance of the marine mattress and gabion baskets (hereafter "Structures"). The evaluation should identify conditions that may cause a failure of or scour around the Structures or that may expose residual contaminants in upland soils to erosion. The evaluation should be used to make decisions about ongoing maintenance to the Structures, and to determine if the Structures need to be repaired or replaced to continue their function. Each report shall contain recommendations, if any, for necessary maintenance, repair, changes, or modifications to the project. If a monitoring report contains recommendations for repair, maintenance, or other work, the permittee shall implement such activities consistent with the requirements of Special Condition 12.

(2) The monitoring plan shall identify changes to the area that could require some type of repair, maintenance, or supplemental work in order to maintain the protection structure in its approved state. Such changes could include, but not be limited to, the following:

(a) Any significant erosion feature that is more than 12 inches deep;

(b) Movement of the marine mattress by more than 6 inches;

(c) Exposure of any part of the marine mattress; and

(d) Breakdown of the wire mesh supporting the marine mattress and/or gabion baskets.

(3) The report shall also analyze trends such as erosion of the shoreline or changes in sea level and the stability of the overall shoreline face, including the upper shoreline area, and the impact of the Structure on shoreline areas adjacent to the ends of the Structure.

(4) If any changes necessary to maintain the protection structure in its approved state are identified during the annual monitoring, the permittee shall, within 60 days of the identification of any such changes, propose a coastal development permit amendment to correct the identified problem. If more immediate action is needed to maintain the integrity of the Structures, the permittee shall propose temporary maintenance measures while longer term options are developed.

(5) Provisions for submittal of an annual monitoring report to the Executive Director by May 1 of each year (beginning the first year after construction of the project is completed) for a period of 10 years and then, each third year following the last the annual report, for the life of the approved Structure. However, reports shall be submitted immediately following either (1) a large storm event – equal to or greater than a 20-year storm, and/or (2) a tsunami event that triggers a local tsunami warning. Each report shall be prepared by a licensed civil engineer, geotechnical engineer, or geologist. The report shall contain the evaluation required above.

(B) Within 30 days after completion of construction of the upland protection device, the permittee shall provide "as built" plans showing the location of the permitted structure in relation to existing topography in plan view and cross section using the California coordinate system.

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

14. <u>Final Revised Eelgrass Monitoring & Mitigation Plan</u>

(A) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and written approval of the Executive Director, a final revised eelgrass monitoring and mitigation plan prepared by a qualified biologist or ecologist. The final plan must include provisions for all of the following:

(1) A pre-construction eelgrass survey shall be completed during the months of May through August during periods of low tides only. The pre-

construction survey shall be completed prior to the beginning of construction and shall be valid for 60 days or until the next period of active growth if construction takes place after the end of the active growth period. The survey shall be in compliance with survey recommendations in Appendix B, "Recommendations Concerning Surveys for Assessing Impacts to Eelgrass," of the Draft California Eelgrass Mitigation Policy prepared by the National Marine Fisheries Service (NMFS), Southwest Region dated December 7, 2011 (published in the Federal Register March 9, 2012).

(2) Direct and indirect impacts to eelgrass shall be avoided to the maximum extent feasible.

(3) A post-construction eelgrass survey shall be completed within the first 30 days of completion of construction, or within the first 30 days of the next active growth period following completion of construction that occurs outside of the active growth period. The survey shall be in compliance with survey recommendations in Appendix B, "Recommendations Concerning Surveys for Assessing Impacts to Eelgrass," of the Draft California Eelgrass Mitigation Policy prepared by NMFS, Southwest Region dated December 7, 2011.

(4) Density and extent of vegetative cover shall be estimated at reference areas during pre-construction surveys, post-construction surveys, and during annual monitoring. Changes in density and extent of vegetated cover of the control areas shall be used to account for natural variability. Selection of an appropriate control site shall be performed in consultation with staff from the Department of Fish and Game, NMFS, and the Coastal Commission.

(5) The post-construction survey shall document adverse impacts to eelgrass. Adverse impacts to eelgrass shall be measured as the difference between the pre-construction and post-construction estimates of eelgrass cover and density within and adjacent to the remediation areas.

(6) If post-construction survey results demonstrate to the satisfaction of the Executive Director that eelgrass densities have not decreased and there has been no loss of extent of vegetated cover, then no further monitoring or mitigation is required.

(7) If post-construction survey results indicate any decrease in eelgrass density or cover in eelgrass beds or patches within and adjacent to the remediation areas, then an eelgrass mitigation and monitoring plan shall be prepared and submitted for the review and approval of the Executive Director. The mitigation methods, the location of the mitigation sites, and the monitoring plan shall be in compliance with the recommendations in Appendix D, "Recommended Measures for Eelgrass Impact Mitigation," of the Draft California Eelgrass Mitigation Policy prepared by NMFS, Southwest Region dated December 7, 2011 and shall provide for the following:

(a) The plans shall provide for an initial transplant area to impact area ratio of 4.82 to 1.

(b) Within three years of completion of transplanting, the eelgrass mitigation site shall have a minimum of 40% of the coverage of eelgrass and 20% of the density of the reference site over an area not less than 1.2 times the area of impact.

(c) The plan shall provide for mitigation site identification, planting methods, monitoring methods, and schedule. Specific success and monitoring criteria are as follows:

i. A minimum of 40% of the coverage of eelgrass and 20% of the density of the reference site over an area not less than 1.2 times the area of impact in the first year;

ii. A minimum of 85% of the coverage of eelgrass and 70% of the density of the reference site over an area not less than 1.2 times the area of impact in the second year;

iii. A minimum 100% of the coverage of eelgrass and 85% of the density of the reference site over an area not less than 1.2 times the area of impact in years three through five.

(d) Monitoring methods shall include mapping and random sampling of the eelgrass areas using a sampling size adequate to obtain representative data for the entire project site to determine bed size, percent cover, and shoot density.

(e) A detailed monitoring schedule shall be provided that indicates when each of the required monitoring events will be completed. Monitoring reports shall be provided to the Executive Director, DFG, and NMFS within 30 days of completion of each required monitoring period;

(f) If the impacted eelgrass areas have not met the recovery standard in subsection (c) in five years, the permittee shall submit an application for an amendment to coastal development permit 1-11-007 proposing additional mitigation to ensure all performance criteria are satisfied consistent with all terms and conditions of this permit.

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

15. <u>Protection of Bird Breeding & Nesting Habitat</u>

(A) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the permittee shall submit, for the review and written approval of the Executive

Director, a Sensitive Bird Nesting Habitat Protection Plan, prepared by a qualified biologist, for conducting seasonally appropriate pre-construction surveys for sensitive bird nesting habitat in the project area and protecting such habitat from construction impacts. The plan shall include, at a minimum, the following:

(1) Provisions for surveying the project area by a qualified biologist according to current Department of Fish and Game protocols no more than one week prior to commencement of construction activities proposed to occur during the bird breeding and nesting season (March 1 through August 15) for the presence of active nesting habitat;

(2) Provisions for avoiding construction activities during the nesting season(s) within 100 feet of an occupied nest. No-disturbance buffers around active nests shall be maintained until completion of nesting;

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

(4) Provisions that require for any identified nesting habitat, a subsequent bird survey shall be conducted to confirm that the young have fledged prior to commencement of development in the area.

(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.

16. Assumption of Risk, Waiver of Liability, and Indemnity Agreement

By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from earthquakes, erosion, flooding, inundation, extreme high tide events, and tsunami wave run-up; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

17. Deed Restriction

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval documentation demonstrating that the landowners have executed and recorded a deed

restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property (hereinafter referred to as the "Standard and Special Conditions"); and (2) imposing all Standard and Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the applicant's entire parcel or parcels. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

18. Channel Access During Construction

At all times during project construction, and at all stages of the tide, a passage of at least 50 feet wide in the channel of Humboldt Bay immediately adjacent to the subject work area shall be kept clear of all obstructions including floating and submerged structures, equipment, and suspended overhead hazards to allow for continued access through the bay around the project area by boats and recreational water craft. The passage shall be clearly marked with floating buoys.

19. Public Access Protection Plan

(A) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and written approval of the Executive Director, a Public Access Protection Plan to maintain reasonable use of the public boardwalk/pier by the public during and following construction activities authorized under this coastal development permit:

(1) The Public Access Protection Plan shall demonstrate the following:

(a) The portion of the boardwalk/pier proposed to be temporarily closed to the public for construction-related public safety purposes shall be minimized;

(b) The duration of boardwalk/pier closure for construction-related public safety purposes shall be minimized and shall not exceed 14 days total, unless the Executive Director grants in writing for good cause additional time as needed not to exceed 21 days total without an amendment to this coastal development permit; and

(c) The boardwalk/pier shall remain open and accessible in full to the public on Memorial Day weekend, the 4th of July, and Labor Day weekend.

(2) The Public Access Protection Plan shall include, at a minimum, the following components:

(a) A narrative description of the proposed temporary access control measures to be used;

(b) A site plan showing where any proposed temporary access barriers would be installed and which portions of the boardwalk/pier will be maintained for unrestricted public access use; and

(c) A schedule of the estimated dates when the proposed temporary access control measures would be installed/implemented and removed/terminated.

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

20. Final Revised Traffic Management Plan

(A) **PRIOR TO COMMENCEMENT OF AUTHORIZED DEVELOPMENT**, the applicant shall submit, for the review and approval of the Executive Director, a final Traffic Management Plan that demonstrates all of the following:

(1) Construction equipment, trucks, and other vehicles associated with the authorized development shall be staged and routed such that congestion on local streets and public parking impacts are minimized;

(2) Project activities shall be scheduled to avoid truck traffic during peak hours and weekends, to the maximum extent feasible; and

(3) The final plan shall be reviewed and approved by the City of Eureka prior to commencement of any traffic-generating activities.

(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.

21. Protection of Archaeological Resources

(A) If an area of cultural deposits is 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 a supplementary archaeological plan for the review and approval of the Executive Director.

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

(2) If the Executive Director approves the Supplementary 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.

22. Liability for Costs and Attorneys Fees

The permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys fees – including (1) those charged by the Office of the Attorney General, and (2) any court costs and attorneys fees that the Coastal Commission may be required by a court to pay – that the Coastal Commission incurs in connection with the defense of any action brought by a party other than Union Pacific Railroad Company against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit, the interpretation and/or enforcement of permit conditions, or any other matter related to this permit. The Permittee shall reimburse the Coastal Commission within 60 days of being informed by the Executive Director of the amount of such costs/fees. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

IV. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares as follows:

A. PROPOSED PROJECT DESCRIPTION

The applicant proposes to implement a Remedial Action Plan (RAP) for the project site approved by the North Coast Regional Water Quality Control Board (RWQCB) in March of 2011. The RAP was prepared to address contamination (primarily polychlorinated biphenyls [PCBs], polycyclic aromatic hydrocarbons [PAHs], and various metals) in soils and offshore sediments due to the historic use of the ~4-acre subject site for metal salvage operations (Exhibits 1-2). See Appendix C for background on site contamination.

The proposed development involves (1) preparing the ~3-acre upland portion of the site for excavation of contaminated soils by clearing woody vegetation (mostly willows) from an approximately 7,000-square-foot upland area adjacent to the shoreline and demolishing an existing ~7,000-square-foot storage warehouse; (2) excavating approximately 13,580 cubic yards of contaminated soils from the upland portion of the site and backfilling the area with clean import material; (3) preparing the ~1-acre tidal mudflat portion of the site for dredging of contaminated sediments by installing a temporary sediment barrier (Portadam™ steel-framed structure and/or silt fencing) during low tide, over the course of several tidal cycles, to minimize the potential for sediment migration from the work area and to prevent fish from entering and becoming entrapped in the work area; (4) dredging approximately 4,350 cubic yards of contaminated sediments from tidal mudflat habitat and backfilling the area with clean import material; (5) installing upland stabilization structures along the length of the site inboard of the

High Tide Line (HTL) following excavation, including a "marine mattress" composed of a rock-filled geogrid container buried beneath the backfill inboard of the HTL, rows of live willow fascines and coir matting above the marine mattress in the transition zone between the HTL and the 100-year flood elevation, and a row of 3-ft by 3-ft gabion baskets buried just below final grade along the upland strip of land parallel to the shoreline; and (6) temporarily stockpiling the dredged and excavated material on the upland portion of the site for dewatering purposes prior to transport to off-site disposal facilities.

The cleanup levels and selected remedial actions approved by the RWQCB staff for the upland area are based on a RAP alternative that would bury residual contaminants under 2 to 10 feet of clean backfill and protect that backfill from erosion using an upland protection structure. Cleanup levels for the sediments in the tidal area are based on a remedial action that would remove all sediments down to 4 feet below sediment surface (bss) offshore of the property and down to 5 feet bss near one sample location. In addition, sediments in three "hot spots" to the west of the property would be removed down to two feet bss. These excavations would be backfilled with coarse-grained material to isolate small amounts of residual pollutants and restore the mudflat. The sandy material will be resistant to erosion and should be covered with fine-grained sediments over time. The cleanup as described in the RAP would remove the vast majority of pollutants left by past practices at this site and isolate the small amounts of residual pollutants from marine resources.

Additional details on various project components are provided below:

Building demolition and debris removal: Prior to initiating the proposed remediation of the upland areas of concern, site preparation would involve in part removal of larger debris on-site and the demolition of the existing ~7,000-square-foot warehouse. The single-story warehouse, built in 1962, consists of corrugated sheet metal supported by steel beam framing and a concrete base with sheet metal and fiberglass roofing. The applicant proposes to conduct a pre-demolition survey for lead-based paint and asbestos-containing materials (ACM). If lead-based paint or ACM needing abatement is discovered, Cal-OSHA and, if applicable, the North Coast Unified Air Quality Management District (Air District), would be notified prior to commencement of any abatement work, and appropriate abatement procedures would be followed. Waste materials generated during the proposed demolition activities would be characterized, handled, segregated, and containerized into appropriate waste streams to consolidate waste materials with similar waste characteristics to facilitate either off-site transport and disposal or recycling/salvage. Anticipated waste materials associated with the proposed demolition work include sheet metal, steel, ACM, concrete, and other construction debris. There also is expected to be larger debris encountered on the site necessitating removal, including engine parts, scrap metal, and other metal debris. Potentially contaminated and hazardous materials (e.g., stained concrete) would be stockpiled separately from those materials designated for recycling (e.g., steel beams). Stockpiles and other construction materials would be covered with heavy-duty plastic or temporary roofs and contained with berms to minimize the potential for stormwater runoff.

Removal of vegetation, debris, and berm: Site preparation also would involve removal of the existing earthen berm along the shoreline, including associated metal, concrete, and ceramic debris embedded within and around it, and removal of trees and shrubs rooted in the berm and other upland portions of the site above the high tide line. This vegetation clearing would involve the removal of various weedy shrubs (e.g., Scotch broom, French broom, Himalayan blackberry) and coyote brush along the fence lines as well as 88 Hooker willow trees covering an approximately 7,000-square-foot area adjacent to the bay shoreline. According to information included in the CDP application, willow trees were counted as individual trees if they were greater than or equal to 4 inches in diameter at breast height (i.e., 4.5 feet above the ground surface). Additionally, multi-trunk willows originating from a single point were identified as multiple trees if the separation occurred below breast height. In addition to the proposed woody vegetation removal, the site would be cleared of grasses, weeds, and other vegetation using a rubber tire tractor equipped with a scraper box. Vegetation debris would be placed in a City roll-off bin and transported by truck for disposal at a local landfill. Other debris would be sorted for appropriate disposal at an acceptable off-site disposal facility.

Upland excavation: Prior to excavation, a designated work area boundary would be established, and soil and sorbent berms would be constructed at the perimeter of excavations to restrict surface runoff. A Caterpillar 330 track-mounted excavator or similar equipment would be used for excavation. Excavated surface soils would be sifted with a series of screens to separate metal debris from the soil. As described above, debris would be segregated and transported for off-site disposal in accordance with applicable regulations. Temporary staging areas would be set up within fenced areas for excavated soil stockpiling. Excavated material would be placed on and covered by plastic sheeting to prevent migration of contaminants, shield the material from elements, and mitigate fugitive dust and stormwater runoff. Separate staging areas would be set up for each anticipated waste classification, as follows:

- Toxic Substances Control Act (TSCA)-regulated materials, including an estimated 200 cubic yards of material with PCB concentrations exceeding the TSCA threshold from three upland areas totaling approximately 6,000 square feet in size to a depth of approximately 1 foot below ground surface (bgs);
- Resource Conservation and Recovery Act (RCRA)-regulated hazardous waste, including an estimated 3,800 cubic yards of material with lead concentrations exceeding the regulatory threshold from three upland areas totaling approximately 52,500 square feet in size to a depth of 1 to 4 feet bgs, and
- California-regulated non-hazardous waste, including an estimated 9,580 cubic yards of material with lead and zinc concentrations exceeding the regulatory threshold from four upland areas totaling approximately 105,600 square feet in size to a depth of 2 to 10 feet bgs.

Based on current estimated waste quantities, it is expected that RCRA-regulated soil would be treated on-site via chemical fixation (using a chemical reagent such as liquid buffered phosphate and water) to reduce constituent concentrations to below threshold limits prior to off-site transportation and disposal (see Section D.3.6 of the RAP, Exhibit 14).

In some areas of the site, excavation would extend to below groundwater, which would necessitate dewatering or the addition of agents such as Portland cement. Excess water potentially also could be used for dust control.

Verification sampling would be conducted to confirm that the upland excavations have achieved the target remediation goals. Upon receipt of acceptable confirmation sampling results, excavations would be backfilled with clean imported soil. The source of imported backfill material, which has yet to be determined, would be identified, sampled, and analyzed for constituents of potential concern prior to on-site use (see below).

Bay dredging: The applicant proposes to dredge contaminated bay sediments in the tidal area of concern (AOC) to a depth of 3 to 5 feet below the sediment surface using a long-reach excavator from shore. Any debris or old piles in the excavation area would be removed (piles would be cut off at the mud-line) and stockpiled for subsequent proper disposal at an appropriate off-site facility. The sediment AOC would be divided into sub-areas that are sized to allow for excavation and backfilling of a complete sub-area within one low-tide period reduce the potential for suspended sediment to mobilize in the water column (see turbidity control measures described below). Dredging and backfilling of each sub-area (or "grid") would occur from east to west. Prior to backfilling of each sub area, design elevations would be confirmed to ensure that areas are restored to pre-construction grades. Verification samples are not proposed to be collected within the tidal area prior to backfilling, since the tidal AOC is believed to have been adequately delineated through characterization sampling in both the horizontal and vertical directions. Small "hotspots" and the area under the public boardwalk/pier would be excavated using a smaller bucket and possibly using smaller equipment such as a bobcat. When working near or beneath the City pier, the pier would need to be closed to the public to ensure public safety. The pier structure would be inspected after work has been completed and reopened once it has been confirmed that there has been no damage to the structure.

Dredged material would be temporarily stockpiled on the upland portion of the property for dewatering purposes. Stabilization agents, such as Portland cement, may be used to help reduce the moisture content if dewatering alone is not able to achieve the required limits for off-site transport and disposal in an acceptable time period. Waste characterization samples would be collected to determine the appropriate disposal method (as described above). Dewatered, stabilized sediment spoils would be loaded into trucks and transported to the appropriate disposal facility. Decant water would be collected in a sump and would undergo primary treatment to reduce the solids content. Treated decant water would be discharged into the City's sanitary sewer system (after necessary local approvals are obtained).

Sediment and Turbidity Control: The applicant proposes two methods to control turbidity and sediment during remediation work below the mean high tide line: a Portadam™ system and silt fences (or curtains). Both sediment/turbidity control measures would be installed and removed in a manner that avoids fish entrapment,

prevents fish from entering excavation areas, and avoids sedimentation of adjacent eelgrass beds and coastal waters.

The Portadam™ system would be installed to control suspended sediment from exiting the excavation area and to prevent fish from entering the excavation area. The Portadam™ structure consists of an impermeable geomembrane liner that is placed over a steel-frame support structure (Exhibits 6-7). The steel frame structure would be installed first, followed by the installation of the geomembrane liner during low tide. The fully installed structure would create a seal between the work area and water area, and any residual water on the front side of the dam would be pumped directly over the dam. Once excavation begins, any water that requires removal from the work area would be pumped to the on-site containment system, treated, and disposed of into the City's sanitary sewer system. An advantage of the Portadam™ device over silt fencing is that in-water work could proceed at any tide level, and night-time work could be avoided.

The silt fence/curtain would be installed at low tide, and excavation and backfill activities of the sub-area would be completed during a single low tide cycle to reduce the potential for suspended sediment to mobilize in the water column and to prevent fish from entering the work area (Exhibits 6-7). Silt fencing would consist of a chain-link fence with metal posts lined with geotextile fabric on the bay side. The fabric would serve as a filter that would keep suspended sediment in the enclosed areas while allowing water to pass through. The silt fence would completely encompass the target sub-area within the AOC and would extend upland, so that water in the excavation area would flow through the fence and not around the ends. Because in-water construction work would occur at low tides only with this turbidity control method, work during night-time low tides may be necessary (in which case illumination of the work area would be required). This turbidity control method would most likely be used in the western portion of the project area around the public pier/ boardwalk.

The applicant proposes to use, as necessary, a combination of the two turbidity control methods, depending on the results of the updated eelgrass survey and bathymetric survey, which are proposed to be conducted prior to commencement of the proposed remediation work. The final sediment and turbidity control design would avoid areas of eelgrass to the maximum extent feasible, even if that means having to stage the excavation between a Portadam™ stage and a follow-up silt fence stage.

Backfill Material: Upon receipt of acceptable confirmation verification sampling results as described above, upland and tidal excavation areas would be backfilled with clean imported fill from a permitted source (e.g., an authorized local quarry) that has yet to be determined. The imported backfill material would be identified, sampled, and analyzed for constituents of potential concern prior to on-site use, per the California Department of Toxic Substances Control's (DTSC) October 2001 Information Advisory on Clean Imported Fill Material. In addition, the backfill source would be approved by the RWQCB prior to use.

Backfill composition is proposed to include coarse-grained soils with a minor amount of fines, since coarser-grained material is easier to compact, minimizes the potential for

sediment runoff and turbidity, is less likely to have contamination issues, and allows water to more readily drain into surrounding soils. In addition, as the subject tidal area is a depositional environment, it is expected that fine grain sediments naturally will deposit there over time. According to the applicant's agent, the average D_{50} (particle size) of the sediment at the site is somewhere on the order of 0.028 mm (D_{50} is defined as the grain diameter at which 50% of the sediment sample is finer than). A proposed grain size distribution graph is included in Exhibit 15.

Transportation of clean fill materials to the site would entail the movement of approximately 1,000 truckloads of soil. Backfill material would be brought on-site in approximately the same timeframe that excavated spoils and demolition debris would be transported off-site. As a result, it is estimated that 35 to 45 trucks per day would enter and exit the site.

Shoreline restoration: Following removal of contaminated sediment from the waterfront area and removal of contaminated soil from the upland area, the shoreline is proposed to be restored using three distinct features: (1) a "marine mattress" composed of a rock-filled geogrid container buried beneath the backfill inboard of the high tide line (HTL), (2) a bioengineered transition area above the marine mattress in the transition zone between the HTL and the 100-year flood elevation using live willow (*Salix hookeriana*) fascines, coir matting, and native grass seeding for erosion protection, and (3) a row of 3-ft by 3-ft gabion baskets buried just below final grade within the upland portion of the property parallel to the shoreline (Exhibits 8-9).

The purpose of the proposed mattress is to provide protection against erosion of the upland areas inland of the HTL. The structure would be covered with soil backfill to provide a natural environment. Within a few years, it is expected that natural colonization of the new slope by herbaceous tidal wetland species such as pickleweed and salt grass would occur just above and below the HTL.

The purpose of the proposed willow fascines is to provide additional protection above the HTL and at least up to the 100-year flood elevation. This transition area between the intertidal zone and the usable portion of the property would also be seeded with native grasses to assist in long term erosion control and to revegetate the transition area. Willow fascines are expected to begin to grow within the first growing season, which would increase surface roughness and instill root mass beneath the soil surface, thereby assisting in shoreline stabilization and erosion control. Planting of the willows also will help reduce visual impacts from removal of the existing willows at the site. It is unclear how long the willows and the soil backfill placed over the marine mattress would remain in place before shoreline erosion eventually erodes these materials away. The marine mattress and gabion baskets are designed to remain in place to protect the upland soils from future erosion which could expose residual contaminants in the upland soils to tidal action.

The purpose of the row of gabion baskets would be to anchor the top of the marine mattress structure and also to serve as a demarcation between the transition area and the

usable portion of the property for redevelopment. The area above the gabion baskets would be seeded with a native grass seed for erosion-control.

Waste disposal: Proposed disposal facilities include the Waste Management Landfill in Arlington, Oregon (for TSCA-regulated materials), the Rogue Disposal and Recycling, Inc., Dry Creek Landfill in White City, Oregon (for non-RCRA [treated] and non-RCRA California-regulated waste), and the Waste Management Landfill in Anderson, California (for non-hazardous waste). It is estimated that 20 to 30 trucks per day could be loaded for disposal and transported from the site for a total of 50 trucking days (approximately 10 weeks).

Environmental Covenant: The applicant proposes to place a land use restriction on the property, in the form of an environmental covenant pursuant to California Water Code Section 13307.1, which would require that in the event that "sensitive uses" (such as residences, hospital, daycare facility, school, etc.) are proposed for the property in the future, an evaluation of the need for additional remedial measures would be conducted. The covenant would be recorded against all deeds and leases of the property and also would include additional conditions, such as a soil management plan and a description of any long-term obligations for operations, monitoring, maintenance, and/or inspection requirements for the property.

Proposed Mitigation Measures & BMPs: The applicant proposes to implement various engineering and control measures and "Best Management Practices" (BMPs) as part of the project. These measures and practices are described in the RAP, the CDP application, and the Mitigation Monitoring and Reporting Program adopted for the project (and see Exhibits 6, 10, 12, and 14).

B. ENVIRONMENTAL SETTING

The subject site, known as the former G & R Metals property, is located on the Humboldt Bay waterfront at 701 First Street in Eureka between G and I Streets (Exhibits 1-2). The approximately 4-acre area is a narrow strip of land on the east side of the bay across from Woodley Island. The property is planned and zoned for "Waterfront Commercial" (CW) uses under the City's certified LCP. Principally permitted uses in the CW zone include docks, piers, and wharfs; boat launching; commercial fishing facilities; recreational boating facilities; public and commercial recreation; hotels and motels; visitor-serving facilities; offices related to or dependent upon coastal-dependent or coastal-related uses; ice vending stations; marine and boat sales, services, and repairs; and coastal dependent and coastal-related uses. The City's General Plan identifies the site as part of a "Core Area" with high potential for economic redevelopment. Current plans for the City's "Waterfront Drive Extension Phase II" roadway improvement and redevelopment include acquiring this property and creating a parking lot and open space/park for the subject site.

For the purpose of the proposed project, the property consists of two distinct geographic areas: an approximately 1-acre tidal area below the high tide line and an approximately 3-acre upland area. The tidal area, which is adjacent to the Eureka Inner Channel of

Humboldt Bay, consists primarily of tidal mudflat habitat along the northern portion of the property. The tidal area is separated from the upland area to the south by a steep earthen berm. This earthen berm is vegetated with Hooker willow (*Salix hookeriana*), Himalayan blackberry (*Rubus discolor*), French broom (*Genista monspessulana*), and various weedy grasses. The biological assessment completed for the proposed project documents approximately 88 trees and shrubs covering an approximately 7,000-square-foot area atop the berm. The Commission's ecologist believes this willow habitat does not constitute environmentally sensitive habitat (ESHA), as the vegetation is completely isolated by industrialized and urbanized development in the surrounding area with little to no native vegetation or open space.

Scattered metal, concrete, and ceramic debris embedded in and seaward of the berm effectively functions as a form of shoreline protection (see photos, Exhibit 17). The upland area of the property landward of the existing protection feature is unpaved and developed with an approximately 7,000-square-foot vacant warehouse building adjacent to First Street and an inactive railroad spur bisecting the property. The single-story structure, built in 1962, consists of corrugated sheet metal supported by steel beam framing and a concrete base with sheet metal and fiberglass roofing. The property is surrounded (except for the bay side) with chain-link fencing.

Other vegetation on the subject site consists of weedy upland plants including Scotch broom (*Cytisus scoparius*), French broom, Himalayan blackberry, jubata grass (*Cortaderia jubata*), fennel (*Foeniculum vulgare*), and various weedy grasses and herbs. Native wetland plants, including pickleweed (*Salicornia virginica*) and saltgrass (*Distichlis spicata*), are restricted to a small strip of intertidal land bayward of the berm.

Existing development surrounding the subject property includes Caito Fisheries (a wholesale seafood dealer) to the immediate east, a multi-family residential building to the southwest, commercial businesses along First Street, a residential/retail development and the Eureka Boardwalk to the west, and Humboldt Bay to the north. Immediately across the channel from the property is the Woodley Island Marina, which is the largest marina on Humboldt Bay.

Humboldt Bay is California's second largest natural bay, and it is the North Coast's only deep-water port. Protected from ocean waves and storms by the Samoa Peninsula (also known as the North Spit) and the South Spit, Humboldt Bay is a sheltered, generally shallow, coastal water body that is open to the ocean yet nearly surrounded by land. Historically, the Port of Humboldt Bay's main purposes were to export forest products and to serve as the home port for a vast commercial fishing fleet. Today, Humboldt Bay continues to serve as a working port, capable of handling ocean-going vessels with domestic or international cargoes. In addition to port-related functions, Humboldt Bay also supports marinas (including the Woodley Island Marina located immediately across the channel from the subject site), boat/ship repair facilities, commercial fishing, mariculture, and various other commercial activities that contribute significantly to the local economies. Sport fishing, waterfowl hunting, and small-craft boating are popular water-dependent recreational activities on the bay. Opportunities for near-shore

recreation such as beachcombing, nature walks, and birding occur at numerous sites all around the bay.

Ecologically, Humboldt Bay contains a diverse biota of at least 300 fish and invertebrate species, many with important commercial and recreational fisheries value, over 100 species of birds (that regularly frequent the various wetland habitats associated with the bay), and over 30 species of mammals (in and around the bay). Annual runs of Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), and steelhead trout (*O. mykiss irideus*) ascend the major bay tributaries, and the bay is an important nursery ground for several commercial species including Pacific herring, lingcod, at least three species of crab, and various other species. Numerous rare, threatened, and endangered species inhabit the bay and its associated habitats, including tidewater goby (*Eucyclogobius newberryi*), the three salmonid species mentioned above, coastal cutthroat trout (*O. clarkii clarkii*), green sturgeon (*Acipenser medirostris*), eulachon (*Thaleichthys pacificus*), long-fin smelt (*Spirinchus thaleichthys*), double-crested cormorant (*Phalacrocorax auritus*), osprey (*Pandion haliaetus*), several rare salt marsh plant species (e.g., Humboldt Bay owl's clover, *Castilleja ambigua* ssp. *humboldtiensis* and Point Reyes' bird's-beak, *Cordylanthus maritimus* ssp. *palustris*), and various other species. Bands (or "beds") of eelgrass (*Zostera marina*), which generally occur in intertidal habitats of the bay near the level of mean low water, are widespread in the bay, particularly in South Bay. Eelgrass beds function as important shelter, foraging, and in some cases spawning habitats for a variety of fish species. The long, green leaves of the aquatic flowering plant also are an important food source for certain sensitive bird species, such as black brant (*Branta bericla*, small migratory geese). Beds of eelgrass are present immediately off-shore from the subject site (Exhibit 11).

Humboldt Bay is currently listed as "impaired" for PCBs and dioxin under Section 303(d) of the federal Clean Water Act (CWA). This status means that the bay does not meet state or federal water quality requirements, and Total Maximum Daily Load (TMDL) waste allocations must be developed pursuant to the CWA and the California Porter Cologne Water Quality Act. TMDLs are not expected to be completed until 2019.

C. OTHER AGENCY APPROVALS

Humboldt Bay Harbor, Recreation, and Conservation District: The Harbor District is a county-wide agency with permit jurisdiction over all tidelands, submerged lands, and other lands granted to the District, including all of Humboldt Bay.

The Harbor District is the lead agency for the proposed project under the California Environmental Quality Act (CEQA) (see Finding IV-M). On November 10, 2011, the Harbor District issued permit no. 11-03 and adopted and certified the CEQA Mitigated Negative Declaration for the proposed project.

North Coast Regional Water Quality Control Board: The RWQCB directed the preparation of the Remedial Action Plan (RAP) for the project site pursuant to Cleanup and Abatement Order #R1-2002-0095 issued to the applicant by the Board in

2002 (explained in more detail in Appendix C). The RWQCB approved the RAP dated January 2011 on March 22, 2011. The RWQCB also approved an August 24, 2011 addendum to the RAP. In addition, the project also requires a General Construction Activity Storm Water Permit from the RWQCB, which is pending. The applicant plans to prepare a Storm Water Pollution and Prevention Plan (SWPPP) to satisfy the requirements of the Storm Water permit.

It is unclear whether or not the proposed project requires a Water Quality Certification from the RWQCB pursuant to Section 401 of the federal Clean Water Act and/or Porter-Cologne Water Quality Control Act authority. To ensure that the project ultimately approved by the RWQCB is the same as the project authorized herein, the Commission attaches **Special Condition 1**, which requires the applicant, prior to issuance of the permit, to demonstrate that all necessary approvals from the RWQCB for the proposed project have been obtained.

U.S. Army Corps of Engineers: The Corps has regulatory authority over the proposed project under Section 10 of the Rivers and Harbors Act (RHA) of 1899 (*33 U.S.C. 1344*) and Section 404 of the Clean Water Act (CWA). Section 10 of the RHA regulates the diking, filling, and placement of structures in navigable waterways. Section 404 of the CWA regulates fill or discharge of materials into waters and ocean waters.

For the subject project, the Corps has stated that the proposed project is eligible for coverage under Nationwide Permit No. 38 (Cleanup of Hazardous and Toxic Waste). A NWP is a general approval of the activity identified in that permit.

Pursuant to Section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA), any applicant for a required federal permit to conduct an activity affecting any land or water use or natural resource in the coastal zone must obtain the Coastal Commission's concurrence in a certification to the permitting agency that the project will be conducted consistent with California's approved coastal management program. The Commission's review of the subject CDP application 1-11-007 serves as Commission review of the project under the CZMA.

To ensure that the project ultimately approved by the Corps is the same as the project authorized herein, the Commission attaches **Special Condition 2**, which requires the applicant, prior to commencement of development, to demonstrate that all necessary approvals from the Corps for the proposed project have been obtained.

North Coast Unified Air Quality Management District: In this region, the Air District is the federally designated state agency with the authority to enforce the federal National Emission Standards for Hazardous Air Pollutants (NESHAPS) regulations for asbestos relating to renovation and demolition projects. To ensure that the project ultimately approved by the District is the same as the project authorized herein, the Commission attaches **Special Condition 3**, which requires the applicant, prior to commencement of development, to demonstrate that all necessary approvals from the Air District for the proposed project have been obtained.

D. STANDARD OF REVIEW

The proposed project area is bisected by the boundary between the retained CDP jurisdiction of the Commission and the CDP jurisdiction delegated to the City of Eureka by the Commission through the City's certified local coastal program (LCP). The portion of the project area within the Commission's retained jurisdiction includes approximately one acre of tidal mudflat habitat in Humboldt Bay up to the mean high tide line on the property. The remainder of the project area, including the approximately 3-acre upland area above the mean high tide line, is within the CDP jurisdiction of the City of Eureka.

Section 30601.3 of the Coastal Act authorizes the Commission to process a consolidated coastal development permit application when requested by the local government and the applicant and approved by the Executive Director for projects that would otherwise require coastal development permits from both the Commission and from a local government with a certified LCP. In this case, the Eureka City Council adopted a resolution, and both the applicant and the City submitted letters in August of 2011 requesting consolidated processing of the coastal development permit application for the subject project by the Commission. The Executive Director agreed to the consolidated permit processing request.

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

E. UPLAND PROTECTION STRUCTURE

Coastal Act Section 30235 requires that seawalls, revetments, cliff retaining walls, groins and other such structures be approved under certain circumstances. Such devices are required to be approved only when the devices (1) are necessary to serve coastal-dependent uses or to protect existing structures or public beaches, and (2) designed to eliminate or mitigate adverse impacts on shoreline sand supply. The Coastal Act does not require the Commission to approve shoreline altering devices to protect vacant land. Although the Commission is not required to approve the proposed upland protection structure pursuant to the mandates of Coastal Act Section 30235, as discussed further in other findings below, the Commission finds that the proposed upland protection structure, as conditioned, is consistent with all applicable Coastal Act policies. Therefore, the Commission approves the proposed upland structure, as conditioned, even though it is not required to approve the proposed upland structure pursuant to the mandates of Coastal Act Section 30235.

F. DIKING, DREDGING, AND FILLING IN COASTAL WATERS AND PROTECTION OF THE MARINE ENVIRONMENT

Section 30230 of the Coastal Act states as follows:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic*

significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes. [Emphasis added.]

Section 30231 of the Coastal Act states as follows:

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

Section 30232 of the Coastal Act states as follows:

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

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

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

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

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

(6) Restoration purposes.

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

…

> *(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.]
>
> …

Section 30121 of the Coastal Act defines "wetland" in relevant part as follows:

> *"…lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.*

Section 13577(b) of the Commission's regulations further defines "wetlands" in relevant part as follows:

> *"…land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate..."*

The project involves both dredging and backfilling below the high tide line of Humboldt Bay for the purpose of removing contaminated sediments as proposed in the RWQCB-approved RAP. As described in the Project Description Finding, no portion of the proposed upland protection structure will occur within tidal habitat or other areas that qualify as wetlands under the Coastal Act.

Approximately 4,350 cubic yards of contaminated sediments will be dredged from the bay mudflat portion of the property, and clean backfill material will be placed within the remediation site to restore the intertidal habitat to pre-project elevations. To enable the dredging and filling work to be accomplished in a way that minimizes turbidity and protects sensitive species and habitats, temporary turbidity control devices (a Portadam™ system and silt fences), which represent a form of fill, will be placed below the high tide line of the bay during the course of the remediation work.

The above-cited policies set forth a number of different limitations on what development projects may be allowed in coastal waters. For analysis purposes, the limitations can be grouped into four general categories or tests:

(1) The purpose of the diking, dredging, or filling must be for one of the seven uses allowed under Section 30233;

(2) The project must have no feasible less environmentally damaging alternative;

(3) Feasible mitigation measures must be provided to minimize adverse environmental effects; and

(4) The biological productivity and functional capacity of the habitat must be maintained and enhanced and where feasible restored.

Each of these "tests" is discussed below.

(1) IS THE PROPOSED DIKING, DREDGING, AND FILLING FOR AN ALLOWABLE USE?

The dredging and backfilling below the mean high tide line of Humboldt Bay for the purpose of removing contaminated sediments, improving water quality, and remediating tidal mudflat habitat can be considered to be for "restoration purposes" consistent with 30233(a)(6).

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."[1] 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."[2] Implicit in all of these varying definitions and distinctions is the understanding that the restoration entails returning something to a prior state.

As described above, the proposed project involves dredging and backfilling below the high tide line of Humboldt Bay for the purpose of removing contaminated sediments as proposed in the RWQCB-approved RAP. Approximately 4,350 cubic yards of contaminated sediments will be dredged from tidal mudflat areas, and clean backfill material will be placed within the remediation site to restore the intertidal habitat to pre-project elevations. As noted above, temporary turbidity control devices will also be placed below the high tide line of the bay and constitute a form of fill.

The purpose of the proposed remediation work is to comply with the terms and directives of a Cleanup and Abatement Order issued to the applicant by the RWQCB in 2002, which in part directs the clean-up of contaminants documented at elevated levels in the tidal portion of the property (e.g., copper, lead, mercury, zinc, and PCBs). As discussed in more detail in Appendix C, the project area's history includes over a century of industrial use during a time when there were no mandated environmental protections from hazardous materials. Discharges from the upland portion of the property to the bay from lack of or improper containment measures during historic metal salvage operations resulted in contamination of bay sediments. The final RAP, approved by the RWQCB in March 2011, proposes in part a remedy for the bay portion of the property "…that will reduce long-term risks to acceptable levels and protect human and ecological receptors under the anticipated recreational and aquatic habitat land use scenario." Upon removal of the contaminants and completion of the remedial action within the tidal portion of the property, the biological productivity and quality of coastal waters will be enhanced both for marine organisms and for the protection of human health, consistent with the requirements of Coastal Act Sections 30230 and 30231. The proposed remediation of tidal mudflat habitat is for a restoration purpose consistent with the requirements of Section 30233 because it entails a re-establishment of habitat conditions that were present

[1] Merriam-Webster's Collegiate Dictionary, Tenth Edition
[2] "Definitions," *Society of Ecological Restoration News*, Society for Ecological Restoration; Fall, 1994

prior to contamination of the habitat from historic industrial land uses on the upland portion of the site.

This finding that the proposed project constitutes "restoration purposes" is based in part on the assumption that the proposed project will be successful in restoring various historic habitats and processes as proposed and increasing habitat values. As such, there must be assurance that the proposed project will be successful in increasing and enhancing habitat values. Otherwise, should the project be unsuccessful at increasing and/or enhancing habitat values, or worse, if the proposed impacts of the project actually result in long term degradation of the habitat, the proposed activities could not be found to be for "restoration purposes."

As previously discussed, clean imported backfill material is proposed to be placed within the tidal remediation area following removal of the contaminated sediments. The applicant has proposed to identify, sample, and analyze the imported backfill for constituents of potential concern prior to on-site use, and to obtain the RWQCB's approval of the material prior to use on-site. The applicant has proposed to use sandy material ($d_{90} \leq 4$ mm, $d_{10} \geq 0.2$ mm and d_{50} such that 1 mm $\geq d_{50} \geq 0.7$ mm, where d_X is the grain diameter at which X% of the sediment by weight is finer), which is coarser than the native mudflat substrate but more appropriate for backfill use in this environment, because coarser material (1) is less likely to harbor contaminants than finer material (therefore it is cleaner); and (2) has greater compaction capability and therefore less potential to become re-suspended and increase turbidity in surrounding coastal waters.

To ensure that the area bayward of the high tide line is fully restored to functional tidal habitat and that the project does not result in the permanent reduction in benthic fauna in the project area, the Commission attaches **Special Condition 4.** This condition requires the applicant to submit a final restoration monitoring plan for monitoring the tidal remediation site following completion of the authorized work. The plan is required to include performance standards for achieving the marine restoration goals of (a) providing a benthic habitat in the tidal remediation area that supports an infaunal community similar in composition and extent to the infaunal community that was present prior to remediation, and (b) providing a marine bottom substrate that is similar in contour to that present before the authorized remediation work and that is not subject to unusual erosion. The plan must include provisions for monitoring infaunal biomass and particle size distribution within the upper 15 cm of bottom sediments as well as elevational changes of the bottom substrate. Furthermore, Special Condition 4 requires the monitoring plan to include provisions for remediation to ensure that the goals and objectives of the restoration project are met.

Therefore, the Commission finds that the proposed diking, dredging, and filling activities associated with the remediation of tidal habitats necessary to maintain healthy populations of marine organisms is allowable under Section 30233(a)(6), is mandated by the requirements of Sections 30230 and 30231, and, as conditioned, will ensure the successful restoration of the biological productivity and quality of coastal waters for marine organisms, consistent with Sections 30230 and 30231 of the Coastal Act.

(2) IS THERE A FEASIBLE LESS ENVIRONMENTALLY DAMAGING ALTERNATIVE?

The second test set forth by the Commission's fill and dredge policies is that the proposed filling or dredging project must have no feasible less environmentally damaging alternative. In this case, the Commission has considered alternatives and determines that there are no feasible less environmentally damaging alternatives to the proposed diking, dredging, and filling of tidal mudflat area as conditioned. Alternatives that have been identified include: (a) the monitored natural recovery alternative (similar to the "no project" alternative), (b) the elimination of the Portadam™ alternative for turbidity control, and (c) the alternative of cleaning up the area to higher standards than proposed.

a. ALTERNATIVE 1: MONITORED NATURAL RECOVERY

As explained in the RAP, this alternative would rely on natural processes to reduce the toxicity of sediments through natural chemical, physical, and biological processes. Therefore no dredging or filling activities in bay waters would be required. The alternative is similar to the "no project" alternative, except that monitoring would occur over time to confirm that risks to human and ecological receptors are being adequately reduced by natural processes.

Under this alternative, sediments in general would "naturally recover" due to the transformation or loss of chemical constituents and the deposition of additional (clean) sediments. Natural containment and attenuation of contaminant concentrations by natural sedimentation would reduce exposure to human and ecological receptors. The natural recovery process could take several years or even decades. For this alternative to be effective, the environment must be depositional with low erosive forces, where the natural sedimentation process gradually buries contaminants, and where contaminant characteristics include a high likelihood of transformation and attenuation over time.

While the subject site within an estuary environment is depositional in nature, erosive forces in the area are not considered low. The applicant modeled hydrodynamic forces in the bay, describing near-bed shear stresses and depth-average velocities under a variety of tide and wind conditions. The results of the analysis demonstrate the potential for moderate to high erosive forces in the area (up to 1.9 meters/year), where currents, tides, and storm events would have the potential to re-expose contaminated sediments. Thus, the environment at the subject site is not appropriate for the monitored natural recovery alternative to be effective. In addition, this alternative would not protect water quality, human health, or the marine environment if natural erosive and/or future actions along the shoreline or in the water (e.g., dredging or installing a bulkhead) would re-expose contaminated sediment. Furthermore, this alternative is not effective at protecting water quality, human health, or marine resources in the short term from the risks associated with exposure to the contaminated sediments, as it involves leaving the contaminated sediment in situ where it would continue to impact water quality.

Therefore, this alternative is not a feasible less environmentally damaging alternative to the proposed project as conditioned.

b. ALTERNATIVE 2: USE OF THE SILT FENCE METHOD ONLY FOR TURBIDITY CONTROL (ELIMINATION OF THE PORTADAM™ ALTERNATIVE)

As described in the Project Description Finding above, the applicant proposes two methods to control turbidity and sediment release into surrounding coastal waters during remediation work below the high tide line, including the temporary installation of a Portadam™ system and silt fences/curtains. Both sediment/turbidity control measures are proposed to be installed and removed in a manner that avoids fish entrapment, prevents fish from entering excavation areas, and avoids sedimentation of adjacent eelgrass beds and coastal waters. However, the Portadam™ alternative will result in a greater amount of temporary fill than the silt fence alternative (Exhibit 6). The applicant proposes to use, as necessary, a combination of the two turbidity control methods, depending on the results of the updated eelgrass survey and bathymetric survey, which are proposed to be conducted prior to commencement of the proposed remediation work. The final sediment and turbidity control design will avoid areas of eelgrass to the maximum extent feasible, even if that means having to stage the excavation between a Portadam™ stage and follow-up silt fence stage.

Elimination of the Portadam™ alternative entirely and use of strictly silt fencing to control turbidity during the course of the dredging and backfilling work in the tidal mudflat area would result in significantly less temporary fill placed in the tidal mudflat habitat, because there would be no need to install a steel-frame support structure, as the Portadam™ system requires, which will cover an approximately 5,600-square-foot area. In addition, the use of silt fencing only would avoid filling the area covered by the Portadam™ impermeable liner. However, use of silt fencing, unlike the Portadam™ system, would not allow for creation of a complete seal between the work area and adjacent bay habitats. Thus, work would be restricted to periods of low tide only. This timing limitation would necessitate construction during night-time low tides, which would require extensive lighting systems to illuminate the work area. Such unnatural excessive artificial lighting would be a significant disturbance to natural conditions that could negatively impact the activity patterns, breeding, and/or predatory/prey interactions of intertidal organisms such as shorebirds, fish, and invertebrates. In addition, use of the silt fencing option alone for turbidity control would allow for fish increased entrapment due to the need to repeatedly remove and secure the device anew with each low tide cycle. Furthermore, the silt fencing alternative alone would not be as effective in protecting water quality from turbidity impacts associated with the proposed in-water construction work, because, as stated above, this alternative would not allow for creation of a complete seal between the work area and adjacent bay habitats.

Therefore, for the reasons discussed above, this alternative is not a feasible less environmentally damaging alternative to the proposed project as conditioned.

c. ALTERNATIVE 3: CLEANING UP THE AREA TO HIGHER STANDARDS THAN PROPOSED

Another alternative to the proposed project is the alternative of remediating the tidal mudflat area to an even higher standard than proposed so that no amount of residual

pollutants remains. As proposed, the remediation of the tidal mudflat area involves remediating the site to levels acceptable to protect human and ecological receptors under the recreational and aquatic habitat land use scenarios. This proposed cleanup level will remove the vast majority of pollutants, though small amounts of residual pollutants will remain. The residual pollutants will be isolated from marine resources by a layer of clean backfill. While the residual contaminated sediments would have very low levels of toxicity if exposed at the surface, the risk of toxicity will be greatly reduced by covering the sediments with 4 to 5 feet of clean backfill. The alternative of remediating the tidal mudflat area to an even higher standard could eliminate the need for some of the backfill proposed to be placed over the excavated tideland areas to isolate marine resources from residual pollutants left in bay sediments.

Although it is technically possible to continue dredging and removal of all impacted sediments in the tidal mudflat area, the efforts necessary to accomplish this higher cleanup goal would cause significant impacts. First, sheet piles would need to be driven into the intertidal or subtidal sediments, which would require pile driving. Pile-driving generates hydroacoustic pressure impulses and particle velocities that can cause effects on fish ranging from altered behavior, hearing loss, and tissue injuries to immediate mortality. In addition, a much longer in-water construction period would be required, probably necessitating multiple construction years (since the in-water construction window is limited to the period between July 1 and October 15 to protect sensitive fish and other aquatic organisms). Increased construction time in and adjacent to the bay increases the time that heavy equipment would be required along the shoreline, thereby increasing the potential for (1) construction-related pollutants to be carried by accidental spills or stormwater runoff into the bay; (2) turbidity increases in surrounding bay waters associated with remediation work in tidal mudflat areas; and (3) water quality impacts associated with waste material stockpiling and backfill material placement in tidal mudflat and upland areas. Therefore, for the various reasons discussed above, the Commission finds that this alternative is not a feasible less environmentally damaging alternative to the proposed project as conditioned.

Conclusion:

Based on the above alternatives analysis, the Commission concludes that there are no feasible less environmentally damaging alternatives to the proposed project as conditioned.

(3) FEASIBLE MITIGATION MEASURES TO MINIMIZE ADVERSE ENVIRONMENTAL EFFECTS

The third test set forth by the above-cited policies is whether feasible mitigation measures have been provided to minimize adverse environmental effects. The proposed remediation project could have potential adverse impacts to: (a) the water quality and marine habitats of the bay from in-water construction-related activities and from the accidental release of hazardous materials into surrounding coastal waters; (b) eelgrass habitat within and around the project area; and (c) sensitive fish and other marine species.

The potential adverse impacts and their mitigations are discussed in the following sections.

a. MITIGATION MEASURES TO PROTECT WATER QUALITY

If the contaminated sediments on the property are not cleaned up as proposed, the risks to marine organisms and human health associated with the elevated levels of PCBs, PAHs, lead, zinc, various other metals, and other constituents of interest on the site would remain unacceptably high. The Commission's water quality program supervisor, Dr. Jack Gregg, has reviewed the RWQCB-approved RAP and the proposed project plans and generally agrees with their conclusions and recommendations.

Although the proposed project will improve water quality and help protect biological productivity and marine resources when completed, implementation of the proposed remediation project could have short-term impacts on water quality, biological productivity, and marine resources. The project requires the use of heavy equipment in and around coastal waters, and as such, the project has the potential to impact marine resources and water quality through, for example, an accidental spill of hazardous fluids such as fuels, concrete, etc. In addition, dredging and backfilling remediation work in the tidal mudflat could lead to sediment migration and turbidity increases in surrounding coastal wasters. Furthermore, the entrainment of sediment into the bay via stormwater runoff from proposed demolition and remediation activities on the upland portion of the site also could impact water quality. Moreover, hydraulic line breaks and leaks are common in construction equipment, resulting in spills of hydraulic fluid into the environment. The petroleum-based hydraulic fluids (mineral oils) that typically are used have a low biodegradation rate, a high potential for bioaccumulation, and a measurable toxicity to marine organisms. In contrast, biologically-based hydraulic fluids (derived from vegetable oils or synthetic esters) have reduced environmental impacts because they degrade faster, have a smaller residual, do not bioaccumulate appreciably, and have a lower toxicity to marine organisms. Hydraulic fluids based on polyalkylene glycols (PAG), which are synthesized from petroleum, are also generally biodegradable and do not bioaccumulate; however, some PAGs may be more toxic due to their solubility in water. Therefore, biologically-based hydraulic fluids (derived from vegetable oils or synthetic esters) are the environmentally preferable alternative for use in construction equipment used in or near intertidal areas and waterways.

To guard against the construction-related water quality impacts discussed above, the applicant proposes the use of a number of best management practices and control measures (see Exhibits 6, 10, 12, and 14). To ensure that the BMPs and control measures necessary to protect water quality are fully implemented with the project, the Commission attaches Special Conditions 5-8. **Special Condition 5** requires adherence to various construction responsibilities during project implementation to protect water quality. **Special Condition 6** restricts the timing of construction to the non-rainy season. **Special Condition 7** requires submittal of a final sediment and turbidity control plan that in part provides for the assurance that temporary sediment and turbidity control barriers will be installed and removed in a manner that avoids sedimentation of adjacent eelgrass beds and coastal waters. **Special Condition 8** requires submittal of a final Storm Water

Pollution Prevention Plan (SWPPP) for the proposed project that includes provisions for ensuring that BMPs are used to prevent the entry of polluted stormwater runoff into coastal waters during and post-construction.

The water quality of coastal waters also could be adversely affected by the discharge or release of stockpiled dredged/excavated contaminated spoils, demolition debris, and other construction-related debris and waste, if proper protocols are not followed. As described in the Project Description Finding above, anticipated waste materials associated with the proposed warehouse demolition include sheet metal, steel, asbestos-containing material, concrete, and other construction debris. Larger debris also is expected to be encountered on the site necessitating removal, including engine parts, scrap metal, and other metal debris. The applicant proposes to stockpile potentially contaminated and hazardous materials (e.g., stained concrete) separately from those materials designated for recycling (e.g., steel beams). Excavated surface soils will be sifted with a series of screens to separate metal debris from the soil. Debris will be segregated and transported for off-site disposal in accordance with applicable regulations. Proposed disposal facilities include the Waste Management Landfill in Arlington, Oregon (for TSCA-regulated materials), the Rogue Disposal and Recycling, Inc., Dry Creek Landfill in White City, Oregon (for non-RCRA [treated] and non-RCRA California-regulated waste), and the Waste Management Landfill in Anderson, California (for non-hazardous waste). It is estimated that 20 to 30 trucks per day could be loaded for disposal and transported from the site for a total of 50 trucking days (approximately 10 weeks). Temporary staging areas will be set up within fenced areas for excavated soil stockpiling. Excavated material will be placed on and covered by plastic sheeting to prevent migration of contaminants, shield the material from elements, and mitigate fugitive dust and stormwater runoff. Separate staging areas will be set up for each anticipated waste classification (TSCA-regulated materials, RCRA-regulated hazardous waste, and California-regulated non-hazardous waste). RCRA-regulated soil will be treated on-site via chemical fixation to reduce constituent concentrations to below threshold limits prior to off-site transportation and disposal. Stabilization agents, such as Portland cement, may be used to help reduce the moisture content of dredged/excavated spoils if dewatering alone is not able to achieve the required limits for off-site transport and disposal in an acceptable time period.

To guard against potential water quality impacts associated with waste material stockpiling, the Commission attaches **Special Condition 5(I)**, which requires that all stockpiles of construction debris, waste materials, excavated soils and sediments, and other materials and debris associated with or generated by the authorized work be underlain by and covered with heavy-duty plastic sheeting or temporary roofs as appropriate and contained with berms or other sediment and runoff control devices at all times to minimize the potential for migration of contaminants and sediment-entrained stormwater runoff. In addition, **Special Condition 5(T)** requires that soil and sediment stockpile areas, including hazardous waste and debris and concrete storage areas, be located a minimum of 50 feet from the high tide line. Furthermore, **Special Condition 5(Q)** requires that any and all construction and demolition debris and excavated spoils resulting from construction/remediation activities be removed from the work site on a regular basis and disposed of at appropriate licensed facilities as proposed in the final RAP and RAP addendum.

Another potential impact to coastal water quality relates to the proposed placement of backfill material within the remediation area following removal of the contaminated sediments and soils. Upon receipt of acceptable confirmation verification sampling results, as described above in the Project Description Finding, upland and tidal mudflat excavation areas will be backfilled with clean imported fill from a permitted source (e.g., an authorized local quarry) that has yet to be determined. The imported backfill material is proposed to be identified, sampled, and analyzed for constituents of potential concern prior to on-site use, per the DTSC October 2001 Information Advisory on Clean Imported Fill Material. In addition, the backfill source is proposed to be approved by the RWQCB prior to use.

To ensure that the backfill material placed in the bay mudflat is appropriate in grain size and free of contaminants, the Commission attaches **Special Condition 9**. This condition requires submittal of a final Backfill Material Plan prior to permit issuance for the Executive Director's review and approval. The plan must include provisions for all of the following: (a) identification, sampling, and analysis of the imported backfill material for constituents of potential concern prior to on-site use, per the California Department of Toxic Substances Control October 2001 Information Advisory on Clean Imported Fill Material; (b) approval of the imported backfill material by the RWQCB prior to on-site use; and (c) the imported backfill material for use seaward of the proposed gabion structure must be clean fill, screened to remove all trash, debris, organics, and any materials greater than or equal to 10 mm diameter. In addition, the final SWPPP required by **Special Condition 8** is required to include provisions for preventing backfill material placed in the upland area from entraining in stormwater runoff. Furthermore, the applicant has proposed to seed backfilled areas above the mean high tide line with native grasses to assist in erosion-control and to revegetate the area. As specified in the hydroseeding specification included as Attachment 2 to the RAP Implementation Plan, tufted hairgrass (*Deschampsia caespitosa*), molate fescue (*Festuca rubra*), meadow barley (*Hordeum brachyantherum*), and three weeks fescue (*Vulpia microstachys*) will be seeded across the site following construction. To ensure that the applicant undertakes seeding using native species as proposed, **Special Condition 10** requires submittal of a revegetation plan subject to certain revegetation standards, including in part (a) only native plant species shall be used on the property, including in erosion-control seed mixes, and (b) all erosion-control seeding shall be applied within 30 days after the close of the construction.

Finally, as the applicant's proposed upland protection structure (marine mattress and gabion baskets placed in uplands along the length of the shoreline inboard of the high tide line) is proposed as a means to inhibit erosion of residual contaminated soils that are proposed to remain in the upland portion of the property, the Commission must ensure that the proposed structure is maintained over the long term. As discussed above, the proposed remedial action for the upland area aims to protect human health and the environment by excavating up to 10 feet below the ground surface in some areas with most of the site excavated two to four feet below ground surface. This excavation will produce 14,000 cubic yards (CY) of contaminated soil that will need to be hauled to licensed land fills. Some residual contaminants will remain buried under 2 to 10 feet of

clean backfill, and that backfill will be protected from erosion using an upland protection structure. The applicant states that it is infeasible to cleanup the upland portion of the property to a higher standard (e.g., to the standard necessary to protect marine aquatic life) for various reasons (see Exhibit 16). First, an additional 24,000 CY of contaminated soil would need to be excavated and transported for disposal, and as most of the excavation would be at least 5 feet below groundwater level, the work would continuously be hindered by groundwater flow. The groundwater would be contaminated by soils at the site, and the flow rate of contaminated groundwater would require much higher volumes of water treatment. In addition, the number of trucks trips needed to haul material off site for disposal and to haul clean backfill material onto the site would increase by the thousands, thereby increasing truck emissions output, traffic impacts, and interference with public access to the waterfront area.

The Commission's water quality program supervisor, Jack Gregg, agrees with the applicant's feasibility evaluation. Dr. Gregg believes that the proposed levels of clean-up for both the upland and tidal portions of the site are appropriate, since they are based on efforts over the last decade by the RWQCB to oversee site investigations and identify actions necessary to protect the beneficial uses of State waters. Those site investigations included multiple rounds of sediment and soil sampling as well as toxicity testing. The iterative site investigation process allowed for ongoing refinement of the information needs and better delineation of contaminated sediments and soils. Risk assessments were completed for both ecologic and human health impacts based on the results of the site investigations, the future uses of the site, and the likely exposure pathways. The final remedial actions proposed were based on evaluation criteria recommended by the California Department of Toxic Substances Control and include overall protection of human health and the environment, short- and long-term effectiveness, and compliance with applicable state, federal and local environmental laws and regulations. Dr. Gregg believes that while it may be technically possible to clean up the upland soil to aquatic life standards, that extra level of effort is not required to sustain the biological productivity of coastal waters and maintain healthy populations of all species of marine organisms as long as the proposed remedial action is completed as designed and adequately maintained.

Thus, to ensure the proposed upland protection structure is adequately installed and maintained over the long term to protect coastal water quality, the Commission attaches Special Conditions 11-13. **Special Condition 11** requires submittal of final plans for the upland protection structure that substantially conform with the conceptual and typical plans proposed in Exhibit 9. **Special Condition 12** requires the permittee to maintain the upland protection structure in its approved state and apply for a coastal development permit amendment for all non-exempt repair and maintenance activities necessary to maintain the structure in its approved state. **Special Condition 13** requires submittal of an upland protection structure monitoring program prepared by a licensed civil engineer or geotechnical engineer and ecologist to monitor the performance of the upland protection structure, including the authorized marine mattress and gabion baskets. The monitoring program must include provisions for an annual evaluation of the condition and performance of the structure and identification of any changes to the area that could require some type of repair, maintenance, or supplemental work.

With the implementation of the above plans and BMPs during and after construction, the project as conditioned will minimize the potential for (1) construction-related pollutants to be carried by accidental spills or stormwater runoff into the bay; (2) turbidity increases in surrounding bay waters associated with remediation work in tidal mudflat areas; and (3) water quality impacts associated with waste material stockpiling and backfill material placement in tidal mudflat and upland areas; and (4) residual contaminants in the upland area to erode into the bay. thereby protecting the water quality and biological productivity of these areas. Furthermore, the special conditions discussed above will minimize adverse impacts to water quality while not conflicting with any determinations by the State Water Resources Control Board or any California Regional Water Quality Control Board in matters relating to water quality as required by Section 30412 of the Coastal Act.

Therefore, the Commission finds that the proposed remediation project, as conditioned, (a) will restore the biological productivity and quality of coastal waters to maintain optimum populations of marine organisms, and (b) provides feasible mitigation measures to minimize potential water quality impacts, as required by Sections 30230, 30231, and 30233(a) of the Coastal Act.

b. MITIGATION MEASURES TO PROTECT EELGRASS HABITAT

The proposed project could have direct and indirect impacts on eelgrass habitat within on-site tidal wetlands and adjacent to the project site. Eelgrass plants within the remediation area could be directly impacted by dredging and backfilling activities and by the installation and removal of temporary sediment and turbidity control devices. Eelgrass plants adjacent to the remediation area could be adversely affected by sedimentation and increased turbidity associated with the proposed remediation work.

An eelgrass survey was completed for the proposed project in 2008 by WRA Environmental Consultants (Exhibit 11). The survey documented one ~7,555 square-foot eelgrass bed, ~857 square feet of eelgrass patches, and five eelgrass individuals within the study area (which included the project area footprint plus the surrounding area). The eelgrass bed was growing at approximately -1 foot Mean Lower Low Water (MLLW) approximately 40 feet from the shoreline. The eelgrass patches, which were defined as areas of eelgrass smaller than 0.01-acre (~436 square feet) in size, and individual eelgrass shoots were scattered closer to the shoreline than the eelgrass bed.

The eelgrass bed and the majority of the eelgrass patches and individuals documented in the 2008 survey were located outside of the tidal mudflat remediation area proposed for dredging and backfilling under this CDP application. However, at least one eelgrass individual and one eelgrass patch were mapped within the proposed remediation area.

To address potential eelgrass impacts associated with the proposed remediation project, the applicant submitted an eelgrass monitoring plan (Exhibit 12), which generally describes the pre- and post-construction monitoring and contingency mitigation plan for eelgrass in the event that eelgrass is impacted by the proposed project. Specifically, the plan proposes to conduct a pre-construction eelgrass survey (within 30 days of the start of

construction during a low tide and during the active eelgrass growing season, which generally is May through August) and post-construction eelgrass survey (within 30 days of project completion, if possible, though the survey must be conducted during the growing season) to document conditions of the eelgrass bed prior to and following construction. The plan proposes to mitigate, at a 1.2-to-1 ratio (eelgrass habitat area created to eelgrass habitat area impacted), for impacts to the eelgrass bed itself or to eelgrass patches that total more than 5 square meters (~53.8 square feet) in size. The plan does not propose any mitigation for impacts to eelgrass patches and individual shoots that total less than 5 square meters in size. The mitigation area would be outside of the project area footprint, since that area is believed to be of only marginal habitat quality for eelgrass growth (based on elevation and tidal conditions). Proposed methods to mitigate for eelgrass impacts greater than 5 square meters in size may include seed buoys, transplantation, or both. The applicant also proposed some changes to its original plan in a January 18, 2012 e-mail from Arcadis, including in part a proposal to provide out-of-kind mitigation for impacts to eelgrass patches that total less than 5 square meters in size. The proposed out-of-kind mitigation would involve planting Hooker willow along the length of the restored shoreline area.

The Commission's staff ecologist, Dr. John Dixon, reviewed the proposed plan, as revised by the January 18, 2012 e-mail from Arcadis, and recommends that the proposed plan be further revised to the extent necessary to bring the standards, protocols, and other specifications for eelgrass surveys, mitigation, and monitoring in complete conformance with the December 7, 2011 NOAA-Fisheries Draft California Eelgrass Mitigation Policy. The draft policy was published in the Federal Register on March 9, 2012, and contains minimum requirements the Commission considers necessary for the protection of eelgrass habitat within on-site tidal wetlands. Since its publication, the Commission has required adherence to the draft policy for CDP applications on the North Coast with potential eelgrass impacts (e.g., CDP Nos. 1-12-004 and 1-10-035-A).

Therefore, **Special Condition No. 14** requires the applicant to submit a final revised eelgrass mitigation and monitoring plan for the Executive Director's review and approval prior to permit issuance. The final plan must include provisions for, in part, the following: (1) a pre-construction eelgrass survey to be completed during the months of May through August in compliance with survey recommendations in Appendix B, "Recommendations Concerning Surveys for Assessing Impacts to Eelgrass," of the Draft California Eelgrass Mitigation Policy prepared by the National Marine Fisheries Service (NMFS), Southwest Region dated December 7, 2011 (published in the Federal Register March 9, 2012); (2) a post-construction eelgrass survey to be completed within the first 30 days of completion of construction, or within the first 30 days of the next active growth period following completion of construction that occurs outside of the active growth period; (3) if post-construction survey results indicate any decrease in eelgrass density or cover in eelgrass beds or patches within and adjacent to the remediation areas, then an eelgrass mitigation and monitoring plan is to be prepared and submitted for the review and approval of the Executive Director; (4) the mitigation methods, the location of the mitigation sites, and the monitoring plan are to be in compliance with the recommendations in Appendix D, "Recommended Measures for Eelgrass Impact Mitigation," of the Draft California Eelgrass Mitigation Policy prepared by NMFS,

Southwest Region dated December 7, 2011, including, in part, (a) an initial transplant area to impact area ratio of 4.82 to 1; and (b) within three years of completion of transplanting, the eelgrass mitigation site must have a minimum of 40% of the coverage of eelgrass and 20% of the density of the reference site over an area not less than 1.2 times the area of impact; (5) a detailed monitoring schedule; and (6) if the impacted eelgrass areas have not met the recovery standard in five years, the permittee shall submit an application for an amendment to CDP 1-11-007 proposing additional mitigation to ensure all performance criteria are satisfied consistent with all terms and conditions of this permit.

In addition, as previously discussed, **Special Condition 7** requires that temporary sediment and turbidity control barriers be installed and removed in a manner that avoids direct impacts to eelgrass as well as sedimentation of adjacent eelgrass beds, and the various water quality protection measures required by **Special Conditions 5-10 (**discussed above) also will serve to protect eelgrass habitat.

Therefore, the Commission finds that as conditioned, the project provides feasible mitigation measures to minimize the project's potential impacts on eelgrass habitat, as required by Sections 30230, 30231, and 30233(a) of the Coastal Act.

c. MITIGATION MEASURES TO PROTECT SENSITIVE FISH SPECIES

The proposed remediation site within Humboldt Bay is located on the east side of the Eureka Inner Channel in an area that may be used by various sensitive fish species for migrating, rearing, foraging, and/or spawning, including several species of juvenile and adult salmonids, green sturgeon, eulachon, long-fin smelt, and various other species. Both NOAA-Fisheries and DFG staff commented on the proposed project to address the project's potential impacts on sensitive fish and other marine resources of the bay.

NOAA-Fisheries wrote an informal consultation letter pursuant to the federal Endangered Species Act dated January 17, 2012 to address the project's potential impacts to federally listed fish species and essential fish habitat (EFH) (Exhibit 13). The NOAA-Fisheries letter states that since the proposed dredging and filling associated with the proposed remediation project will occur at low tides when mudflat areas are exposed, because the work is proposed to occur within the confines of a sediment barrier, and because fill material will not be placed directly in coastal waters outside of the sediment barriers, sensitive fish will not be directly exposed to the proposed dredging and backfilling activities within the sediment barrier area. The letter further states that any indirect impacts to sensitive fish in the area, such as increases in turbidity associated with work in the bay or reduction in prey (benthic fauna) related to dredging and backfilling, are expected to be temporary and insignificant. With respect to the use of heavy equipment adjacent to the channel and the potential for the accidental spill of fuel, lubricants, hydraulic fluid, etc., the letter concludes that this impact is unlikely due to the mitigation measures proposed with the project including that all equipment will be leak-free, all refueling will occur at least 100 feet from the water, and machinery will be operated from the shoreline. NOAA-Fisheries concludes that the project may affect but is not likely to adversely affect salmonids, green sturgeon, or eulachon or their designated critical

habitats. The letter further concludes that while the project would affect salmon EFH, "…the proposed project contains adequate measures to avoid, minimize, mitigate, or otherwise offset the adverse effects to EFH."

DFG's comments on the project were informal (e.g., provided through e-mail correspondence or during interagency meetings with the applicant on the project) and related primarily to (1) the use of the proposed Portadam™ and the potential for impacts to sensitive fish species if the structure were to be installed when water is present in the area; (2) the need to restrict the work window for work below the high tide line to July through September to avoid out-migrating salmon smolts and longfin smelt, which may be present in the adjacent channel during the earlier part of the non-rainy season; and (3) appropriate eelgrass survey methods and mitigation requirements.

To ensure that the project incorporates the mitigation measures and BMPs deemed necessary by NOAA-Fisheries and DFG, and which the Commission itself determines are necessary to minimize the project's adverse effects on sensitive fish and marine resources, the Commission imposes **Special Conditions 4-9** and **14** (previously described in earlier findings).

Therefore, the Commission finds that as conditioned, the project provides feasible mitigation measures to minimize the project's potential impacts on sensitive fish and other marine organisms, as required by Sections 30230, 30231, and 30233(a) of the Coastal Act.

(4) MAINTENANCE AND ENHANCEMENT OF MARINE HABITAT VALUES

The fourth general limitation set by Sections 30230, 30231, and 30233 is that any proposed dredging or filling project in coastal waters must maintain and enhance the biological productivity and functional capacity of the habitat, where feasible.

The project as conditioned will increase and enhance the functional capacity of the marine habitat of Humboldt Bay, because contaminated sediments that currently are degrading water quality and marine resources will be removed, and the conditions of the permit will ensure that the proposed remediation project will not have significant adverse impacts on any coastal resources. Therefore, the Commission finds that the project will maintain, increase, and enhance the biological productivity and functional capacity of the habitat consistent with the requirements of Sections 30230, 30231, and 30233 of the Coastal Act.

In conclusion, the Commission finds that the proposed project is an allowable use, there is no feasible less environmentally damaging alternative, adequate mitigation is required for potential impacts associated with the filling of coastal waters, and marine habitat values will be increased and enhanced. Therefore, the Commission finds that the proposed development, as conditioned, is consistent with Sections 30230, 30231, and 30233 of the Coastal Act.

G. ENVIRONMENTALLY SENSITIVE HABITAT AREAS

Section 30240 of the Coastal Act states as follows:

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

(1) MITIGATION MEASURES TO PROTECT SENSITIVE NESTING BIRD HABITAT

In order to remediate the project area as proposed, approximately 88 willow trees and shrubs and other vegetation growing on the existing earthen berm and elsewhere on the property must be removed. The willow vegetation covers an approximately 7,000-square-foot area, primarily atop the existing earthen berm. The Commission's ecologist believes this willow habitat in and of itself does not constitute environmentally sensitive habitat (ESHA), as the vegetation is completely isolated by industrialized and urbanized development in the surrounding area with little to no native vegetation or open space. However, if nesting birds (e.g., resident or migratory song birds) were to be present in the woody vegetation, the nesting habitat would constitute environmentally sensitive habitat, and the habitat would need to be avoided until the end of the nesting activity (i.e., until young have fledged).

As described in the Project Description Finding above, the applicant has proposed to have a biologist survey the property for nesting birds prior to woody vegetation removal during the avian breeding/nesting season (February 1 through August 31). If any nesting habitat is identified, a minimum 100-foot exclusionary buffer area will be established, and a subsequent bird survey will be conducted to confirm that the young have fledged prior to commencement of development. The avian survey will be conducted no more than three days prior to commencement of building demolition and/or vegetation removal.

To avoid impacts to nesting birds and to ensure implementation of the nesting bird protective measures and no-disturbance buffers proposed by the applicant, the Commission includes **Special Condition 15.** This condition requires the applicant to submit, prior to permit issuance for the Executive Director's review and approval, a Sensitive Bird Nesting Habitat Protection Plan, prepared by a qualified biologist, for conducting seasonally appropriate pre-construction surveys for sensitive bird nesting habitat in the project area and for protecting such habitat from construction impacts. The plan must include provisions for (1) surveying the project area by a qualified biologist according to current DFG protocols no more than one week prior to commencement of construction activities proposed to occur during the bird breeding and nesting season for the presence of active nesting habitat; (2) avoiding construction activities during the nesting season within 100 feet of an occupied nest; and (3) submittal of the surveys

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

Therefore, the Commission finds that as conditioned, the project will (1) prevent impacts that could significantly degrade adjacent sensitive nesting bird habitat, and (2) be compatible with the continuance of that habitat as required by Section 30240(b) of the Coastal Act.

(2) MITIGATION MEASURES TO PREVENT THE SPREAD OF INVASIVE EXOTIC PLANTS

If nonnative, invasive plant species were to be used on the site for erosion control and/or landscaping purposes, and if the nonnative plants then colonized or dispersed to sensitive marsh or rare plant habitats offsite in nearby environmentally sensitive habitat areas (ESHA) around the bay, the ESHA could be adversely affected. Introduced invasive exotic plant species could colonize nearby ESHA and displace native vegetation, thereby disrupting the functions and values of the sensitive habitat areas.

The applicant has not proposed to use nonnative plants on the site for erosion control or other purposes. Instead, the applicant has proposed to seed backfilled areas above the mean high tide line with native grasses to assist in erosion-control and to revegetate the area. As specified in the hydroseeding specification included as Attachment 2 to the RAP Implementation Plan (Exhibit No. 14), tufted hairgrass (*Deschampsia caespitosa*), molate fescue (*Festuca rubra*), meadow barley (*Hordeum brachyantherum*), and three weeks fescue (*Vulpia microstachys*) will be seeded across the site following construction.

To ensure that the applicant undertakes the proposed seeding, erosion control, and site revegetation using native species as proposed, **Special Condition 10** requires adherence to certain revegetation standards. These include, in part, the following: (a) only native plant species shall be used on the property, including in erosion-control seed mixes; (b) all proposed plantings shall be obtained from local genetic stocks within Humboldt County; and (c) all erosion-control seeding shall be applied within 30 days after the close of the construction.

Therefore, the Commission finds that as conditioned, the project will (1) prevent impacts that could significantly degrade adjacent sensitive rare plant and marsh habitats, and (2) be compatible with the continuance of those habitats as required by Section 30240(b) of the Coastal Act.

H. HAZARDS

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

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

> *(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs…*

The primary natural hazard affecting development of the subject property is flooding. A portion of the site, including an approximately 25-foot-wide strip of upland area along the length of the property parallel to the shoreline above the high tide line (with a finished elevation of ~8-10 feet NAVD88), falls within the FEMA-mapped 100-year flood zone and may be subject to flooding from extreme high tides. In addition, the subject property, along with many others around Humboldt Bay, is shown on emergency planning maps published in 2009 by the California Emergency Management Agency, California Geologic Survey, and University of Southern California as being within the zone of potential inundation by a tsunami. If the region were to suffer a major earthquake along the Cascadia Subduction Zone, a local tsunami could hit the Humboldt Bay shoreline within minutes. Furthermore, extreme high tide events in conjunction with future sea-level rise will increase the vulnerability of the subject site. According to the State's 2010 sea-level rise interim guidance document, sea level is projected to rise 5 to 8 inches by 2030 and 10 to 17 inches by 2050. Throughout the first half of the 21st-century, sea-level rise alone is not expected to cause significant flooding, inundation, or erosion, but rather the highest probability and most damaging events likely will take place when increasingly elevated sea-level occurs simultaneously with high tides and large waves (e.g., during El Niños). Between 2050 and 2100, when sea-levels approach 18 to 69 inches above the present, the effects of sea level rise alone (flooding and inundation) and the combined effects of sea-level rise and large waves (e.g., damage to coastal structures, cliff erosion, beach loss) are projected to have much greater impacts.

In order to minimize flood hazard risks to life and property consistent with the requirements of Section 30253, the Commission finds that if the applicant and future landowners receive notification of the flood risks associated with the property, then the applicant and future landowners of the property can decide whether to implement development on the site despite the risks. Therefore, the Commission attaches Special Conditions 16 and 17. **Special Condition 16** requires the landowner to assume the risks of flooding hazards to the property and to waive any claim of liability on the part of the Commission. Given that the applicant has chosen to implement the project despite flooding risks, the applicant must assume the risks. In this way, the applicant is notified that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires the applicant to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand hazards. To ensure that all future owners of the property are aware of the flood hazard present at the site, the Commission's immunity from liability, and the indemnity afforded the Commission, **Special Condition 17** requires recordation of a deed restriction that imposes the special conditions of the permit as covenants, conditions, and restrictions on the use of the property. Therefore, the Commission finds that the proposed development, as conditioned, has been designed to minimize flood hazard risks to life and property consistent with the requirements of Section 30253.

In addition to minimizing risks to life and property in hazard areas, Section 30253 also requires that new development assure stability and structural integrity and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

First, the development as proposed has been designed to assure stability and structural integrity in several ways. The grain size of the proposed backfill material will be sized to minimize the potential for erosion and re-suspension into the tidal environment and to achieve adequate compaction capability. **Special Condition 9** requires that the backfill material plan adhere to the specified grain size parameters. In addition, the project has been designed to ensure the structural integrity of the upland protection structure (which is the only structure involved in the proposed development). The proposed buried armoring structure (marine mattress and gabion baskets) will consist of rock-filled baskets in various geometries made of zinc wire mesh coasted with PVC. The applicant completed an erosion rate analysis (Exhibit 15) to determine the appropriate rock size to use to ensure that the structure remains anchored in place and functions as intended. According to the applicant's agent (Arcadis), the wire mesh to be used in the structure has a design life of 75 years under "normal" (non-saline) conditions. In saline conditions, the design life is estimated to be between 20 and 25 years, after which time localized failures of the mesh material could be expected. However, because the rocks will be appropriately sized to resist erosional forces expected on the site, the rocks will continue to operate as designed and intended despite any failures in the wire mesh. Nevertheless, as discussed in Finding IV-F above, **Special Condition 12** requires maintenance of the protection structure in its improved state. The condition further requires the permittee apply for a coastal development permit amendment for all non-exempt repair and maintenance activities necessary to maintain the structure in its approved state. Therefore, the Commission finds that the proposed development, as conditioned, has been designed to assure stability and structural integrity, consistent with Section 30253.

Secondly, the development as proposed will neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. As previously discussed, **Special Condition 13** requires annual monitoring of the upland protection structure, including an annual evaluation of any conditions that may cause a failure of or scour around the structure or that may expose residual contaminants in upland soils to erosion. The site must be monitored for any significant erosion features that is more than 12 inches deep, movement of the marine mattress by more than 6 inches, exposure of any part of the marine mattress; and breakdown of the wire mesh supporting the marine mattress and/or gabion baskets. Therefore, the Commission finds that the proposed development, as conditioned, will neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area, consistent with Section 30253.

Finally, the proposed project will not alter a natural landform along a bluff or a cliff because the subject site does not meet the definition of a coastal bluff under the Section 13577(h) of the Commission's regulations or under the County's LCP (the City of

Eureka's LCP does not define "bluff"). The standard of review for the project is the Chapter 3 policies of the Coastal Act. Although not part of the standard of review, the certified Humboldt County LCP provides guidance. The definition of bluff within Chapter 5 of the Humboldt Bay Area Plan, a portion of the certified LCP, defines bluff in a manner that requires that the subject site include at least 10 feet of vertical relief. As the subject site is generally flat and has less than 10 feet of vertical relief, the subject site does not meet the definition of a bluff under the Humboldt County LCP.

Therefore, for all of the reasons discussed above, the Commission finds that the proposed project, as conditioned, will (1) minimize risk to life and property from hazards, and (2) assure stability and structural integrity and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area, consistent with Section 30253 of the Coastal Act.

I. PUBLIC ACCESS AND RECREATION

Section 30210 of the Coastal Act states as follows:

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

Section 30211 of the Coastal Act states as follows:

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

Section 30212 of the Coastal Act states, in applicable part, as follows:

> *(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*
>
> …
>
> *(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.*

Section 30213 of the Coastal Act states, in applicable part, as follows:

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

…

Section 30214 of the Coastal Act states, in applicable part, as follows:

> *(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case.…:*

…

Section 30223 of the Coastal Act states as follows:

> *Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

As cited above, Section 30210 of the Coastal Act requires that maximum public access be provided consistent with public safety needs and the need to protect natural resource areas from overuse. Section 30212 requires that access from the nearest public roadway to the shoreline be provided in new development projects except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or adequate access exists nearby. Section 30211 requires that development not interfere with the public's right to access gained by use or legislative authorization. Section 30214 provides that the public access policies of the Coastal Act shall be implemented in a manner that takes into account the capacity of the site and the fragility of natural resources in the area. In applying Sections 30210, 30211, 30212, and 30214, the Commission must show that any denial of a permit application based on these policies or any decision to grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential access. In addition, Section 30223 of the Coastal Act requires that upland areas necessary to support coastal recreational uses shall be reserved, where feasible.

As described in the Project Description Finding, no portion of the proposed upland protection structure will occur within tidal habitat or other areas subject to the Public Trust. The project includes the excavation of mudflat sediments within tidal areas and the subsequent backfill of those areas. There is no existing public access to the shoreline available at the subject site. The shoreline area consists of mudflat habitat, which generally is unsuitable for walking. Public access is available west of the subject site, along the City's public pier boardwalk, and approximately one-quarter-mile east of the site, at the Adorni Center and nearby Halvorsen Park. The tidal areas are accessible to kayaks and other small watercraft at certain stages of the tide. The proposed tidelands development is necessary to remove contaminants that could affect human health and ecological receptors and will only be of temporary duration. The development is proposed to be completed within one construction season during the summer months. To ensure that the project does not impede passage by boats and recreational water craft, the Commission attaches **Special Condition 18**. This condition requires that a clear channel passage of at least 50 feet be maintained offshore of the site at all times during construction.

The project site is located seaward of First Street, the first through public road paralleling the sea (bay) in this area. There is no existing public access to the shoreline available on

or along the property. Public access is available west of the site, along the City's public boardwalk/pier, and approximately one-quarter-mile east of the site, at the Adorni Center and nearby Halvorsen Park. The eastern end of the City's T-shaped public boardwalk/pier abuts a portion of the proposed project area.

The proposed project involves excavating small "hotspots" in the area under the boardwalk/pier using a smaller bucket and possibly using smaller equipment such as a bobcat. When working near or beneath the City pier, the structure will need to be closed to the public to ensure public safety. The pier structure is proposed to be inspected after work has been completed and will be reopened once it has been confirmed that there has been no damage to the structure. The applicant has not indicated the expected duration or extent of pier closure.

To ensure that the project's impact on public access is temporary and minimized, the Commission attaches **Special Condition 19**. This condition requires submittal of a public access protection plan prior to permit issuance for the Executive Director's review and approval. The access plan must demonstrate that (a) the portion of the boardwalk/pier proposed to be temporarily closed to the public for construction-related public safety purposes shall be minimized; (b) the duration of boardwalk/pier closure shall be minimized and shall not exceed 14 days total, unless the Executive Director grants in writing for good cause additional time as needed to ensure public safety not to exceed 21 days total without an amendment to this coastal development permit; and (c) the boardwalk/pier shall remain open and accessible in full to the public on Memorial Day weekend, the 4th of July, and Labor Day weekend.

According to the proposed project description, it is estimated that 20 to 30 trucks per day of excavated material could be loaded for disposal and transported from the site for a total of 50 trucking days (approximately 10 weeks). In addition, transportation of clean fill materials to the site would entail the movement of approximately 1,000 truckloads of soil. Given the site's location in the City's core downtown waterfront area, which is a busy commercial district frequented by tourists and residents, the traffic impacts of the project on public access to the waterfront area would be significant, if not mitigated.

To address the traffic impacts associated with the proposed project, the applicant developed a draft transportation plan. The plan proposes procedures for vehicle routing, traffic controls, truck loading, worker parking, and other details. A mitigation measure of the CEQA document requires the applicant to prepare a final revised traffic management plan prior to project implementation for the City's review and approval that (a) provides for offsite staging of trucks to reduce congestion on local streets, (b) routes truck traffic along City-preferred routes (probably H and I and 4th and 5th Streets), and (c) schedules project activities so that truck traffic occurs during non-peak hours and on weekdays only.

To ensure that the project's traffic impacts on public access are minimized to the maximum extent feasible, the Commission attaches **Special Condition 20**. This condition requires that prior to commencement of construction the applicant shall submit a final Traffic Management Plan for the Executive Director's review and approval. The final

plan must demonstrate all of the following: (1) construction equipment, trucks, and other vehicles associated with the authorized development shall be staged and routed such that congestion on local streets and public parking impacts are minimized; (2) project activities shall be scheduled to avoid truck traffic during peak hours and weekends, to the maximum extent feasible; and (3) the final plan shall be reviewed and approved by the City of Eureka prior to commencement of any traffic-generating activities.

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

J. ARCHAEOLOGICAL RESOURCES

Section 30244 of the Coastal Act states as follows:

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

The project area includes lands formerly occupied by the Wiyot tribe, prior to Euro-American exploration and settlement in the area in mid 1800s. The ancestral Wiyot territory extended from the Little River (near McKinleyville) on the north to the Bear River Mountains (near Ferndale) on the south and inland approximately 15 miles to the first mountain ridgeline. Humboldt Bay (Wiki) was the central division of the territory. The pattern of Wiyot settlements, located along river terraces, the Humboldt Bay margin, and tidewater sloughs, means that much of the bay margin, tributary sloughs, and adjacent uplands have the potential to hold archaeological resources. Of particular archaeological significance is Indian Island, located directly across the bay channel from the property. The Village of Tulawat was located on the eastern end of Indian Island (~3/4-mile from the property) and was the setting for important ceremonial activities. According to the applicant's records search, seven additional previously recorded Native American village or campsite locations occur within one mile of the project property. However, none are documented adjacent to the property. In addition, record searches of the California Native American Heritage Commission's sacred land file and its California Historical Resources Information System identified no Native American cultural resources, previously recorded archaeological sites, isolated finds, buildings, structures, or objects at the project site. Moreover, City of Eureka planning maps indicate that a portion of the project site was below sea level in 1889, and the western side of the property was not filled until 1927. Thus, given that much of the area proposed for excavation is either submerged sediments or comprised of nonnative fill, and given the fact that database searches indicate a low potential to encounter artifacts of sufficient integrity to offer substantive contribution to the historical record, it is unlikely that the proposed project will impact archaeological resources. Nevertheless, there is no record of any archaeological surveys ever having been completed for the subject property. Therefore, to ensure protection of any archaeological resources that may be inadvertently discovered at the site during project excavation, the Commission attaches **Special**

Condition 21. This condition requires (a) that if an area of archaeological 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 and recommend any needed mitigation measures to protect archaeological resources during construction. To recommence development following discovery of archaeological 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.

K. VISUAL RESOURCES

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

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

The proposed project is primarily a remediation project that involves removing contaminated soils and sediments and restoring areas to pre-project gradients or similar gradients. The project also involves demolishing an existing old warehouse built in the 1960s and a man-made earthen berm paralleling the shoreline, clearing the mostly weedy vegetation (e.g., Scotch broom, Himalayan blackberry, jubata grass, fennel, etc.) that grows across the site, and cleaning up concrete, metal, and other debris currently littering the upland and tidal portions of the property. In these ways, the proposed project will enhance and improve the visual quality of an otherwise visually degraded area.

The project proposes to install an upland protection structure in the form of buried marine mattresses and gabion baskets, with three rows of willows (on 8-foot centers) along the length of the structure above the marine mattress. Because the marine mattress and gabion basket components of the shoreline protection structure will be buried, they will initially not be visible from public vantage points such as from the end of the public boardwalk/ pier to the west of the site. If the structure was to become visible in the future (e.g., via erosion of the backfill material proposed to be placed above it), the visibility of the structure from public vantage points (such as from the end of the public boardwalk) would not be out of character with the surrounding area, since the properties on either side of the site are substantially armored with large rock.

Therefore, the Commission finds that the proposed project, as conditioned, will not impact visual resources and will restore and enhance visual quality in a visually degraded area, consistent with Section 30251 of the Coastal Act.

L. ATTORNEYS FEES AND COSTS

Coastal Act Section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications.[3] Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP application in the event that the Commission's action is challenged by a party other than the applicant. Therefore, consistent with Section 30620(c), the Commission imposes **Special Condition 22**, requiring reimbursement for any costs and attorneys fees that the Commission incurs in connection with the defense of any action brought by a party other than the applicant challenging the approval or issuance of this permit.

M. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The Humboldt Bay Harbor, Recreation, and Conservation District served as the lead agency for the project for CEQA purposes. The Harbor District adopted a mitigated negative declaration for the project on November 10, 2011.

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.

[3] See also California Code of Regulations Title 14 Section 13055(g)

APPENDIX A: STANDARD CONDITIONS

1. Notice of Receipt and Acknowledgment:

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

2. Expiration:

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

3. Interpretation:

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

4. Assignment:

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

5. Terms and Conditions Run with the Land:

   These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

APPENDIX B: SUBSTANTIVE FILE DOCUMENTS

- Application File for Coastal Development Permit No. 1-11-007, received February 3, 2011
- Final Approved Remedial Action Plan (RAP) dated January 2011
- RAP Addendum dated August 24, 2011
- Delineation of Sediment Area of Concern, February 28, 2008, revised August 19, 2010
- Biological Survey by Winzler & Kelly, November 2000 and Biological Survey Addendum by Arcadis, June 12, 2009
- Biological Assessment by Arcadis, February 2011, revised March 2011
- Request for consolidated CDP application, materials received on August 10, 2011
- Eelgrass Monitoring Plan by WRA, October 2011, as revised via January 18, 2012 email from Arcadis
- Initial Study, Mitigated Negative Declaration, and MMRP Adopted by the Humboldt Bay Harbor, Recreation & Conservation District November 10, 2011
- Pillsbury, Letter to Commission staff, February 1, 2012
- Pillsbury, Letter to Commission staff, March 8, 2012, with enclosures
- Pillsbury, Letter to Commission staff, April 4, 2012, with enclosures
- Draft memorandum dated 1/26/11 by Arcadis re: shoreline stabilization/rip-rap sizing, emailed to Commission staff February 3, 2012
- Cleanup and Abatement Order Nos. 99-6 and R1-2002-0095
- Harbor District Permit No. 11-03
- NOAA-Fisheries Informal Consultation Letter dated January 17, 2012
- City of Eureka Local Coastal Program

APPENDIX C: BACKGROUND ON SITE CONTAMINATION

The project area has been used for over a century for industrial use during a time when there were no mandated environmental protections from hazardous materials. The ~3-acre property was the site of a former lumberyard prior to its use for metal salvage operations beginning in the 1930s. Operations at the site included metals reclamation from transformers; automobile dismantling and wrecking; and storage of batteries, radiators, and miscellaneous refuse. Metal salvage operations reportedly continued at the site until 1989. Discharges at the site from lack of proper containment measures during historic metal salvage operations resulted in contamination of soil, groundwater, surface water, and Humboldt Bay sediments with petroleum hydrocarbons and other automotive wastes, metals, polychlorinated biphenyls (PCBs), and volatile organic compounds. Several soil and groundwater investigations were conducted at the site over the past two decades. Through these studies, many contaminants were identified at elevated levels at the site and immediately adjacent to the site in bay sediments including PCBs, polycyclic aromatic hydrocarbons (PAHs), lead, zinc, numerous other metals, and other constituents of interest.

In 1999, the North Coast Regional Water Quality Control Board (RWQCB) issued Cleanup and Abatement Order (CAO) No. 99-6 for the applicant and other named "dischargers" who were known to have conducted metal salvage operations at the site. The CAO required, among other tasks, the preparation of ecological and human health risk assessments to evaluate appropriate cleanup levels for soil, groundwater, surface water, and sediment. The required assessments were initiated, and a draft report was submitted to the RWQCB for concurrence. In 2002, the 1999 CAO was rescinded and replaced with a new CAO (#R1-2002-0095) requiring further sediment and soil investigation and evaluation, a feasibility study and interim remedial action plan, a revised ecological and human health risk assessment, and other tasks.

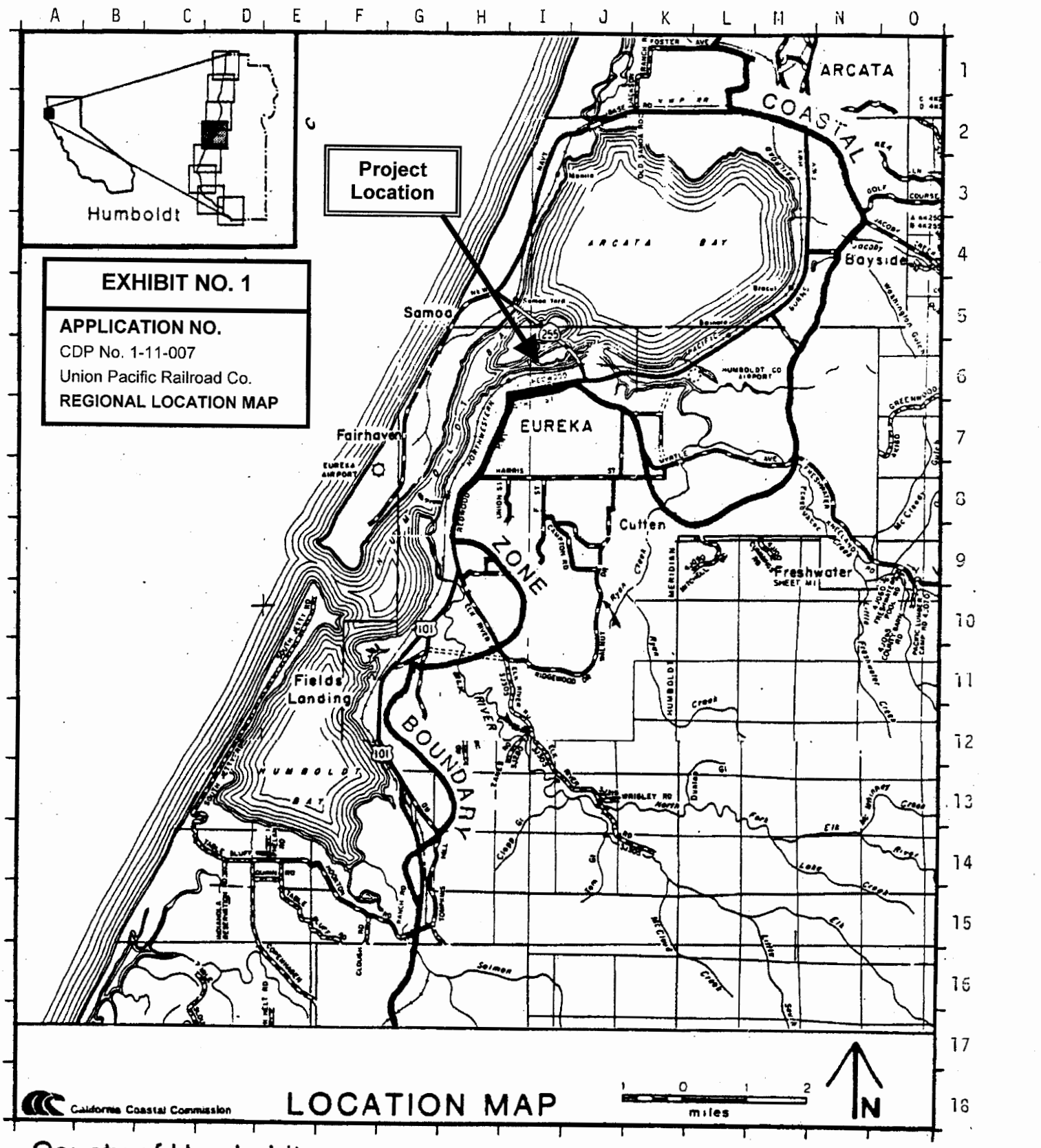
In 2006, a final Human Health Risk Assessment (HHRA) was prepared to assess the risk to future recreational users (e.g., park visitors, youth trespassers, future construction workers, and recreational users) presented by the contaminants of concern on the upland portion of the property. The assessment analyzed the potential for future "receptors" to have direct contact with the site's contaminated soils (previous investigations found the potential for receptor contact with groundwater and surface water to be insignificant, and the regulatory agencies concurred). The HHRA concluded that the risks from the onshore area exceeded action levels and interim remedial actions were taken to reduce the risk (soil binders applied and site remained closed). The HHRA concluded that the potential for human health risks was low to nonexistent. Essentially, it would require over 128 days per year of <u>direct</u> sediment exposure under the recreational user scenario to pose a greater than *de minimis* (1×10^{-6}) health risk. It is important to note however that there would not be a direct exposure to residual contaminants on the site once the proposed clean-up plan is implemented, since at least two feet of clean backfill would be put in place as part of the proposed remedial action.

A final Ecological Risk Assessment (ERA) also was completed in 2006 for the property. The ERA considered the levels of contaminated soils, groundwater, surface water runoff, and sediments in the area and modeled pathways for contaminant uptake by plants and wildlife. Overall, the assessment results indicate that for the portion of the property below the mean high tide line, risks to marine organisms and wildlife (e.g., aquatic invertebrates and aquatic-invertebrate-eating shorebirds) from contaminants are significant, primarily within the central portion of the site and closer to the shoreline. Based on the ERA results, in 2007 the RWQCB declared that there was an unacceptable risk to ecological receptors inhabiting the waterfront portion of the property and requested the submittal of a Remedial Action Plan (RAP).

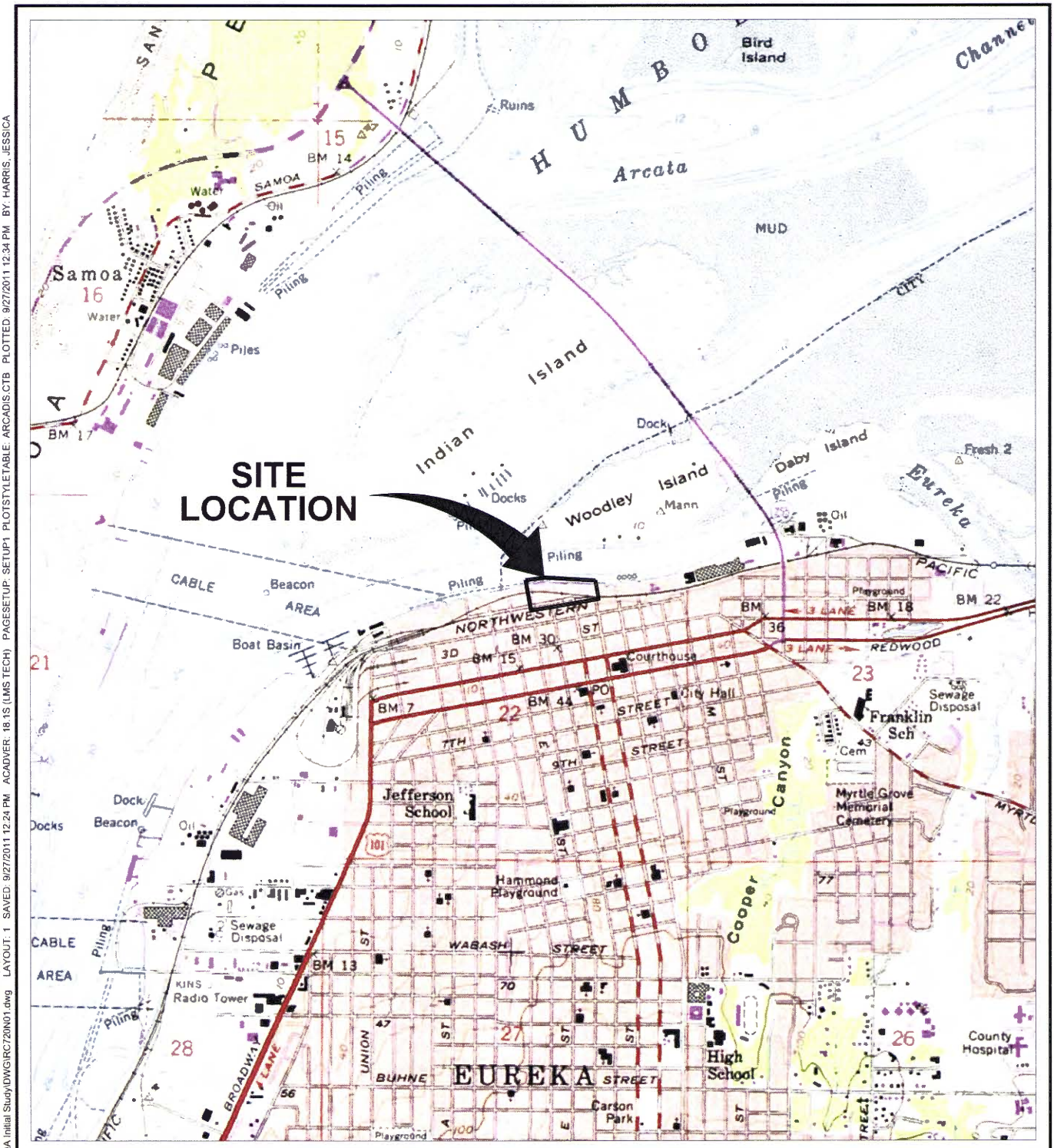
In 2010, a final delineation of the soil and sediment Areas of Concern (AOC) was completed, which defined the lateral and vertical extent of impacted sediment and confirmed that concentrations below the impacted volume would not require long-term monitoring. It was necessary to define the extent of the AOCs prior to finalizing the RAP. For the upland portion of the property, the AOC was estimated by comparing soil sample results to a depth of 10 ft below ground surface (bgs) for the human health risk drivers (arsenic, lead, PAHs, and total PCBs) against target levels. For the tidal portion of the property, the horizontal extent of the sediment AOC was primarily based on sediment sample locations that were defined as “impacted” based on a multiple lines of evidence (MLOE) approach (including an assessment of: sediment quality; the results of sediment toxicity and bioassay tests; the results of the benthic community structure analysis; the risk drivers; and of potential hot spots). The vertical extent was defined using sediment chemistry data and comparison with the low- and median-effects ranges (ERLs and ERMs). Regarding the potential for dioxins to be found in bay sediments, sediment samples taken by the RWQCB in the past in the vicinity of the project area have shown elevated dioxin levels. However, no dioxin source has been identified for the subject site, and no dioxin contamination has been attributed to this site. Thus, the site was not characterized for dioxin in the AOC delineation. Nevertheless, mitigation measures attached to the CEQA document require that (1) sediment confirmation testing be conducted for the identified contaminants of concern as well as for dioxins/furans in the marine sediments remaining after excavation in the northwest corner of the project area, and (2) chemical analysis of the marine sediments for waste characterization purposes include testing for dioxins/furans.

The RWQCB approved the final RAP in March 2011 and an addendum to the RAP in August 2011. The RAP establishes site-specific clean-up objectives based on current environmental conditions and anticipated future uses of the property. Clean-up objectives for the upland portion of the property include remediating the site to levels acceptable to protect groundwater and human “receptors” (e.g., future youth and adult park visitors) under the anticipated commercial/industrial and passive recreational land use redevelopment scenarios. For the tideland portion of the site, clean-up objectives include remediating the site to levels acceptable to protect human and ecological receptors under the recreational and aquatic habitat land use scenarios. The factors considered in developing remedial goals included (1) California Hazardous Waste total threshold limit concentrations (TTLC); (2) action levels for PCBs from the Toxic Substances Control Act (TSCA); (3) marine sediment quality guidelines for the protection of aquatic

ecological receptors; and (4) human health guidelines developed by the California EPA. Specific remediation goals (e.g., post-remedial “exposure point concentrations”) are identified for each of the various constituents of interest in upland soils and bay sediments (see Exhibit 14 for more details).



County of Humboldt



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., EUREKA, CALIFORNIA, 1958, PHOTOREVISED 1972.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.

AREA LOCATION

.NY

EXHIBIT NO. 2

APPLICATION NO.

1-11-007

UNION PACIFIC RAILROAD

VICINITY MAP

FIGURE

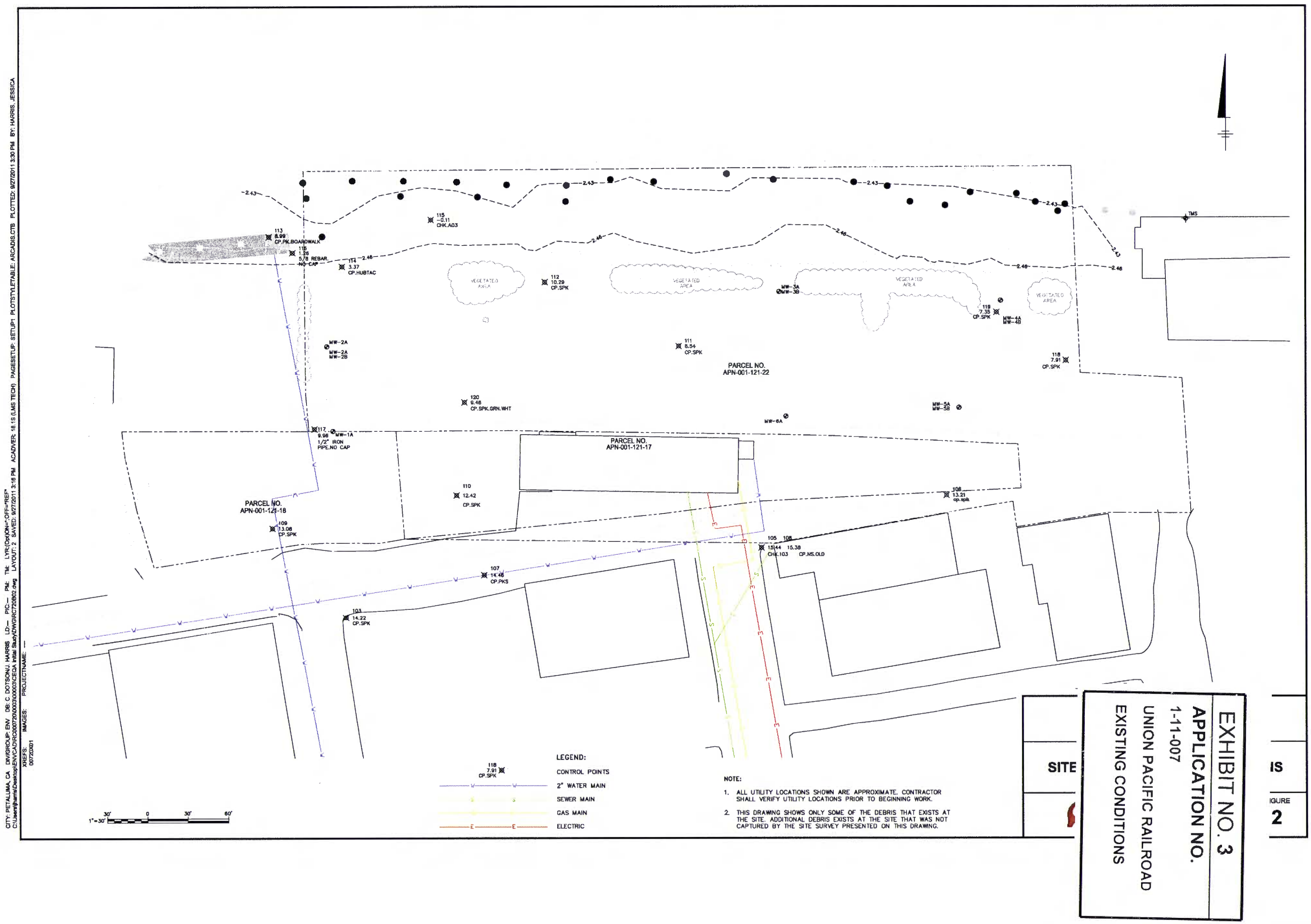


EXHIBIT NO. 3
APPLICATION NO.
1-11-007
UNION PACIFIC RAILROAD
EXISTING CONDITIONS
PARCEL NO.
APN-001-121-22
PARCEL NO.
APN-001-121-17
PARCEL NO.
APN-001-121-18
LEGEND:
CONTROL POINTS
2" WATER MAIN
SEWER MAIN
GAS MAIN
ELECTRIC
NOTE:
1. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
2. THIS DRAWING SHOWS ONLY SOME OF THE DEBRIS THAT EXISTS AT THE SITE. ADDITIONAL DEBRIS EXISTS AT THE SITE THAT WAS NOT CAPTURED BY THE SITE SURVEY PRESENTED ON THIS DRAWING.
1"=30'
SITE
IS
IGURE
2
CITY: PETALUMA, CA DIV/GROUP: ENV DB: C. DOTSON/J. HARRIS LD:— PIC:— PM: TM: LYR:(Opt)ON=*;OFF=*REF*
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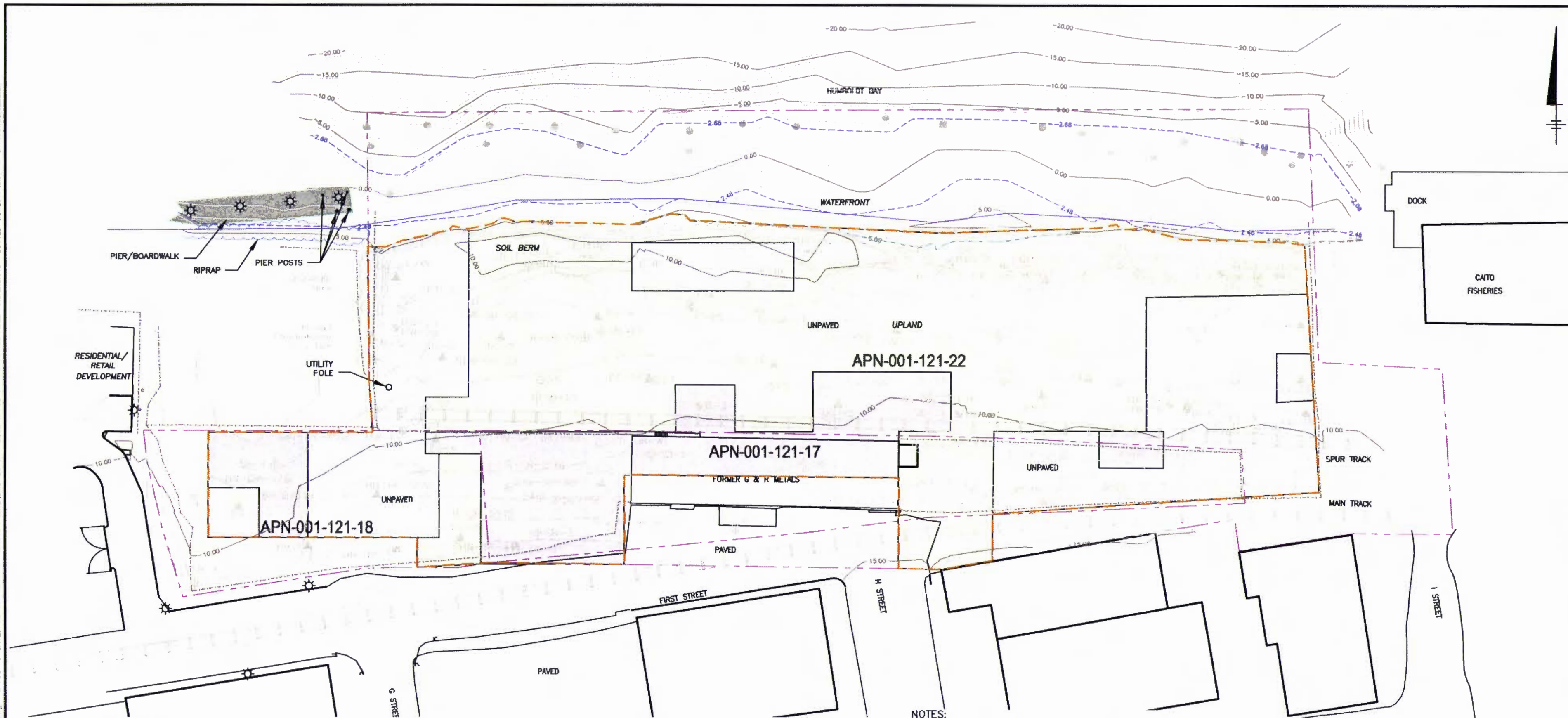

LEGEND:

- SITE BOUNDARY
- APPROXIMATE SHORELINE
- MAJOR ELEVATION CONTOUR
- MINOR ELEVATION CONTOUR
- HIGH TIDE LINE
- MEAN LOW WATER PER NGVD 29
- MEAN HIGH WATER PER NGVD 29
- FENCE LINE
- INACTIVE RAILROAD TRACKS
- LIGHT POLE
- TREE
- WOOD/METAL PILING

- 1990 EXPLORATORY BORING
- 1990 SOIL SAMPLES
- 1990 CONE PENETROMETER TESTS
- 1992 SHN PHASE 2 TEST PITS
- 1994 RWQCB SOIL SAMPLES
- 1996 SHN SUBSURFACE INVESTIGATION
- 1996 GEOMATRIX SOIL INVESTIGATION & WELL INSTALLATION
- 2000 GEOMATRIX SOIL SAMPLING
- 2003 GEOMATRIX SOIL SAMPLING
- 2010 ARCADIS SOIL SAMPLING

- APPROXIMATE AREA OF CONCERN
- AREA OF CONCERN EXTENDS 2 FT BGS
- AREA OF CONCERN EXTENDS 4 FT BGS
- AREA OF CONCERN EXTENDS 6 FT BGS
- AREA OF CONCERN EXTENDS 10 FT BGS
- BGS BELOW GROUND SURFACE

NOTES:

1. BASE MAP FROM SITE SURVEY PERFORMED BY LACO ASSOCIATES OF EUREKA, CALIFORNIA, SEPTEMBER 26, 2008.
2. VERTICAL DATUM IS NGVD29; HORIZONTAL DATUM IS NAD27, STATE PLANE COORDINATE SYSTEM 1927 (CALIFORNIA ZONE 1).
3. TOPOGRAPHIC SURVEY TO WATERLINE PERFORMED IN SEPTEMBER 2008 BY CA-LICENSED SURVEYOR LACO ASSOCIATES OF EUREKA, CALIFORNIA.
4. HUMBOLDT BAY MARGIN IS APPROXIMATED USING THE 1995 0-FOOT ELEVATION CONTOUR AND SEPTEMBER 21, 1995 AERIAL PHOTOGRAPH.
5. SOURCE: MFG, INC. 2005. FEASIBILITY STUDY AND INTERIM REMEDIAL ACTION WORK PLAN, UPRR WATERFRONT LEASE SITE (FORMER G&R METALS).
6. 2010 BORINGS SURVEYED BY LACO ASSOCIATES OF EUREKA, CALIFORNIA, JUNE 3, 2010.
7. HIGH TIDE LINE (404) SURVEYED BY LACO ASSOCIATES OF EUREKA, CALIFORNIA, AUGUST 26, 2010.

0 60' 120'
GRAPHIC SCALE

EXHIBIT NO. 4

APPLICATION NO.

1-11-007

UNION PACIFIC RAILROAD

SEDIMENT AREAS OF CONCERN (1 of 2)

MPANY
E
Y
CONCERN
FIGURE

CITY: PETALUMA, CA DIV/GROUP: ENV DB: C. DOTSON/J. HARRIS LD: -- PIC: -- PM: TM: LYR:(Opt)ON=*;OFF=*REF*
C:\Users\jharris\Desktop\ENV\CADR\C0007200\0003\00003\CEQA Initial Study\DWG\RC720B04.dwg LAYOUT: 3 SAVED: 9/27/2011 12:36 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 9/27/2011 12:37 PM BY: HARRIS, JESSICA
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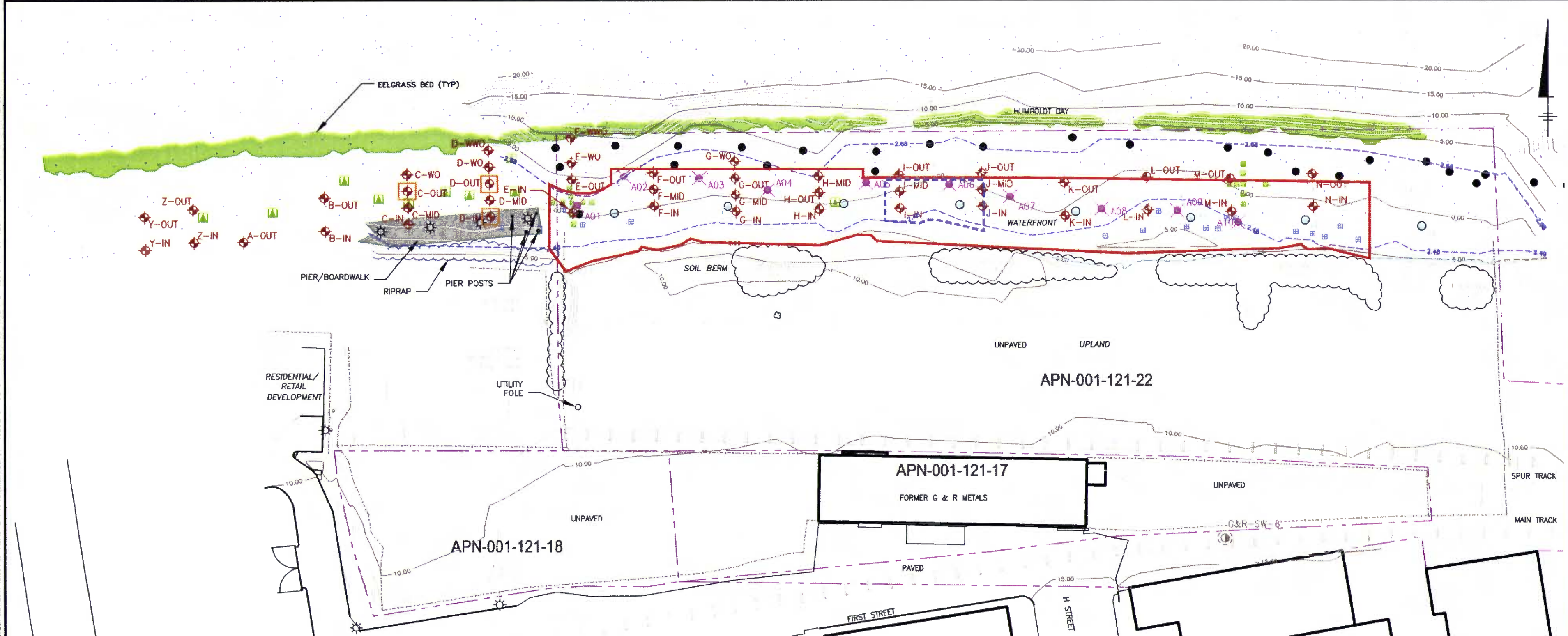


LEGEND:

	SITE BOUNDARY
	APPROXIMATE SHORELINE
	MAJOR ELEVATION CONTOUR
	MINOR ELEVATION CONTOUR
	HIGH TIDE LINE
	MEAN LOW WATER LINE PER NGVD 29
	MEAN HIGH WATER LINE PER NGVD 29
	FENCE LINE
	INACTIVE RAILROAD TRACKS
	TREE
	WOOD/METAL PILING
	EELGRASS PATCH
	AREA OF CONCERN; VERTICAL EXTENT TO 5 FEET BELOW SEDIMENT SURFACE
	AREA OF CONCERN; VERTICAL EXTENT TO 4 FEET BELOW SEDIMENT SURFACE
	HOT SPOT; VERTICAL EXTENT TO 3 FEET BELOW SEDIMENT SURFACE
	1994 RWQCB SEDIMENT SAMPLING LOCATION
	2000 ARCADIS SEDIMENT SAMPLING LOCATION
	2002 BBL SEDIMENT SAMPLING
	2004/2005 MFG PHASE I-III SEDIMENT SAMPLING LOCATION
	2008 ARCADIS VERTICAL AOC CHARACTERIZATION

NOTES:

1. LOCATIONS OF SEDIMENT SAMPLES, OTHER THAN 2008 ARCADIS VERTICAL AOC CHARACTERIZATION, ARE APPROXIMATE; BASED ON ECOLOGICAL RISK ASSESSMENT PERFORMED BY MFG, INC., 2006.
2. BASE MAP FROM SITE SURVEY PERFORMED BY LACO ASSOCIATES OF EUREKA, CALIFORNIA, SEPTEMBER 26, 2008.
3. VERTICAL DATUM IS NGVD29; HORIZONTAL DATUM IS NAD27, STATE PLANE COORDINATE SYSTEM 1927 (CALIFORNIA ZONE 1).
4. TOPOGRAPHIC SURVEY PERFORMED TO WATERLINE IN SEPTEMBER 2008 BY CA-LICENSED SURVEYOR LACO ASSOCIATES OF EUREKA, CALIFORNIA.
5. MULTIPLE LINES OF EVIDENCE (MLOE) APPROACH USED TO IDENTIFY SAMPLES MARKED AS IMPACTED.
6. HIGH TIDE LINE (404) SURVEYED BY LACO ASSOCIATES OF EUREKA, CALIFORNIA, AUGUST 26, 2010.
7. EELGRASS BED AND PATCHES BASED ON SURVEY CONDUCTED ON AUGUST 18, 2008 BY WRA CONSULTANTS.

0 60' 120'
GRAPHIC SCALE

UNION PACIFIC RAILROAD COMPANY
WATERFRONT LEASE SITE
EUREKA, CALIFORNIA
CEQA INITIAL STUDY

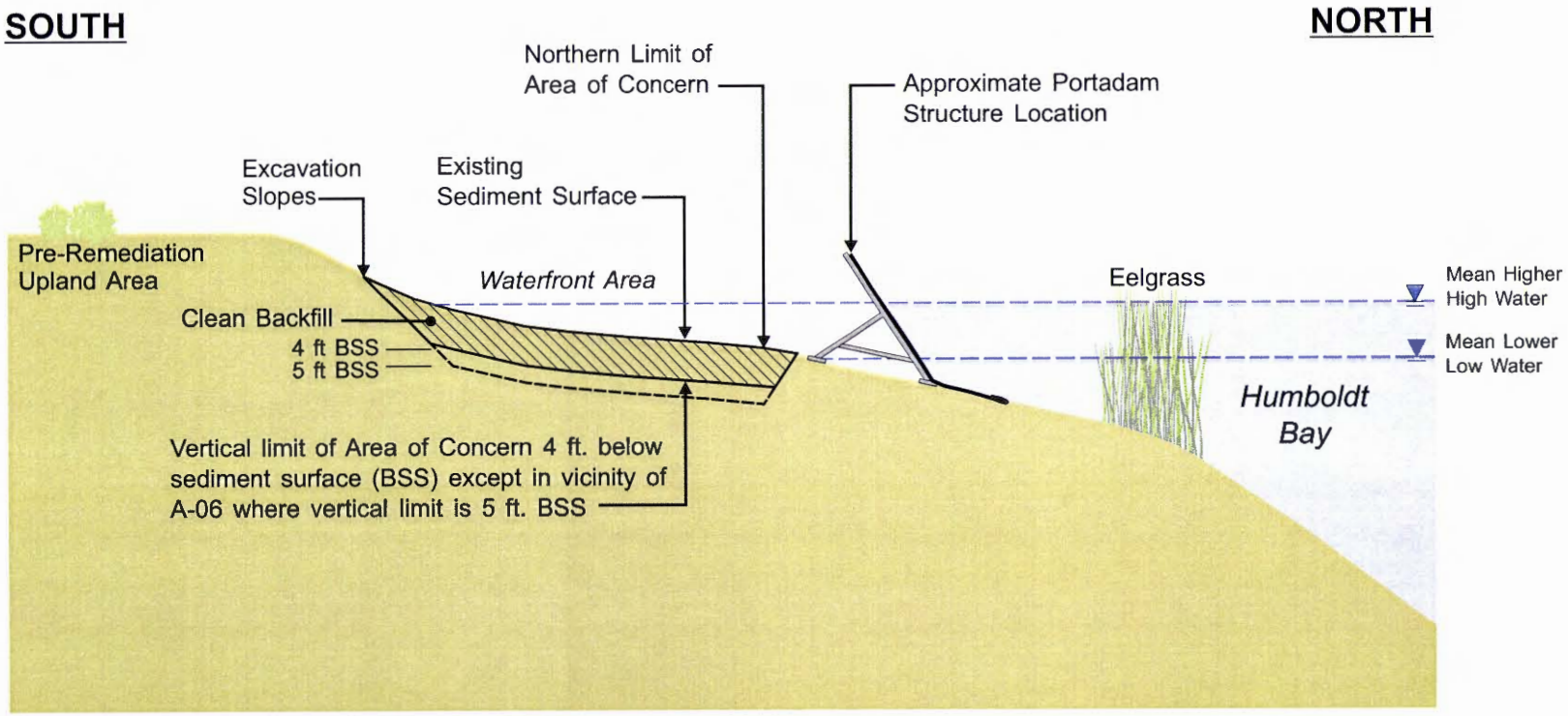
SEDIMENT AREA OF CONCERN

ARCADIS

FIGURE 4

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF* LAYOUT: 4 SAVED: 9/27/2011 12:38 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 9/27/2011 12:39 PM BY: HARRIS, JESSICA

2 of 2



NOT-TO-SCALE

EXHIBIT NO. 5
APPLICATION NO. 1-11-007
UNION PACIFIC RAILROAD
SEDIMENT DREDGING & FILLING CONCEPTUAL CROSS SECTION

UNION PACIFIC RAILROAD COMPANY
EUREKA, CALIFORNIA - WATERFRONT LEASE SITE

CEQA INITIAL STUDY

SEDIMENT DREDGING AND BACKFILLING CONCEPTUAL CROSS-SECTION

ARCADIS

FIGURE
5

ARCADIS

ARCADIS U.S., Inc.
140 2nd Street
Suite 200
Petaluma
California 94952
Tel 707 776 0865
Fax 707 776 0850

MEMO

To:
Craig Hunt., RWQCB
Melissa Kraemer, CCC
Vicki Frey, CDFG
David Hull, Humboldt Harbor District
David Ammerman, USACE
Lisa Shikany, City of Eureka
Walt Wilson, NOAA/NMFS

Copies:
James Eisert, ARCADIS
Jim Diel, UPRR

From:
Bridgette DeShields, Alex Francisco, Conrad Mulligan

Date:
August 24, 2011

ARCADIS Project No.:
RC000720

Subject:
Turbidity Control Measures Alternatives

The Remedial Action Plan (RAP; ARCADIS, 2011) provided the following measures (amongst others) to address and minimize impacts to special status fish species, Essential Fish Habitat (EFH), intertidal and vegetated wetlands, and eelgrass (Sensitive Protected Habitat):

- Prior to initiating excavation activities in tidal areas, a silt fence will be constructed around the excavation area in a manner that will both minimize suspended sediment from exiting the excavation area and prevent fish from entering the excavation area. Silt fences will be constructed in stages to leave opening in the fence line during construction to prevent entrapment/impingement of fish in/on fencing material.

- Excavation activities will occur during low tide, and excavated areas will be backfilled with sediment of similar organic content and grain size prior to the next incoming tide. This will reduce potential generation of suspended sediment in the water column and restore the intertidal area to pre-excavation conditions.

- Water turbidity will be monitored to minimize potential indirect impacts to eelgrass beds associated with reduced light penetration in through the water column.

- The upland work will likely we completed first and the waterfront work second, beginning no sooner than July, to accommodate "fish windows" (Frey, pers. comm. 2010) and to occur during a period when more low tide periods are within daylight hours.

EXHIBIT NO. 6
APPLICATION NO.
1-11-007
UNION PACIFIC RAILROAD
TURBIDITY CONTROL ALTERNATIVES (1 of 4)

The silt fence construction was described as follows:

> Prior to construction, a silt fence will be installed outside of the sediment AOC and side slopes that will form during sediment excavation. The silt fence will consist of a chain link fence with metal posts lined with geotextile fabric on the bay side. The top-of-fence elevation will be selected based on published tide predictions, general tidal bench marks, and recorded historical water levels. Sufficient "freeboard" will be added based on engineering judgment. The geotextile fabric will serve as a filter that will keep suspended sediment in the enclosed areas while allowing water to pass through. The filter fabric will be attached to the chain link fence using wire ties. The filter fabric will be placed to cover the chain link fence from top to bottom. The filter fabric will be peg fixed to the sediment surface using rebar pegs. The fence will be inspected regularly, and additional wire ties and rebar pegs will be placed as necessary to control shifting due to tidal actions. The silt fence will completely encompass the AOC and will extend to the upland, so that water in the excavation area will flow through the fence and not around the ends. This will also prevent fish from becoming trapped within the area surrounded by the silt fence. By lining the fencing with geotextile fabric on the bay side, fish will not be trapped between the fencing and the geotextile when the tide recedes. The silt fence will be maintained throughout the work, including replacing geotextile fabric as needed.

Since publication of the RAP, an alternative to the silt fence has been proposed that includes the installation of a PORTADAM. A PORTADAM consists of an impermeable geomembrane liner that is placed over a steel frame support structure.

- The steel frame structure is installed first, prior to installing the geomembrane liner, so entrapment of fish will not occur during frame installation.

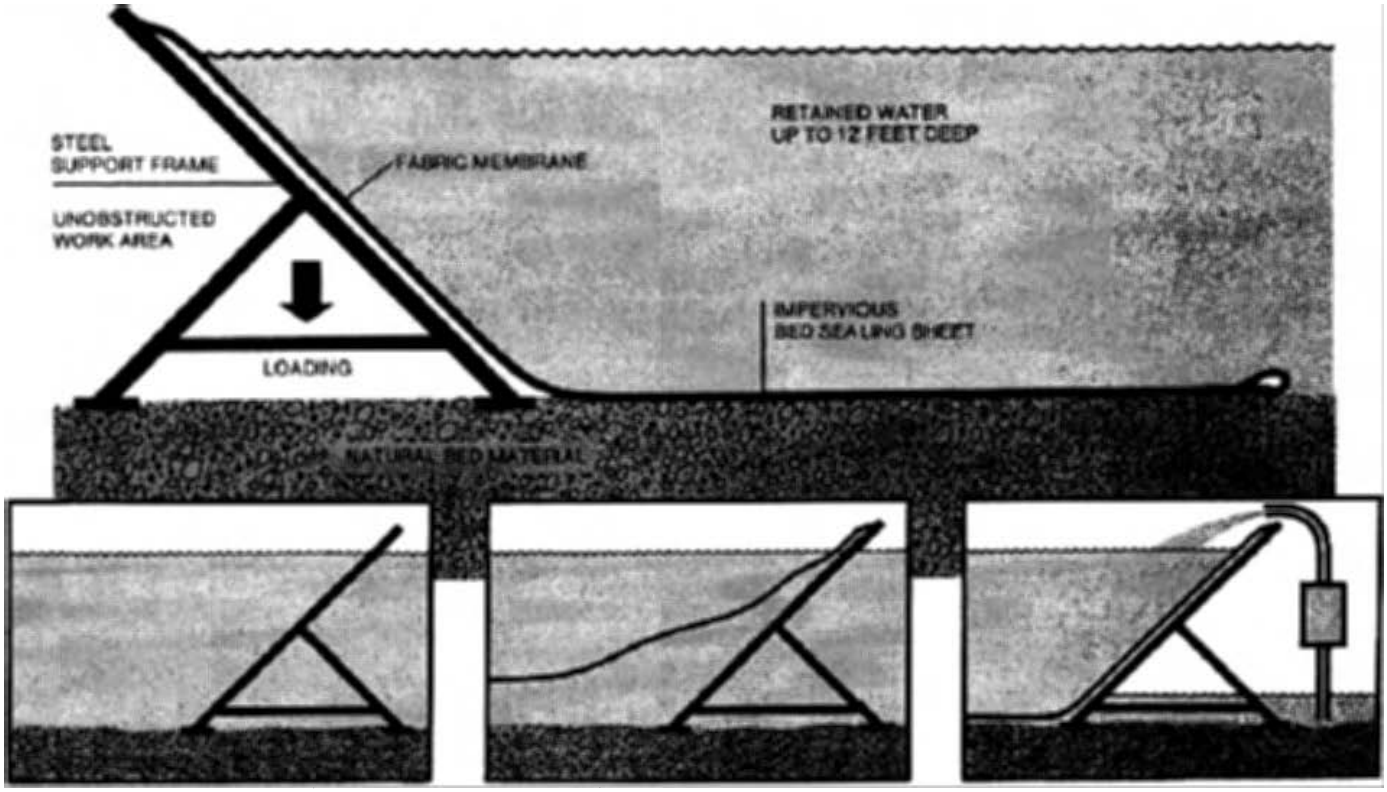
- No digging or trenching is required for installation of the steel frame structure. Gravel bags are used to secure the framework until the fabric is installed.

- Following installation of the steel frame structure, the geomembrane liner (rolled up) is placed at the top of the steel framework. The actual deployment of the fabric will be performed during low tides and in sections to prevent entrapment of fish.

- Once the fabric is positioned across the entire framework and secured on the base of the mudflat area, thereby creating a seal between the work area and water area, residual water on the front side of the damn would be pumped directly over the dam. Some minimal water could collect in the work area during excavation. Once excavation begins, any water that requires removal from the work area would be pumped to the onsite containment system, treated, and disposed of discharged into the City of Eureka sanitary sewer system via permit (along with the that generated during dewatering). Pumping equipment will be maintained onsite during the use of the PORTADAM Structure to manage any residual water.

- PORTADAM can be installed to retain as high as 10-foot of head. The final configuration will be based on the pre-excavation surveys and some combination of silt fencing and the PORTADAM could be employed, if necessary.

  The following diagrams illustrate the installation process:

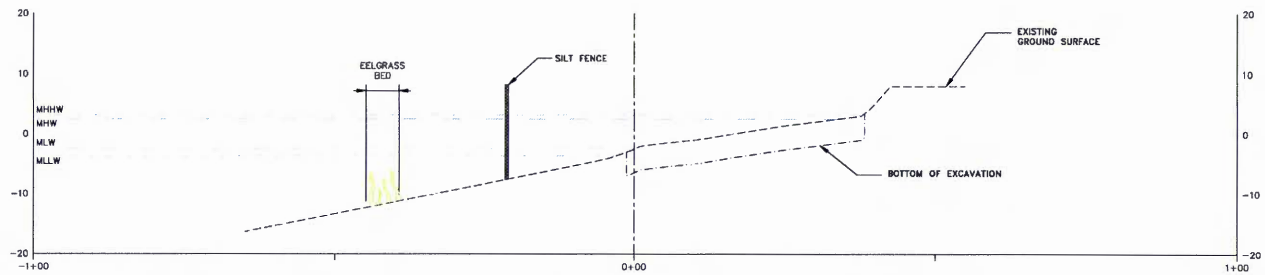


Installation of frames | Placing membrane | De-watering by pumping

And here is a photo that shows a similar configuration:

The advantages of the PORTADAM over the silt fence include (1) a complete seal once installed, allowing the excavation work to occur during any tidal conditions and (2) this will in turn allow the work to be completed more quickly, further minimizing any potential for water quality impacts, eliminating potential fish entrapment in the excavation area as tidal flux will not occur, and eliminating the need for night work (thus eliminating the need for lighting systems and noise barriers/monitoring).

4094



TYPICAL SECTION

SCALE: 1"=10'

NOTE:

1. THE SILT FENCE CONSISTS OF A CHAIN LINK FENCE WITH METAL POSTS LINED WITH GEOTEXTILE FABRIC ON THE BAY SIDE.

EXHIBIT NO. 7

APPLICATION NO.

1-11-007

UNION PACIFIC RAILROAD

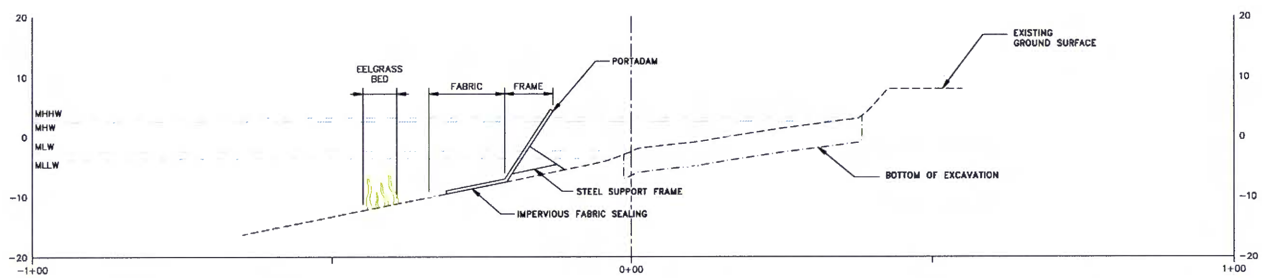
TURBIDITY BARRIER
CROSS SECTIONS (1 of 2)

UNION PACIFIC RAILROAD COMPANY
WATERFRONT LEASE SITE
EUREKA, CALIFORNIA
CEQA INITIAL STUDY

SILT FENCE CONCEPTUAL CROSS SECTION

ARCADIS

FIGURE **6**



TYPICAL SECTION

SCALE: 1"=10'

NOTE:

1. THE PORTADAM STRUCTURE AND IMPERMEABLE LINER WILL BE PLACED SUCH THAT THERE IS NO IMPACT TO EELGRASS BEDS.

UNION PACIFIC RAILROAD COMPANY
WATERFRONT LEASE SITE
EUREKA, CALIFORNIA
CEQA INITIAL STUDY

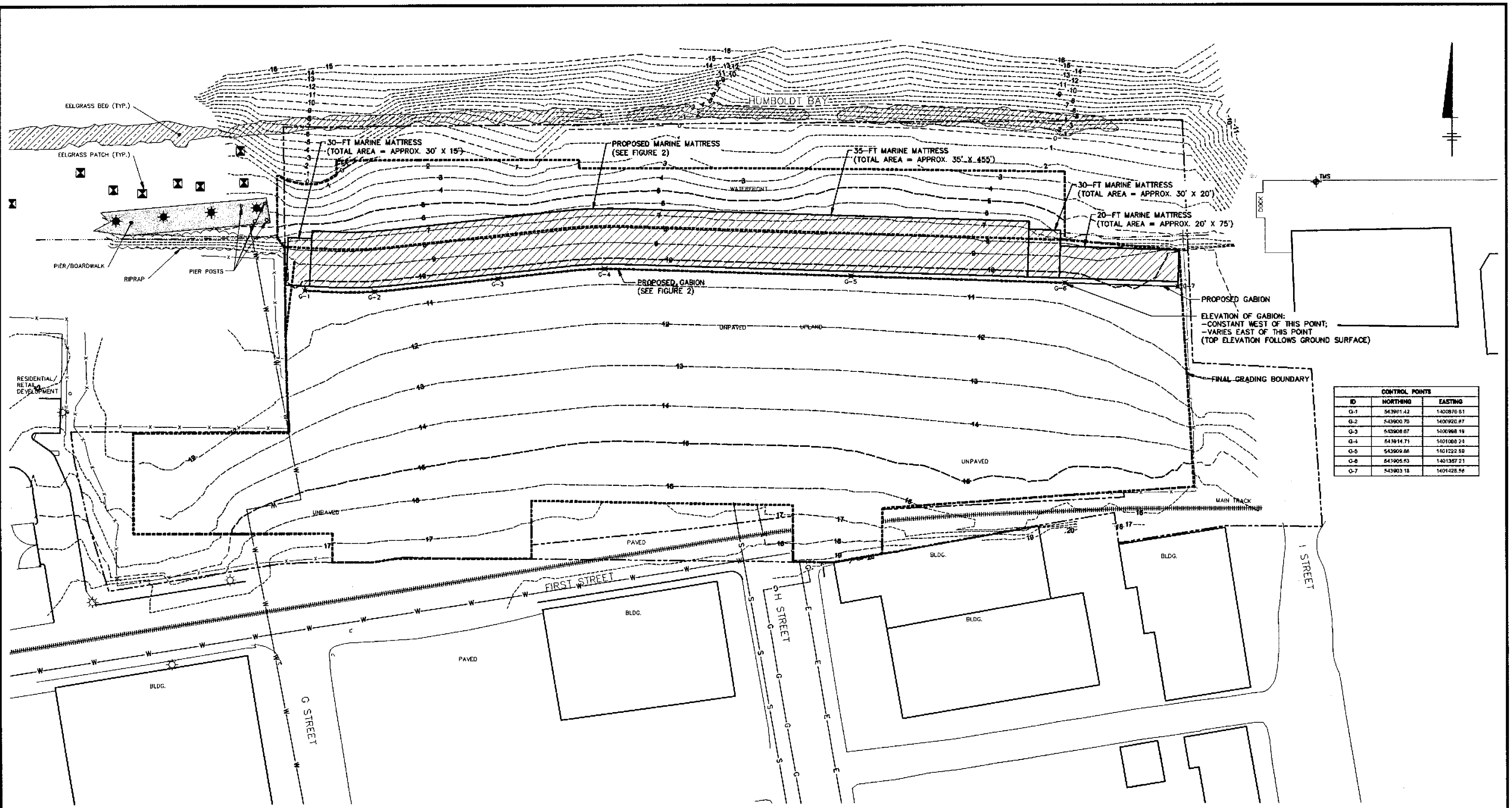
PORTADAM CONCEPTUAL CROSS SECTION

ARCADIS

FIGURE
7

CITY: PETALUMA, CA DIV/GROUP: ENV DB: C. DOTSON/J. HARRIS LD:— PIC:— PM: TM: LYR:(Opt)ON=*;OFF=*REF* PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 9/27/2011 3:51 PM BY: HARRIS, JESSICA ACADVER: 18.1S (LMS TECH) LAYOUT: 7 SAVED: 9/27/2011 3:50 PM
PROJECTNAME: —

2 of 2



CONTROL POINTS		
ID	NORTHING	EASTING
G-1	543901.42	1400876.61
G-2	543900.70	1400920.87
G-3	543908.87	1400998.19
G-4	543914.71	1401088.24
G-5	543909.88	1401222.59
G-6	543905.63	1401357.21
G-7	543903.18	1401428.56

LEGEND:

- ——W—— 2" WATER MAIN
- ——S—— SEWER MAIN
- ——G—— GAS MAIN
- ——E—— ELECTRIC

NOTES:

1. ELEVATION CONTOUR LINES WITHIN FINAL GRADING BOUNDARY REPRESENT FINAL ELEVATION AFTER TOPSOIL PLACEMENT.
2. BATHYMETRY SHOWN IS BASED ON SPOT ELEVATIONS AND MAY NOT ACCURATELY REFLECT THE ACTUAL BATHYMETRY. FINAL GRADING PLAN MAY NEED TO BE ADJUSTED BY THE ENGINEER BASED ON PRE-DREDGE SURVEY.
3. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
4. SHORELINE RESTORATION DETAILS ARE PROVIDED ON FIGURE 2.
5. ELEVATIONS SHOWN ARE IN NAVD 88.

0 30' 60'
GRAPHIC SCALE

UNION PACIFIC RAILROAD COMPANY
WATERFRONT LEASE SITE, EUREKA, CALIFORNIA
RESPONSE TO AGENCY COMMENT

FINAL GRADING PLAN

ARCADIS

FIGURE **1**

EXHIBIT NO. **8**

APPLICATION NO.

1-11-007

UNION PACIFIC RAILROAD

FINAL GRADING PLAN

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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XREFS: IMAGES: PROJECTNAME: —
00720X00
00720X05
00720X04

pillsbury

Pillsbury Winthrop Shaw Pittman LLP
2475 Hanover Street | Palo Alto, CA 94304-1114 | tel 650.233.4500 | fax 650.233.4545

Wayne M. Whitlock
tel 650.233.4528
wayne.whitlock@pillsburylaw.com

April 24, 2012

VIA EMAIL AND OVERNIGHT MAIL

EXHIBIT NO. 9
APPLICATION NO.
1-11-007 - UNION PACIFIC RAILROAD
SHORELINE PROTECTION CONCEPTUAL PLAN & TYPICAL CROSS SECTIONS
(1 of 5)

Mr. Robert Merrill
District Manager
California Coastal Commission
North Coast District Office
710 E Street, Suite #200
Eureka, CA 95501

Re: Eureka, California – Waterfront Lease - Union Pacific Railroad Company – Proposed Remediation Activities

Dear Bob:

To follow up on the conversation among you, Melissa Kraemer and Union Pacific Railroad representatives yesterday, Union Pacific is providing a revised description of the Shoreline Protection Alternative that Bridgette DeShields originally submitted to Coastal Commission and City of Eureka staff on January 28, 2011. The language follows in italics, with the changes shown in underline and strikeout format:

Conceptual Shoreline Restoration Alternative
Following removal of contaminated sediment from the waterfront area and removal of contaminated soil from the upland area, the shoreline will be restored using three distinct features shown on the attached Figure ~~sketch~~:

A buried marine mattress inboard of the high tide line (HTL)~~mean high water (MHW) mark~~

A bioengineered transition area with willow fascines, coir matting and native grass seeding for erosion protection

A row of gabion baskets backfilled with rock in the upland portion of the site.

> *The marine mattress consists of a rock-filled container constructed of high-strength geogrid. The mattresses will be placed inboard of the ~~MHW mark~~ HTL and will provide protection against erosion of the shoreline ~~up to the high tide line (HTL)~~. The marine mattress will be covered with soil backfill to provide a natural environment. Additional protection will be provided above the HTL and at least up to the 100-year flood elevation by installing live willow (i.e., Hooker's willow [Salix hookeriana]) fascines and coir matting in the transition area between the intertidal zone and the usable portion of the property. The transition area above the HTL will also be seeded with native grasses to assist in long term erosion control and to revegetate the transition area. The row of gabion baskets will simply serve as a feature that provides demarcation between the transition area and the usable property. The area above the gabion baskets will be seeded with a native grass seed to resist erosion. Willow fascines should begin to grow within the first growing season to increase surface roughness and develop root mass beneath the soil surface, thereby assisting in shoreline stabilization and erosion control. Over time, the live fascines in the transition area will grow into stands of Hooker's willow trees approximately 20 feet tall, similar to what is currently present. Within a few years, it is expected that natural colonization of the new slope by herbaceous tidal wetland species such as pickleweed (Sarcocornia pacifica) and saltgrass (Distichlis spicata) will occur just above and below the HTL.*

We also are providing a revised figure reflecting the changes Union Pacific has agreed to make in response to your request in the emails we exchanged on Friday and our phone call. See Figure 2 "Shoreline Restoration Section and Detail"(Revised April 24, 2012)(originally submitted with ARCADIS' Response to Agency Comment). It reflects the revised description of the shoreline protection feature and, in particular the revised limits of the marine mattress showing that it would not extend below the High Tide Line. The landward extent of the marine mattress would not be changed under these revisions.

We understand that, with these revisions, placement of the marine mattress will not be subject to the Coastal Act's wetland fill policy under Section 30233 and will facilitate the Commission's review of Union Pacific's Coastal Development Permit application. If your review confirms that these revisions achieve that purpose, please consider all the referenced documents as part of Union Pacific's application package and supporting materials. Please let us know as soon as possible if you have any additional questions or wish to clarify anything further.

Again, we appreciate your working through these issues with Union Pacific Railroad and we look forward to seeing the Staff Report as soon as possible.

Sincerely,

Wayne Whitlock

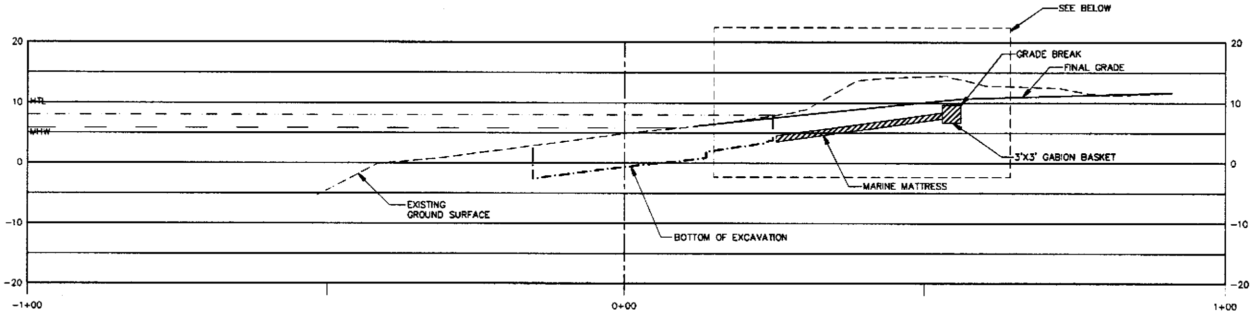
Wayne M. Whitlock

Enclosure

cc: Ms. Alison Dettmer, Deputy Director, California Coastal Commission,
Ms. Melissa Kraemer, California Coastal Commission, North Coast District Office
Mr. Craig Hunt, North Coast Regional Water Quality Control Board
Mr. Dan Berman, Humboldt Bay Harbor, Recreation and Conservation District
Ms. Lisa Shikany, City of Eureka Community Development Department
Mr. James Diel, Union Pacific Railroad Company
Robert Bylsma, Esq., Union Pacific Railroad Company
Mr. Scott Davis, ARCADIS U.S., Inc.
Mr. James Eisert, ARCADIS U.S., Inc.
Ms. Bridgette DeShields, ARCADIS U.S., Inc.

Enclosure

ARCADIS U.S. Inc., Figure 2 "Shoreline Restoration Section and Detail", (Revised April 24, 2012) (original figure included with ARCADIS' Response to Agency Comment)

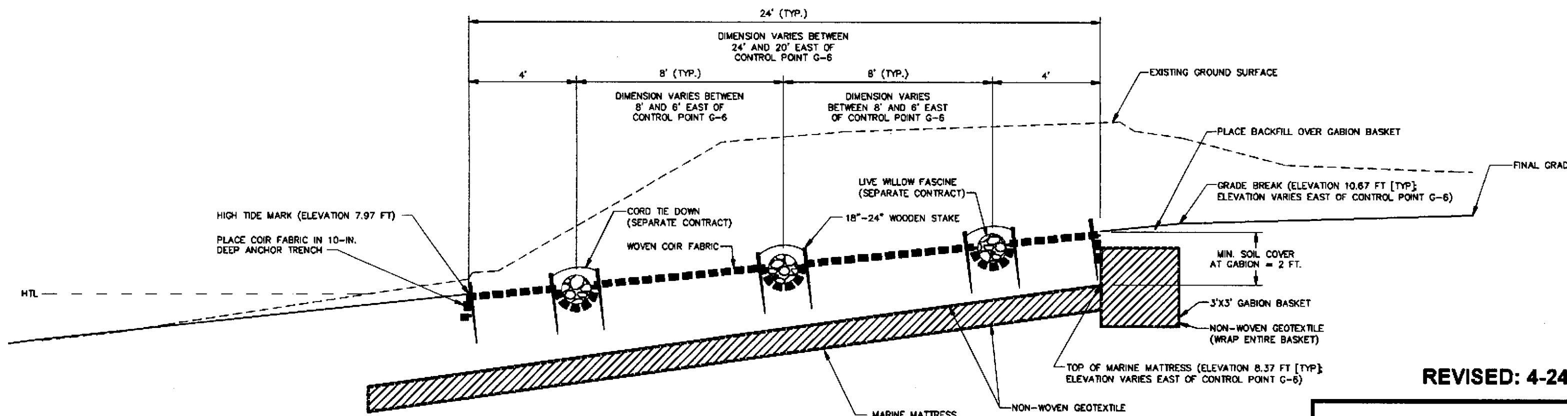


NOTES:

1. CONTRACTOR SHALL INSTALL MARINE MATTRESS BEFORE BACKFILLING AFTER DREDGING. LOW END OF MATTRESS SHALL BE PLACED ON BOTTOM OF EXCAVATION. SUBGRADE FOR MATTRESS SHALL BE SLOPED AT A CONSTANT SLOPE (APPROXIMATELY) BETWEEN THE LOW AND THE HIGH POINT OF THE MATTRESS. SUBGRADE PREPARATION SHALL BE MINIMAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
2. TOP OF MARINE MATTRESS SHALL BE MINIMUM OF 2 FEET BELOW FINAL GRADE.
3. PLACE GABION BASKET ON FIRM, NON-YIELDING SUBGRADE. OVEREXCAVATE SOFT AREAS BY 1 FOOT AND REPLACE WITH COMPACTED GENERAL FILL.
4. STAKING FOR COIR FABRIC AND WILLOW FASCINE SHALL BE DONE AT 3 FOOT INTERVALS (ALONG SHORELINE ALIGNMENT) WHERE SHOWN IN CROSS SECTION.
5. ELEVATIONS SHOWN ARE IN NAVD 88.

TYPICAL SHORELINE STABILIZATION SECTION

SCALE: 1"=10'



NOTE:

1. ELEVATIONS SHOWN ARE IN NAVD 88.

TYPICAL SHORELINE STABILIZATION DETAIL (1)

NOT TO SCALE

REVISED: 4-24-2012

UNION PACIFIC RAILROAD COMPANY
WATERFRONT LEASE SITE, EUREKA, CALIFORNIA
RESPONSE TO AGENCY COMMENT

SHORELINE RESTORATION SECTION AND DETAIL

ARCADIS

FIGURE 2

5 of 5

Attachment A
Mitigation Monitoring and Reporting Pro

for the
Union Pacific Railroad Site Remediation
Mitigated Negative Declaration

The Humboldt Bay Harbor, Conservation and Recreation District (District) has adopted a Mitigated Negative Declaration (MND) as an environmental assessment document pursuant to the California Environmental Quality Act (CEQA) for a soil and sediment remediation activity in and adjacent to Humboldt Bay by Union Pacific Railroad (State Clearinghouse No. 2011102003).

As part of the MND, the District required mitigation measures that have the effect of reducing the proposed project's potential environmental effects to less-than-significant levels. These mitigation measures are identified below. Changes or additions from the mitigation measures included in the Draft MND and IS are highlighted in italic font.

The District requires that all of the following mitigation measures be incorporated into the proposed project. Each mitigation measure will be adopted as a condition of the District's approval of the permit for the proposed project.

The District assigns the responsibility to District staff to verify that each element of all mitigation measures are carried out by the applicant. This assignment of implementation monitoring shall serve as the mitigation monitoring or reporting program required by CEQA, as summarized in CEQA Guidelines section 15074(d).

Mitigation Measures for the
Union Pacific Railroad Soil and Sediment Remediation Project

I. Aesthetics

I-1 Lighting used during daytime and nighttime work, if necessary, will be arrayed to direct light away from sensitive receptors whenever feasible.

I-2 Lighting utilized during daytime and nighttime work will be angled downward and focused to illuminate only the areas necessary to ensure safe operations.

I-3 Lighting utilized during daytime and nighttime work will include shields to minimize the leakage of light from the immediate work area.

III. Air Quality

III-1 The proposed project will incorporate applicable mitigation measures as outlined within North Coast Unified Air Quality Management District Rule 104.4, including but not limited to:

1. Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.
2. The use of water for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads and the clearing of land.

3. The application of water on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.
4. The paving of roadways (i.e., following excavation) maintenance of surfaces in a clean condition.
5. The prompt removal of earth or other track out material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

III-2 In addition, the applicant will comply with the requirements of all adopted air quality plans at all time, including plans covering particulate emissions, and will implement all actions required by the AQMD.

IV. Biological Resources

IV-1 Dredging and waterfront backfilling activities will either take place during low tide cycles where the silt fence alternative is utilized, or will be accomplished "in the dry" if the PORTADAM alternative is selected. Both the silt fences and PORTADAM structure will be installed such that a) fish will not be entrapped, b) an exclusion zone will prevent fish from entering excavation areas, and c) sedimentation of essential fish habitat (EFH) adjacent to the excavation area will be avoided.

IV-2 A survey for any sensitive avian species nesting in the building slated for demolition and near the excavation locations will be conducted prior to the commencement of activities, when work is conducted in the breeding season (i.e., February 1 through August 31) and where vegetation is present. If any sensitive avian species are identified, a minimum 100-foot exclusionary buffer area will be established around active nests, and a subsequent bird survey will be conducted to demonstrate that the young fledged.

IV-3 Herbaceous and woody vegetation will be removed from the site prior to initiating excavation activities to reduce potential for nesting birds in the excavation area if possible. Vegetation removal on the site will generally occur during the non-breeding season (i.e., September 1 through January 31). If herbaceous or woody vegetation removal is necessary during the breeding season (i.e., February 1 through August 31), then a biologist will perform a bird survey no more than 3 days prior to vegetation clearance. If no nesting activity is identified, then vegetation will be removed. If nesting activity is identified, then vegetation removal will not occur until the young have fledged from the nest(s) or the nest(s) has been naturally predated.

IV-4 An avian survey of the existing structure will be conducted no more than 3 days prior to demolition if demolition is to occur during the bird breeding season. If no nesting activity is identified, then demolition will commence. If nesting activity is identified, then demolition will not occur until the young have fledged from the nest(s) or the nest(s) has been naturally predated.

IV-5 To protect against excess sedimentation in EFH and to protect water clarity for eelgrass, water quality will be monitored during dredging activities, as presented in the project description, to confirm that turbidity increases are not occurring outside of the work area. Water quality monitoring will be carried out to ensure that, as specified in the Water Quality Control Plan for the North Coast Region (North Coast Regional Water Quality Control Board 20071), turbidity will not be increased more than 20 percent above naturally occurring background levels. If this limit is exceeded, the District and the Regional Board shall be promptly notified and shall work with the applicant to identify necessary measures to achieve compliance.

[1] North Coast Regional Water Quality Control Board. 2007. Water Quality Control Plan for the North Coast Region.

IV-6 Soil and sediment stockpiles areas, including hazardous waste and debris and concrete storage areas, will be located a minimum of 50 feet from the intertidal areas (BMP WM-3 as presented in project description)

IV-7 Vehicle maintenance and refueling will occur 50 feet or more from intertidal areas, and vehicles will be inspected for leaks prior to use within 50 feet of intertidal areas (BMPs NS-8, -9, and -10 as presented in project description).

IV-8 An eelgrass survey will be conducted in 2012 no more than 30 days prior to initiation of sediment excavation activities (including installation of turbidity control measures). The eelgrass survey will be conducted in the growing season (i.e., May through August).

IV-9 Mitigation will be required if 5 square meters or more of eelgrass patches are impacted. An eel grass patch will be defined as a contiguous area of eelgrass less than 0.01 acre (i.e., 40.4 square meters) in size.

IV-10 If mitigation is required, a ratio of 1.2 square meters restored to 1 square meter impacted will be required. Mitigation areas will need to have an average density equal to that of the impacted area. If required, mitigation methods could be either seed buoys or donor plant transplantation.

IV-11 If mitigation is required, then it will be conducted in an area where eelgrass can successfully establish (e.g., adjacent to current eelgrass beds) and not in transitional, intertidal areas where project impacts are most likely to occur and where eelgrass patches colonize and die back in regular (e.g., yearly) fluctuations.

IV-12 If mitigation is required, then a monitoring program will be implemented for a period of five years with a yearly reporting requirement.

VIII. Hazards and Hazardous Materials

VIII-1 A transportation management plan has been developed and will be implemented to address vehicle routing, staging, and other issues (see TMP below under Section XVI-Traffic).

VIII-2 Trucks will be covered to minimize loss of material during transit.

VIII-3 Vehicle tires will be brushed or washed prior to exiting the site to eliminate offsite tracking of material (BMP TC-3 as shown and described in the project description).

VIII-4 A Storm Water Pollution Prevention Plan (SWPPP) will be developed and submitted to and approved by the State Water Resources Control Board pursuant to the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ; provisions of the SWPPP will be implemented. These include BMPs WM-1, -2, -3, -4, WE-1, and NS-8, -9, -10 shown and described in the project description.

VIII-5 Vehicles will follow direct routes along H and I Streets between US 101 and the project site.

VIII-6 Sediment release to the waters of Humboldt Bay will be mitigated through the use of a turbidity control structure consisting of either a PORTADAM system or the installation of a silt fence (see project description for details of these two alternatives).

VIII-7 Sediment confirmation testing will be conducted for the identified contaminants of concern as well as dioxins/furans in the marine sediments remaining after excavation in the northwest corner of the project area, (adjacent to the City Pier) and the results will be shared with the District.

VIII-8 *Chemical analysis of the marine sediments for waste characterization purposes will include testing for dioxins/furans, and the results will be shared with the District.*

VIII-9 *To prevent and address spill of equipment fuels, lubricants, hydraulic fluids, and similar materials the applicant shall incorporate the following measures:*

1. *No equipment fueling, except vessels, shall occur on, within or immediately adjacent to the bay.*
2. *All equipment used during construction shall be free of oil, hydraulic, and fuel leaks at all times.*
3. *All spills shall be reported immediately to the appropriate public and emergency services response agencies.*
4. *Equipment working over water, below mean high water, shall use non-petroleum hydraulic fluid.*

Under the PORTADAM alternative, a temporary PORTADAM structure will be installed to isolate the waterfront area. After installation, the PORTADAM structure will effectively isolate the excavation area from Humboldt Bay, preventing any contaminated sediments from escaping containment. The use of the PORTADAM will allow excavation and backfilling during any tide conditions. *City of Eureka pier pilings in the northwest corner of the project area limit the potential use of the PORTADAM in this area*

Under the silt fence alternative, excavation work will be conducted only during low tide periods, thus allowing excavation in the dry. Prior to initiating excavation activities in tidal areas, a silt fence will be constructed around the excavation area and the geotextile fabric of the silt fence will serve as a filter to keep suspended sediment in the enclosed areas while allowing water to pass through. Excavation activities will occur during low tide, and excavated areas will be backfilled with sediment of similar organic content and grain size prior to the next incoming tide. This will reduce potential generation of suspended sediment in the water column.

IX. Hydrology and Water Quality

IX-1 A SWPPP will be developed, submitted to, and approved by the State Water Resources Control Board pursuant to the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ; provisions of the SWPPP will be implemented.

IX-2 Wastewater will be either used onsite for dust control (on contaminated materials) and/or collected, characterized, and appropriately disposed or recycled in accordance with applicable federal, state, and local regulations (BMP NS-2). This could include treatment and disposal to the City of Eureka sanitary sewer system via permit.

IX-3 Although water will be used for dust control, the work is proposed for the dry season, and erosion controls (BMPs EC-1, -3, -4, -6, -7, -8, SE-1, -3, -4, -5, -6, -7, -8, and -10 as presented and described in the project description) will be in place in accordance with a SWPPP.

IX-4 Sediment release to the waters of Humboldt Bay will be avoided through the use of either a PORTADAM system or the installation of a silt fence (see project description for details of these two alternatives).

IX-5 BMPs EC-1, -3, -4, -6, -7, -8, and SE-1, -3, -4, -5, -6, -7, -8, and -10 as presented and described in the project description will be implemented as sediment controls.

IX-6 Occurrence of excavation activities will be restricted to the non-rainy season (generally April 15 to October 15 but activities could extend through October 31).

IX-7 Use berms to divert runoff around exposed areas (BMPs SE-4, -6, and EC-9 as presented and described in the project description).

IX-8 Use other sediment control measures including filtration devices, barriers (e.g., fiber rolls, silt fences, straw bale barriers, gravel inlet filters, storm drain inlet protection, and gravel bag dikes) and settling devices (i.e., sediment traps) or other controls, as appropriate (BMPs SE-1, -3, -4, -5, and -6 as presented and described in the project description).

IX-9 Implement sediment control BMPs, including storm drain inlet protection, and be prepared with on-hand materials to implement sediment control measures in the event of predicted rain during the remainder of the year (BMPs EC-1 and SE-10 as presented and described in the project description).

IX-10 Inspect any stormwater drain in close proximity to any ongoing excavation activities on a regular basis for evidence of erosion causing settlement, blockage, or damage resulting in standing water (BMP SE-10 as presented and described in the project description).

IX-11 Revegetate upland areas, install live willow (i.e., Hooker's willow [Salix hookeriana]) fascines and coir matting in the transition area between the intertidal zone and the usable portion of the property, and install a buried marine mattress inboard of the mean high water (MHW) mark to reduce potential for short and long-term erosion of the site.

XII. Noise

XII-1 The applicant shall implement all of the following mitigation measures to assure that the temporary noise impacts to nearby sensitive receptors (residences and businesses as well as local fauna) associated with the proposed Project are reduced to less than significant levels. The relevant standard shall be compliance with the *City of Eureka General Plan Section 7G, and Table 7-1 in particular, which calls for reducing noise levels at neighboring sensitive sites (residences) to 75 dB (max) or 50 dB (Leq) or less during the day, and 65 dB (max) or 45 dB (Leq) during the night.* The mitigation measures include the following:

A The project will employ noise monitors at the project site boundary adjacent to potentially sensitive receptor locations. Noise monitors will be periodically read during construction to ensure compliance with the *city of Eureka General Plan Section 7G Table 7-1.*

B *Noise readings out of compliance with the City of Eureka General Plan requirements shall necessitate a reassessment of these mitigation measures and changes to project implementation to achieve compliance. However it is anticipated that certain components of the project that will occur on the property perimeter may create short term exceedences of the City standards. Such exceedences shall be limited to daytime hours, shall require additional notification of neighboring properties (see C below) and shall be of limited (1-2 week) duration.*

C Adjoining residents and businesses within 1000 ft from the project perimeter will be notified in writing prior to start of construction, with such notification to include: a brief summary of the project, the projected timeline, the and a phone number and contact person to reach with concerns or complaints regarding project noise or other impacts. Additional notification shall be provided to these same project neighbors in advance of any night time work.

D Stationary noise sources (e.g., generators) will be located as far from adjacent noise-sensitive receptors as possible. Portable, temporary noise shielding will be used to mitigate noise emissions.

E Portable, temporary noise shielding will be erected on the project site to attenuate noise generated by construction and lighting equipment during nighttime work, if night work is necessary. Noise shielding will consist of temporary walls measuring approximately 40 feet long by 15 feet high. These walls will be relocated each night to provide shielding for the residences located to the west and southeast of the project

site, as necessary, to maintain compliance with City of Eureka General Plan Section 7G and Table 7-1 therein. Noise shielding will be located adjacent to the sediment excavation activities along the waterfront portion of the site, as well as in the vicinity of the soil stockpile. The temporary noise barrier will be positioned so that the construction equipment does not approach the edge of the noise barrier by less than 10 feet. The temporary sound wall will be constructed of plywood or a sound blanket system with a surface density of 3lbs per square foot.

XVI. Transportation and Traffic

XVI A draft traffic management plan (TMP) has been developed for the project. In order to address potential changes in traffic considerations prior to project implementation, *the applicant shall submit for review and approval by the City of Eureka a revised traffic management plan prior to implementation, and no traffic generating activities shall commence until approval of this TMP by the City of Eureka. The City's approval of this plan shall be shared with the District to verify compliance with this measure.* The final traffic management plan shall include:

A. Offsite staging of trucks to reduce congestion on local streets

B. Routing of truck traffic along City-preferred routes (currently H and I Streets, but to be determined in City's final review and approval).

C. To the extent possible, scheduling of project activities so that truck traffic occurs during non-peak hours and on weekdays only

D. To the extent possible, scheduling of project activities so that truck traffic will be staggered throughout the day to mitigate congestion and potential vehicle noise concerns

XVII. Utilities and Service Systems

XVII-1 Wastewater generated by the proposed project that cannot be used for dust control will be treated onsite prior to disposal into the City of Eureka's wastewater system and/or transported for offsite disposal. A mobile water treatment unit, likely consisting of sand filtration to reduce solids, will be used for primary treatment of the water to meet applicable requirements before it is discharged into the City of Eureka sanitary sewer system via permit. The system will most likely be run as a batch process as preferred by the City of Eureka. *Water quality testing will be implemented to verify* that discharged waters meet the requirements of the RWQCB and those of the City of Eureka

XVII-2 A SWPPP will be established and implemented to minimize stormwater runoff.

wra
ENVIRONMENTAL CONSULTANTS

September 4, 2008

EXHIBIT NO. 11
APPLICATION NO.
1-11-007
UNION PACIFIC RAILROAD
2008 EELGRASS SURVEY REPORT (1 of 4)

Judy Nedoff
Arcadis
1670 Corporate Way, Suite 202
Petaluma, CA 94954

Re: Eelgrass Survey at Union Pacific Railroad Former G&R Metal Site

Dear Ms. Teague,

The purpose of this letter is to summarize the results of the eelgrass survey performed on August 18, 2008 offshore of the Union Pacific Railroad Former G&R Metal Site located at 701 1st Street in Eureka, California. The eelgrass survey covered the area just offshore of 701 1st Street and the shoreline area immediately west of this property (Study Area; see Figure 1).

The Study Area is located in the northern portion of Humboldt Bay; and lies south of the Woodley Island Marina and west of the Samoa Bridge. The Inner Reach waterway is located in the northern portion of the Study Area, and is dredged and maintained by the Army Corps of Engineers for navigable passage. The area to the east of the Study Area is also dredged to the shoreline to support commercial navigation. The purpose of the WRA eelgrass survey is to provide a map for use in assessing potential eelgrass impacts that could occur due to soil remediation work in the Study Area.

Eelgrass in the Study Area

On August 18, 2008 WRA biologists Dan Chase and Rob Schell conducted an eelgrass survey of the Study Area during a -0.18 foot low tide. Mapping was done with a Trimble GeoXH GPS unit with sub-foot accuracy. Eelgrass mapping in subtidal areas was conducted by boat. Eelgrass within the intertidal area was mapped on foot. Eelgrass areas larger than 0.01 acres were designated as eelgrass beds, areas smaller than 0.01 acres were designated as eelgrass patches, and single isolated shoots was designated as individuals.

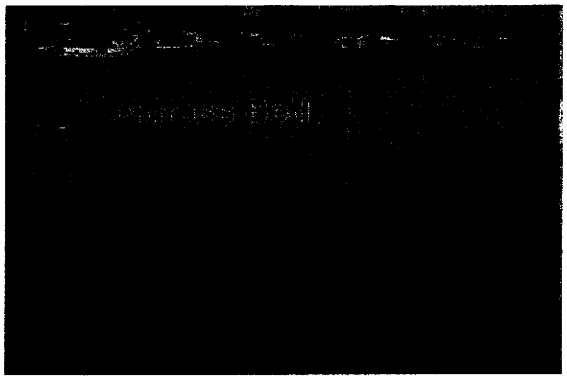
Within the Study Area, 1 eelgrass bed, 10 patches of eelgrass, and 5 individual eelgrass shoots were identified (Figure 1). The majority of eelgrass was found within a bed growing at approximately -1 foot Mean Lower Low Water (MLLW). This bed measures approximately 7,555 sq ft (0.17 acres) and is located approximately 40 feet from the shoreline.

The 10 eelgrass patches identified covered approximately 857 sq ft (0.02 acres), and the majority of the patches were located in the western portion of the Study Area, closer to the shoreline than the larger eelgrass bed. Five additional individual eelgrass shoots were identified and account for approximately 5 square feet of eelgrass coverage within the Study Area. Table 1 summarizes the results of the eelgrass survey. The photographs below show the linear eelgrass bed within the Study Area.

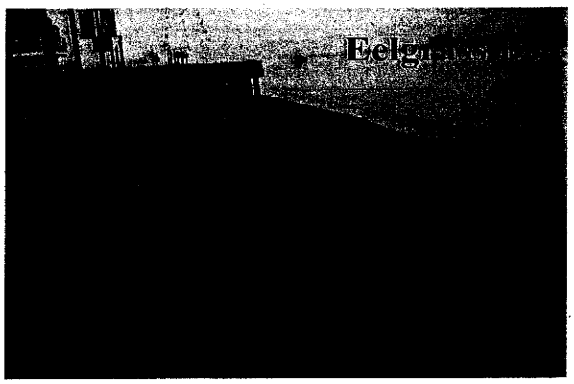
2169-G East Francisco Blvd., San Rafael, CA 94901 (415) 454-8868 tel (415) 454-0129 fax info@wra-ca.com www.wra-ca.com

Table 1. Summary of eelgrass mapped within the Study Area

Eelgrass Feature	Number of Features Mapped	Total Size of Features (sq ft)
Bed	1	7,555
Patch	10	857
Individual	5	5
	Total Area of Eelgrass Coverage:	8,417



Eelgrass bed located approximately -1' MLLW at 701 1st Street.



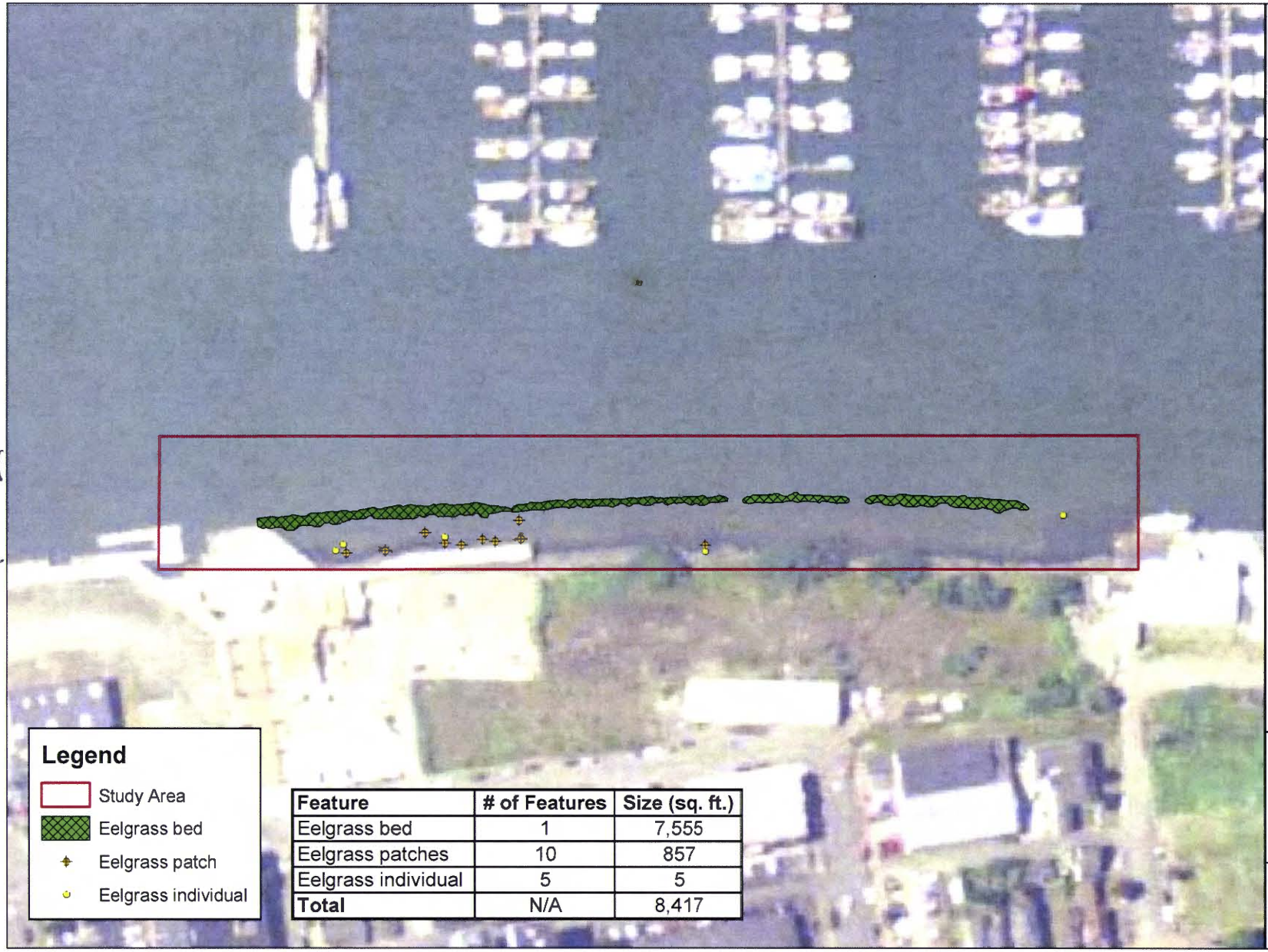
Eelgrass patches and bed located west of the Study Area.

Substrate composition within the Study Area and adjacent shoreline was primarily mud with some sand and fine sediment moving up the shoreline. Various areas of rocky substrate, comprised mainly of concrete and rock riprap, were scattered around the intertidal zone. The shorelines are comprised of rock rip rap. No eelgrass was observed within the dredged navigational channel along the northern portion of the Study Area.

Please let me know if you have any questions or comments.

Sincerely,

Justin Semion
Associate Biologist
WRA, Inc.



Feature	# of Features	Size (sq. ft.)
Eelgrass bed	1	7,555
Eelgrass patches	10	857
Eelgrass individual	5	5
Total	N/A	8,417

wra
ENVIRONMENTAL CONSULTANTS
2169-G East Francisco Blvd.
San Rafael, CA 94901
(415) 454-8868 Phone
(415) 454-0129 Fax

Union Pacific Railroad
Former G&R Metal Site
701 1st Street

Eureka, CA

Figure 1

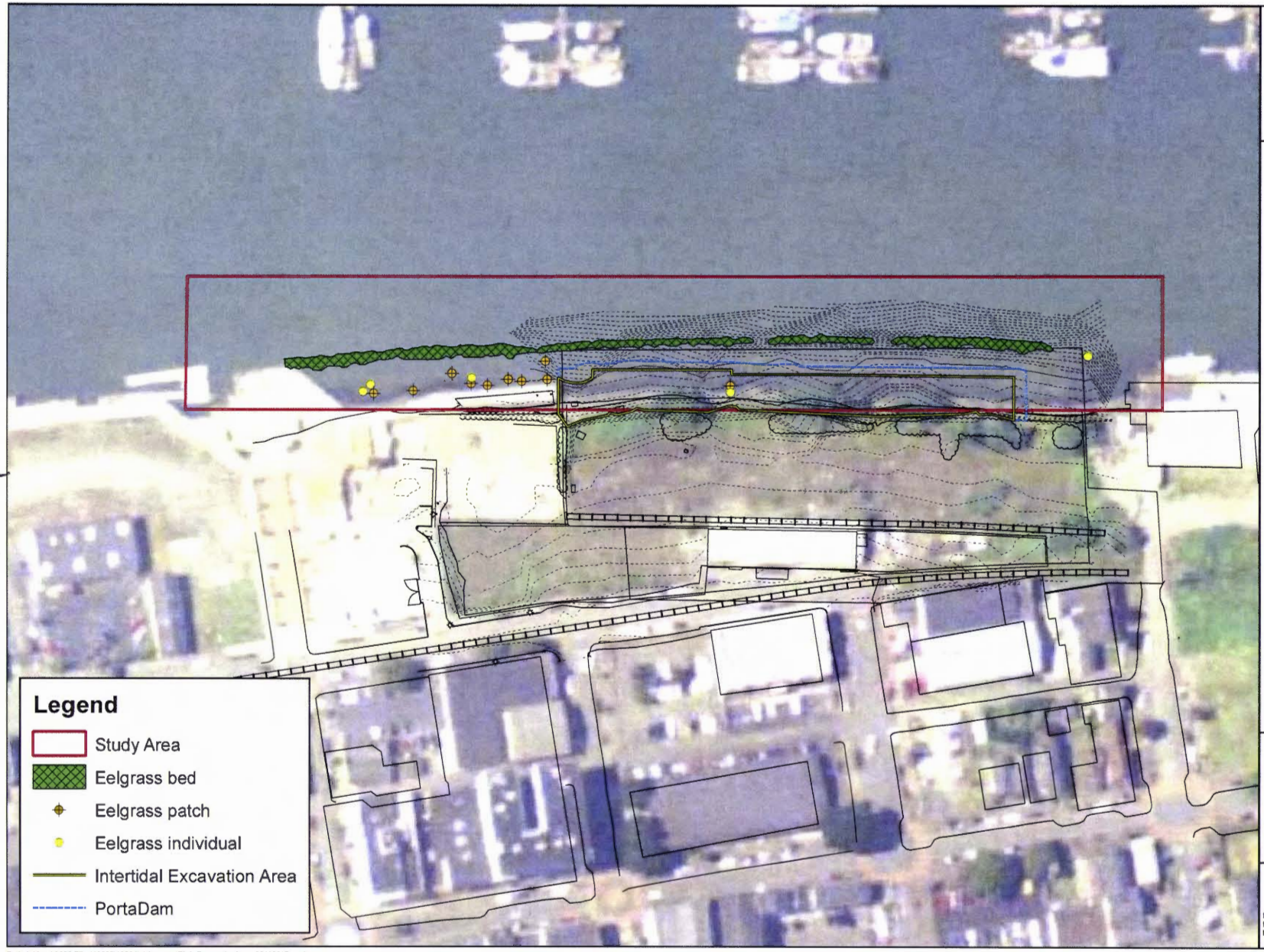
Eelgrass Survey Results

This map is representational only, and not meant for use in detailed design.

N
W E
S

0 50 100 200
Feet

Date: August 2008
Image Source: TerraServer, 6/29/2005
Map By: Derek Chan
Filepath: L:\Acad 2000 Files\18000\18094\gis\arcmap\Fig1_Eelgrass.mxd



Path: L:\Aced 2000 Files\18000\18094\gis\arcmap\Fig3_ExcavationArea_20110915.mxd

wra
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2169-G East Francisco Blvd.
San Rafael, CA 94901
(415) 454-8868 Phone
(415) 454-0129 Fax

Union Pacific Railroad
Former G&R Metal Site
701 1st Street

Eureka, CA

Figure 3

Intertidal Excavation Area

This map is representational only, and not meant for use in detailed design.

N
W E
S

0 50 100 200
Feet

Date: September 2011
Map By: Derek Chan
Image Source: TerraServer, 6/29/2005

Waterfront Lease Site (Former G & R Metals) Eelgrass Monitoring Plan

701 First Street
EUREKA, HUMBOLDT COUNTY
CALIFORNIA

Prepared For:
Alex Francisco
Arcadis U.S., Inc.
2033 North Main Street, Suite 340
Walnut Creek, CA 94595

Contact:
Justin Semion
semion@wra-ca.com

Date:
October 2011

EXHIBIT NO. 12
APPLICATION NO.
1-11-007
UNION PACIFIC RAILROAD
PROPOSED EELGRASS CONTINGENCY MITIGATION PLAN (EXCERPT) (1 of 9)

wra
ENVIRONMENTAL CONSULTANTS

2169-G East Francisco Blvd., San Rafael, CA 94901 (415) 454-8868 tel (415) 454-0129 fax info@wra-ca.com www.wra-ca.com

Table of Contents

List of Figures

List of Tables

List of Attachments

1.0 INTRODUCTION

The purpose of this report is to describe the pre- and post-construction monitoring and contingency mitigation plan for eelgrass (*Zostera marina*) that may be necessary if eelgrass is impacted by sediment remediation activities (Project Area) adjacent to the Union Pacific Railroad (UPRR) Waterfront Lease site (former G&R Metals) located at 701 First Street Eureka, California (the site (site; Figure 1). The remedial action is being undertaken pursuant to Provision No. 7 of the North Coast Regional Water Quality Control Board's (RWQCB) Cleanup and Abatement Order No. R1-2002-0095. This report covers only those portions of the remedial action area within the intertidal and subtidal habitat portions of the Project Area. Avoidance, minimization and mitigation (AMM) measures presented in this report are based on agreements reached during the September 16, 2011 conference call held between representatives of UPRR, the United States Army Corps of Engineers (USACE), the National Marine Fisheries Service, the California Coastal Commission (CCC), and the California Department of Fish and Game (CDFG).

The Project Area is located in the northern portion of Humboldt Bay in Humboldt County, California. Presence of eelgrass was established during a survey conducted by WRA on August 18, 2008 (Figure 2). The 2008 eelgrass survey covered the intertidal and subtidal aquatic portion of the Project Area and adjacent aquatic areas. During the survey a narrow bed of eelgrass growing in a band approximately 40 feet from the shoreline, 10 eelgrass patches (i.e., areas of eelgrass less than 0.01 acres in size), and five individual eelgrass shoots were documented. The 2008 survey identified one eelgrass patch and one individual eelgrass shoot in the Project Area. Based on the remedial action plans, it is not anticipated that impacts to the eelgrass bed will occur from the Project. However, impacts to patches of eelgrass cannot be ruled out. This report describes plans for a pre-construction eelgrass survey and post-construction monitoring survey to document conditions of the eelgrass bed prior to and following construction, as well as measures to avoid and minimize potential impacts to eelgrass. This plan also includes a contingency mitigation plan for eelgrass in the event that proposed activities results in impacts to eelgrass above the threshold of acceptable impacts, as agreed upon in the September 16, 2011 conference call (i.e., impacts to the eelgrass bed or more than 5 square meters of eelgrass patches).

1.1 Project Description

The Project Area is located in the intertidal and subtidal areas of northern Humboldt Bay adjacent to 701 First Street in Eureka, south of the Woodley Island Marina and west of the Samoa Bridge. The Inner Reach waterway is located north of the Project Area, and is dredged and maintained by the USACE for navigable passage. The area to the east of the Project Area is also dredged to the shoreline to support commercial navigation. Substrate composition within the Project Area and adjacent shoreline is primarily mud with some sand and fine sediment moving up the shoreline. Various areas of rocky substrate, comprised mainly of concrete and rock riprap, is scattered around the intertidal zone. The shoreline within the Project Area is comprised of rock rip rap.

The purpose of the proposed activities is to remediate impacted soil and sediment to comply with Provision No. 7 of Cleanup and Abatement Order No. R1-2002-0095 from the RWQCB. Remediation activities will include dredging to remove approximately 4,350 cubic yards (cys) of impacted intertidal sediments to a depth of three to five feet and across approximately 0.54

acres of tidal mudflat below mean high tide line. It is assumed that 25 percent of this material (approximately 1,100 cys) will be California Hazardous Waste and 75 percent (approximately 3,250 cys) will be non-hazardous waste. Additionally, upland soil excavation will remove approximately 13,580 cys of soil at depths of one to 10 feet below ground surface. A more detailed project description is presented as Attachment 1 of this report.

2.0 ECOLOGICAL BACKGROUND

2.1 Eelgrass Biology

Eelgrass (*Zostera marina*) is a sea grass with dark green, long, narrow, ribbon shaped leaves with rounded tips. Leaves shoot from a creeping rhizome that binds bottom sediments. An individual rhizome may have many shoots; however, most shoots tend to be toward the growing end of the rhizome. Leaves and rhizomes contain air spaces, called lacunae, that assist with buoyancy. Numerous flowers occur on a reproductive shoot similar to those of terrestrial grasses. The flowers float near the surface, are pollinated by floating pollen and produce seeds that sink to the bottom and germinate the following year. Eelgrass is common throughout the northern Pacific and Atlantic Oceans and provides habitat for many other species of fish, mammals, and invertebrates.

2.2 Eelgrass in Humboldt Bay

Humboldt Bay is a coastal estuary comprised of multiple basins and forms the second largest enclosed bay within California. Maintained as a deep water bay for nautical navigation, the 14 mile long and 4.5 mile wide Humboldt Bay has a well established and documented eelgrass presence. Previous estimates of eelgrass distribution in Humboldt Bay totaled 4,670 acres, which accounts for approximately 41 percent of California's eelgrass population (CDFG 2008). Growth within the bay is generally restricted to narrow bands along the shore at depths -2.1 m (-6.9 ft) to 1.4 m (4.6 ft) Mean Lower Low Water (Gilkerson 2008). The most expansive and dense beds are present in the northern and southern basins of Humboldt Bay. The attributes of eelgrass beds provide a consistent food source, spawning habitat, and protective cover for a large variety of micro and macrofauna, including large numbers of Pacific Herring (*Clupea pallasii*).

The size and density of a given eelgrass bed can be highly variable from year to year, even given the relative stability of the eelgrass population in Humboldt Bay. Abiotic factors such as turbidity levels, cloud cover, marine currents and freshwater input can have a substantial impact on growing conditions for eelgrass. Years with high rainfall totals that cause higher levels of sediment input to estuaries and can reduce light availability within the water column, introducing a negative natural environmental stressor affecting eelgrass density and coverage. Conversely, years with low rainfall totals and lower levels of turbidity within estuarine waters can provide more favorable growing conditions for eelgrass and result in higher density beds and expansion in coverage.

3.0 MINIMIZATION AND AVOIDANCE MEASURES

Minimization and avoidance measures for the Project are intended to prevent impact to eelgrass adjacent to the Project Area. The following minimization and avoidance measures will be implemented:

- The area identified for sediment excavation will be surrounded by a turbidity barrier that will minimize migration of sediment from the excavation area. The turbidity barrier will be either a PORTADAM® product or a stiff silt curtain.
    - If the stiff silt curtain option is selected, then dredging activities will be conducted during low tide to limit turbidity. If the PORTADAM® option is selected, then excavation can occur regardless of tidal cycle because water flow will be excluded from the Project Area.
- Proposed activities, including turbidity control, installation will avoid direct impacts to the eelgrass bed adjacent to the Project Area.
- Water quality monitoring will be conducted during dredging activities to confirm that turbidity increases in or adjacent to the work area are not occurring outside parameters detailed in the Water Quality Management Plan.

Upon completion of remediation activities, excavation areas in tidal mudflats will be backfilled to approximately original grade. Subsurface materials (i.e., more than one foot below sediment surface) will be of a grain size sufficient to withstand erosive wind- and boat-generated wave conditions, as estimated through computer modeling. Surface sediment will be of a finer grain size (e.g., fine to medium sand) to allow for mudflat reestablishment in the excavation area. The transition between tidal and upland areas on the site will be regraded during the restoration process to change the abrupt transition currently present to a gentler sloping transition and will likely result in an increase of fringe wetlands. The tidal to upland transition slope will be stabilized with bioengineering materials to the extent possible, and herbaceous vegetation will be allow to naturally colonize.

4.0 EELGRASS MONITORING AND EVALUATION OF NEED FOR MITIGATION

Based on agreements reached during the September 16, 2011 conference call, the following eelgrass monitoring plan is designed for the Project Area. If monitoring indicates that impacts to eelgrass will occur, then mitigation for eelgrass impacts will be implemented. Mitigation measures are described conceptually in Section 5.0.

4.1 Pre-construction Surveys

A pre-construction survey will be completed in and directly adjacent to the Project Area within 30 days of the start of construction during the active eelgrass growing season (generally May through August). The pre-construction eelgrass survey will be conducted by boat and/or on foot[1] at low tide using a handheld Trimble GPS unit with sub-foot accuracy to map the extent of eelgrass observed. The survey will include all intertidal and subtidal habitats extending a minimum of 200 feet away from the Project Area, similar to the area mapped in Figure 2. Survey photographs will be taken to document eelgrass presence. The survey will occur during low tide conditions that will allow for the greatest visibility of eelgrass from the surface.

Average eelgrass density (number of turions per square meter) within the eelgrass bed adjacent to the Project Area will be evaluated by counting turions within 15 quadrats. Percent cover will also be estimated within each quadrat. The survey transect will run parallel to the shoreline through the center of the offshore eelgrass bed. Density quadrat locations along the survey

[1] Eelgrass mapped within the Project Area during the 2008 survey was entirely intertidal.

transect will be located with the Trimble GPS, such that the western side of the bed will be the start of the transect and the eastern side will be the end (approximately 800 feet in length). The sample locations are randomly generated based on the length of the survey transect, see Table 1.

Table 1. Eelgrass Project Area Density Transect

Transect Length (ft)	Density Quadrat Locations along Transect (ft)	Number Quadrats
800	25, 41, 133, 224, 234, 279, 361, 457, 505, 568, 594, 716, 735, 764, 786	15

The pre-construction survey will be completed within 30 days of the start of construction. Within 30 days following the completion of the pre-construction survey, a detailed monitoring report will be provided to the USACE, CCC and CDFG.

4.3 Evaluation of Potential Construction Effects on Eelgrass

Results of the pre-construction survey will be used to evaluate any impacts to eelgrass. Several small patches of eelgrass and individual shoots identified during the 2008 survey are located within and adjacent to the Project Area (Figure 3). Currently, these areas are not large enough to exceed the agreed upon threshold for impacts. Based on agreements reached during the September 16, 2011 conference call, if the pre-construction eelgrass survey indicates that proposed activities would impact the eelgrass bed, or eelgrass patches exceeding five square meters, then contingency mitigation measures outlined in Section 5.0 will be implemented. If pre-construction surveys demonstrate that there has been no net loss to the eelgrass bed, and no more than five square meters of impacts to patches, then no further monitoring or mitigation is required.

5.0 CONTINGENCY MEASURES FOR MITIGATION

As agreed upon during the September 16, 2011 conference call, eelgrass mitigation is required following the completion of the pre-construction survey if:

a. Eelgrass patches greater than 5 square meters are lost due to proposed activities
b. The Project results in impacts to the eelgrass bed.

If the eelgrass surveys determine that Project construction impact eelgrass within or adjacent to the Project Area, then mitigation designed to replace impacted eelgrass at a 1.2:1 ratio will be conducted. If mitigation is required, then it will be conducted in an area where eelgrass can successfully establish (e.g., adjacent to current eelgrass beds) and not in transitional, intertidal areas where project impacts are most likely to occur and where eelgrass patches colonize and die back in regular (e.g., yearly) fluctuations. Methods to mitigate for eelgrass may include seed buoys, transplantation, or both. Seed buoy eelgrass restoration is a technique that has been implemented successfully at several restoration sites by Kathy Boyer of San Francisco State University. The use of seed buoys mimics natural eelgrass seed distribution and has served as an effective restoration tool that maintains high levels of genetic diversity relative to the donor population (Boyer *et al* 2008, Pickerell *et al* 2005). Seed buoys consist of mesh bags attached to buoys, which broadcast eelgrass seeds in the surrounding area. The seed source will be collected from eelgrass beds adjacent to the Project Area. Direct transplantation of

eelgrass has been successfully accomplished by WRA using a method based on the TERFS, originally developed by Dr. Fred Short of the University of New Hampshire. TERFS involve attaching eelgrass to frames which are held to the bottom using weights, such as rocks or bricks. If frames are metal, they are retrieved during subsequent monitoring visits. However, WRA has implemented this method using wooden material, which allows the frame to biodegrade, avoiding the need for retrieval.

Prior to any eelgrass transplantation, a Letter of Permission will be attained from CDFG for harvesting eelgrass shoots and seeds. The amount of material (seeds and/or turions) harvested will be sufficient to accomplish a 1.2:1 mitigation ratio for eelgrass impacts. Eelgrass growth within the vicinity of the mitigation area will be monitored annually for five years to document the quantity of eelgrass mitigation has been reached, and extent and density is being maintained. Monitoring methods will be the same as those described in Section 4.1, except that the number of quadrats used for density and percent cover measurements will be based on the extent of mitigation.

6.0 REFERENCES

Boyer, K., S. Wyllie-Echeverria, S. Cohen, and B. Ort. 2008. Evaluating buoy-deployed seeding for restoration of eelgrass (*Zostera marina*) in San Francisco Bay. Romberg Tiburon Centerfor Environmental Studies San Francisco State University. Tiburon, California.

California Department of Fish and Game (CDFG). 2008. Status of fisheries report 2008. 16-6 Eelgrass, *Zosetra marina*. Accessed from: http://www.dfg.ca.gov/marine/status/

Gilkerson, W. 2008. *A spatial model of eelgrass (Zostera marina) habitat in Humboldt Bay, California.* (MS thesis). Humboldt State University, Arcata, California.

Pickerell, C., S. Schott, and S. Wyllie-Echeverria. 2005. Buoy deployed seeding: Demonstration of a new eelgrass (*Zostera marina* L.) planting method. Ecological Engineering 904 1-10.

Kraemer, Melissa@Coastal

From: Francisco, Alex [Alex.Francisco@arcadis-us.com]
Sent: Wednesday, January 18, 2012 10:48 AM
To: Melissa Kraemer
Cc: DeShields, Bridgette; Eisert, James; Justin Semion
Subject: Eelgrass Contingency Mitigation Plan Revisions

Melissa,

We reviewed the October 2001 Contingency Eelgrass Mitigation Plan for the Union Pacific Railroad (UPRR) G&R metals site and the NOAA Southern California Eelgrass Mitigation Plan (revised August 30, 2005). Given that the CDFG and NOAA have agreed to the WRA plan and you have requested that we follow the NOAA plan, we propose the following to reconcile survey, mitigation, and monitoring aspects.

The CCC should note that the NOAA plan was developed for eelgrass communities for Southern California which experience different environmental conditions, thereby affecting eelgrass growth. Therefore, our proposed revision reflect these ecological differences. A discussion of the ecological difference, as provided by our eelgrass consultant Justin Semion of WRA is provided at the bottom of this email.

- Surveys
  - The post-construction survey will be conducted within 30 days of completing the project. However, we will include a caveat that the post-construction survey will occur during the following growing season (i.e., May through September) if the construction process extends past September 30.
    - This caveat is necessary because eelgrass in northern California tends to exhibit an earlier and more noticeable decline in density and areal coverage during the winter months than occurs in the warmer and less turbid waters of southern California. This will help avoid the potential for a monitoring visit that records no eelgrass in the project site and reference bed, which can happen for nearshore beds as present adjacent to the site.
  - We will select a reference eelgrass bed to monitor for natural fluctuations in density or coverage. This reference location will be approved by NOAA, CDFG and CCC.
  - We will include a GIS file of eelgrass presence to the resource agencies in our survey reports.
- Mitigation
  - The NOAA plan allows a case-by-case exemption for eelgrass mitigation for impacts less than 10 square meters with out-of kind mitigation. We proposed 5 square meters previously, and propose to use this threshold. We propose to use the tidal area restoration that increases willow cover adjacent to the shoreline and increases tidal area through removal of berm as out-of-kind mitigation.
  - The NOAA plan calls for mitigation in locations with similar depth. However, since our impacts are likely limited to intertidal areas of marginal quality for eelgrass we will continue proposed mitigation adjacent to the current eelgrass bed in deeper water.
  - If mitigation is necessary and transplantation is selected as a mitigation measure, then transplantation would occur from two distinct locations. Transplantation would not occur from UPRR G&R site, as recommended from NOAA plan, due to specific request from resource agencies to not use eelgrass from impacted sediment.
  - We will mitigate at a 1:1 ratio for impacts to eelgrass density greater than natural fluctuation.
- Monitoring

8 of 9

- We will add in a 6 month monitoring event. However, we will have a caveat that this survey event will be delayed until the start of the next growing season (i.e., May) if it is scheduled to occur during the non-growing season (i.e., October through April) for eelgrass in Northern California.
- We will use mitigation success criteria for coverage and density specified in item 10 of the NOAA plan.
- Mitigation will be conducted within 135 days of competition of construction. However, we will have a caveat that mitigation will not occur until the beginning of the growing season (i.e., May) if the mitigation window falls within the non-growing season (i.e., October through April) for eelgrass in Northern California.

We can discuss these items further during our call today. Thank you.
Alex

>>>

The Southern California Eelgrass Mitigation Policy has a long history of implementation for eelgrass impacts in southern California bays and estuaries. The requirements of the policy were developed based on ecological conditions and eelgrass growth habits common in the warmer, lower energy, and less turbid waters of southern California. These conditions tend to favor more widespread, consistent, and robust eelgrass growth in southern California than is observed in northern California. Northern California waters tend to be much colder, have a higher wave and current energy, and tend to be more turbid than southern California waters. These conditions tend towards less consistent eelgrass growth with greater inter-seasonal and annual variation in areal coverage and density, a patchier growth pattern in some areas, and less widespread coverage. Eelgrass in northern California also has a shorter active growing season and tends to exhibit wider swings in abundance and density between the winter and summer seasons. In cases where eelgrass occurs at the margins of its suitable habitat range, these fluctuations in coverage and density tend to be amplified. The differences in habitat conditions also make eelgrass transplantation and mitigation easier to implement in southern California than in northern California.

Due to the substantial habitat differences between southern California and northern California, some aspects of the Southern California Eelgrass Mitigation Policy are appropriate for application in northern California waters, while some are not. For these reasons, resource agencies with jurisdiction over eelgrass do not rely on a verbatim interpretation of the Southern California Eelgrass Mitigation Policy for northern California eelgrass mitigation projects (see CCC File No. 2-07-020 for an example of the Coastal Commission's deferral on the use of this policy in northern California waters). The lack of flexibility in the timing of surveys and mitigation contained in the Southern California Eelgrass Mitigation Policy is of particular concern for the application of the policy to northern California because a strict application of those policies would in most cases result in surveys that are inconclusive and have a high potential for misinterpretation of results when applied without consideration of eelgrass ecology. While the Southern California Eelgrass Mitigation Policy does provide useful guidance for eelgrass mitigation in northern California, not every condition of that policy is appropriate for application to projects on the north coast. The policy is used as guidance by NMFS and CDFG, but is specifically not used verbatim by these agencies on the north coast because of the habitat differences that are present in northern California waters as compared to southern California waters.

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9 of 9

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

JAN 17, 2012

In response refer to:
2010/04113

EXHIBIT NO. 13
APPLICATION NO.
1-11-007
UNION PACIFIC RAILROAD
NOAA FISHERIES INFORMAL CONSULTATION LETTER (1 of 7)

Ms. Jane Hicks
Chief, Regulatory Branch
U.S. Army Corps of Engineers
333 Market Street
San Francisco, California 94105-2197

Dear Ms. Hicks:

On March 14, 2011, NOAA's National Marine Fisheries Service (NMFS) received the U.S Army Corps of Engineers' (Corps) letter, associated biological assessment, and draft remedial action plan requesting informal consultation, pursuant to section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531 *et seq.*), and its implementing regulations (50 CFR Part 402), for issuance of a Nationwide Permit 38 – Cleanup of Hazardous and Toxic Waste, to Union Pacific Railroad (applicant). The Humboldt Bay Harbor, Recreation and Conservation District (applicant) proposes to dredge and backfill bay substrate and place temporary structures in jurisdictional waters of the U.S. (navigable waters of Humboldt Bay) pursuant to section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403) and section 404 of the Clean Water Act (33 U.S.C. § 1344) at the G & R Metals manufacturing site at 701 First Street, (Parcel Numbers 001-121-017, 001-121-018, and 001-121-022), Eureka, California. Contaminated sediment will be removed in compliance with Provision number 7 of Cleanup and Abatement Order number R1-2002-0095 issued for the site by the North Coast Regional Water Quality Control Board (RWQCB).

The Corps also requested consultation on essential fish habitat (EFH) for species managed under the Pacific Coast Groundfish and Coastal Pelagic Species Management Plans, pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), 16 U.S.C. § 1855(b).

On August 9, 2011, the Corps notified NMFS of a change to the project turbidity control during dredging. NMFS notified the Corps and the applicant's that any change that might increase the likelihood of fish entrapment would result in a formal consultation and that NMFS would need to see a complete assessment of any changes to project design plans before proceeding with its consultation.

On August 24, 2011, NMFS received an addendum to the Remedial Action Plan describing changes in turbidity controls by the use of a Portadam® system instead of the

originally planned silt fence. The addendum also addresses a new implementation schedule for in-water work to occur in July 2012 to avoid impacts to listed fish.

On October 4, 2011, the applicants' submitted to NMFS their initial CEQA study incorporating the Portadam® amendments to the proposed project.

On October 24, 2011, NMFS received revised figures and dimensions for various aspects of the Portadam® structure from the applicants' contractor allowing for analysis of the dimensional impact to fish habitat by the temporary installation of the Portadam®.

This letter constitutes informal ESA consultation for the following threatened species: Southern Oregon/Northern California Coast (SONCC) coho salmon Evolutionary Significant Unit (ESU), California Coastal (CC) Chinook salmon ESU, Northern California (NC) steelhead Distinct Population Segment (DPS), and Southern DPS green sturgeon, and their respective designated critical habitat. In this consultation, NMFS also considered effects to Southern DPS Pacific eulachon, which occur in Humboldt Bay and for which your request for consultation did not originally address. This letter also serves as consultation under the authority of and pursuant to the EFH provisions of the MSA, and the Fish and Wildlife Coordination Act (FWCA) of 1934 as amended.

Description of the Proposed Action

The Corps proposes to permit under section 10 of the Rivers and Harbors Act and section 404 of the Clean Water Act dredging of 4,350 cubic yards of contaminated sediment. The applicant's propose to dredge or excavate the sediment across 0.54 acres of tidal mudflat from below the mean high tide line (approximately 2.48 meters below Mean Lower Low Water) to a depth of 3 to 5 feet below sediment surface (25 percent of this material has been determined by the state of California to be hazardous waste). A long-armed, shore-based excavator, would be used to dredge and backfill the project area with approximately 4,350 cubic yards of clean soil or sandy fill imported from a yet-to-be determined source. "Hot-spot" excavation of sediment (excavation of smaller, isolated areas of contaminated sediment) would occur adjacent to the public boardwalk and pier west of the site. The volume of material excavated from these "hot spots" is inclusive of the 4,350 cubic yards of material. The excavated "hot spots" would immediately be back-filled with clean imported soil or sandy material at the same volume as excavation. All abandoned and loose or mud-embedded woody, plastic, ceramic, or metal debris below the high tide line would be removed and disposed at an appropriate upland disposal site. Approximately 300 square feet of debris within the fringe shoreline adjacent to or above the high tide line (approximately 8.6 feet above Mean Lower Low Water) would be removed during the excavation to facilitate post-dredging bank stabilization and native plant remediation. Equipment will be free from leaks, and refueling will occur 100 feet from the water. Following the remediation activities, shoreline transition area restoration will include installation of a marine buttress consisting of a rock-filled container constructed of high-strength geogrid from the high tide line upward. The marine buttress would be covered with soil backfill; a bioengineered transition area with live willow fascines and coir matting will be installed

between the intertidal zone and the upland portion of the property; and a row of gabion baskets backfilled with rock in the upland portion of the site to provide demarcation between the transition area and the usable (upland) property.

The following measures will be implemented to minimize effects:

1. All excavation work will be completed within a 60-day period between July 1 and September 30 and within five years of the date of this consolation
2. A Portadam® will be installed surrounding the excavation site prior to any excavations on the mudflat exposed to tidal influence.
3. All excavation hotspot work outside the Portadam® would occur at low tide only during a 60-day period between July 1 and September 30.
4. A spill prevention and contingency plan will be developed, and implemented.
5. Prior to excavation in the tidal mudflats, a Portadam® would be installed on the mudflats just outside the excavation area to eliminate movement of suspended sediment and turbid water outside the dredge site.
6. For the excavation "hot spots" no turbidity barrier would be employed as these locations would be excavated and backfilled at low tide within one tidal cycle.
7. Excavated sediment would be stockpiled temporarily, away from the shoreline in an upland area, isolated behind a berm to dry to acceptable moisture content for transport to an appropriate upland disposal facility.
8. Water quality monitoring would be conducted during dredging activities to confirm that turbidity increases in or adjacent to the work area are not occurring.
9. A visual eelgrass survey would be performed no more than 30 days prior to commencement of sediment excavation activities to validate that prior survey conditions are still valid. If eelgrass is observed in the excavation area, mitigation measures (e.g., transplantation and monitoring) would be undertaken prior to initiation of sediment excavation activities.
10. In order to reach more isolated contaminated "hot spots" on the bay mudflat adjacent to or under the public boardwalk, crane mats (portable matting designed to support heavy equipment on soft soils), will be used to allow equipment operation on the mud flat substrate.

Action Area

The G & R Metals Remediation Site is on the east side of the Eureka Inner channel of Humboldt Bay adjacent to the Eureka waterfront and may be used by ESA listed species for migration at high tide. The affected area is approximately 600 feet long and 45 feet wide, occupying a tidal mudflat adjacent to, and within parcel number APN-001-121-22. The area is bounded by relic pilings to the west along the Eureka Inner Channel, to the east and north by an earthen berm separating it from the uplands and to the south by a boardwalk suspended over adjacent mudflats. The mudflats have been determined by the state of California and the North Coast Water Quality Control Board as containing toxic and hazardous substances. The mudflats are absent of plant growth and are bounded at the deep water edge by eel grass. A 2008 survey delineated eelgrass off shore from and outside the remediation site with some eelgrass found adjacent to the hotspot areas

outside the main dredge area. The project is located in extremely shallow water, subject to daily tidal mudflat exposure.

ESA Consultation

Juvenile and adult salmonids, green sturgeon and southern Pacific eulachon will be excluded from the project site by the Portadam® surrounding the entire work site; therefore, direct exposure to project effects is unlikely. Juvenile and adult salmonids, green sturgeon, and southern Pacific eulachon which may use the action area as a migratory corridor during project activities would likely avoid the area due to construction disturbance. Because dredging will be conducted during low tide when the area is an exposed mudflat, occur within the confines of a turbidity barrier, and fill material will not be placed directly in the water outside of the silt fencing, listed species will not be directly exposed to dredging or backfill activities within the sediment barriers. Direct effects to listed species by dredging and backfill activities are discountable.

A temporary increase in turbidity may result from the dredging and backfill activities. Because the work area will be isolated by a silt containment Portadam®, any increase in turbidity outside the contained area is expected to be minor, and any reduction in prey as a result of sediment deposition is expected to recolonize rapidly to pre-project levels. In the rare event salmonids, green sturgeon or southern Pacific eulachon are present, they are expected to avoid the project area due to noise and movement of equipment associated with construction activities. The affects of construction noise and equipment movement in the uplands adjacent to Humboldt Bay on foraging eulachon and green sturgeon and the spawning migration of adults or on rearing and migration of juvenile salmonids is insignificant.

Primary Constituent Elements (PCEs) essential to the conservation of SONCC coho salmon, NC steelhead and CC Chinook salmon are those sites and habitat components that support one or more life stages (sites for rearing, spawning, migration and foraging). The PCE included in the action area is an estuarine area free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.

One of the PCEs essential to the conservation of southern DPS green sturgeon is food resources – abundant prey items within estuarine habitats and substrates for juvenile, sub adult and adult life stages; water quality, including temperature, salinity, oxygen content and other chemical characteristics necessary for normal behavior, growth, and viability of all life stages; and sediment quality, sediments free of elevated levels of contaminants (e.g., selenium, PAHs and pesticides) that can cause adverse effects on all life stages of green sturgeon.

Humboldt Bay contains abundant food resources of both invertebrates and a variety of marine and estuarine fish that may serve as prey items for green sturgeon. The project site is intertidal mud substrate that supports benthic invertebrates. The project site was identified by the North Coast Water Quality Control Board as containing toxic and hazardous substances with various levels of contamination in the soils of the site including offshore areas of mudflat. Uncontrolled or inadvertent disturbance of these substrates could cause spreading of contaminated soils to adjacent areas in Humboldt Bay.

Sediment from remediation and construction activities can contribute to total suspended sediment, however; because the removal of sediments will be temporary and confined within a sediment barrier surrounding the project area, increases in turbidity resulting from the project are insignificant. In addition, because the sediment release is expected to be short-term and expected re-colonization of benthic invertebrates in the subtidal habitat is anticipated, changes to critical habitat or changes in its conservation value to listed species are insignificant.

Construction operations use equipment powered by diesel fuel and lubricated by other petroleum products may affect listed SONCC coho salmon, CC Chinook salmon, NC steelhead, Southern green sturgeon and Southern Pacific eulachon. The use of heavy machinery adjacent to the Eureka Inner Channel increases the potential of an accidental spill of fuel, lubricants, hydraulic fluid or similar contaminant into the riparian zone, or directly into the water where they could contaminate habitat, injure or kill aquatic food organisms, or have toxic affects to ESA-listed species. However, chemical contamination due to petroleum-based fuels and lubricants are unlikely because all equipment will be free from leaks, and refueling will occur 100 feet from the water. Machinery will be operated from the shoreline at low tide and outside the bay, which will significantly reduce the likelihood of petroleum products entering the water. A spill prevention and contingency plan will be developed, and implemented, as necessary. In addition, it is unlikely that antifreeze, brake, or transmission fluid will be present on-site or spilled in volumes or concentrations large enough to result in adverse effects to listed species or their critical habitat. Therefore, fuel spill and equipment leak contingencies and preventions described in the proposed action are sufficient that machinery contaminant spills are unlikely to occur or result in adverse effects to ESA-listed fishes or their designated critical habitat from chemical contamination.

NMFS concurs with the Corps' determination that the project may affect but is not likely to adversely affect threatened SONCC coho salmon, CC Chinook salmon, NC steelhead, southern green sturgeon or their designated critical habitats. NMFS concludes the project may affect but is not likely to adversely affect Pacific eulachon or its designated critical habitat. Reinitiation of consultation is required where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and if: (1) new information reveals effects of the action may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the action is subsequently modified in a manner that causes an effect to the listed species or

designated critical habitat that was not previously considered; or (3) a new species is listed or critical habitat designated that may be affected by the action.

EFH Consultation

The MSA and its implementing regulations require Federal agencies to consult with NMFS regarding any action or proposed action that may adversely affect EFH for federally managed fish species. Section 305(b) (4) (A) of the MSA directs NMFS to develop and provide USACE with EFH Conservation Recommendations. Section 305(b)(4)(B) of the MSA requires USACE to send NMFS a detailed written response within 30 days to any EFH Conservation Recommendations, including a description of measures adopted by USACE to avoid, minimize, or mitigate the impact of the project on EFH (50 CFR 600.920(j)). USACE must explain its reasons for not following any EFH Conservation Recommendation, including the scientific jurisdiction for any disagreement with NMFS over the anticipated effects of the proposed action and the measures needed to avoid, minimize, or mitigate such effects.

The affected action project area is located within an area identified as EFH for various life stages of coho salmon and Chinook salmon managed under the Pacific Coast Salmon Fishery Management Plan (FMP). We have evaluated the Project for potential adverse effects to EFH. Under the EFH implementing regulations [50 C.F.R. 600.810(a)], the term "adverse effect" is defined as any impact that reduces quality and/or quantity of EFH and may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce either quantity or quality of EFH, or both. The Eureka Inner Channel is EFH for Pacific salmon, Pacific groundfish and Coastal Pelagics.

Potential effects to EFH from the Project consist of a temporary increase in turbidity and minor reductions in prey abundance. Any increase in turbidity is expected to be insignificant and any reduction in prey, as a result of sediment deposition, is expected to recolonize rapidly. NMFS determines the Project would adversely affect EFH for Pacific Salmon species. However, the proposed project contains adequate measures to avoid, minimize, mitigate, or otherwise offset the adverse effects to EFH. NMFS has no additional EFH conservation recommendations to provide at this time. This concludes EFH consultation for the Project. Pursuant to 50 CFR § 600.920(l), the Corps must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a manner that may adversely affect EFH.

FWCA Consultation

The purpose of the FWCA is to ensure that wildlife conservation receives equal consideration, and is coordinated with other aspects of water resources development (16 U.S.C. 661). The FWCA establishes a consultation requirement for Federal departments

and agencies that undertake any action that proposes to modify any stream or other body of water for any purpose, including navigation and drainage, 16 U.S.C. § 662(a). Consistent with this consultation requirement, NMFS may provide recommendations and comments to Federal action agencies for the purpose of conserving fish and wildlife resources. The FWCA allows the opportunity to offer these recommendations for the conservation of species and habitats beyond those currently managed under the ESA and the MSA. NMFS has no additional recommendations under the FWCA.

Please contact Mr. Charles Glasgow at (707) 825-5170, or via email at chuck.glasgow@noaa.gov if you have any questions regarding this consultation.

Sincerely,

for Rodney R. McInnis
Regional Administrator

cc: Copy to file - ARN 151422SWR2011AR00322