Crescent City Harbor District

Promenade and Coastal Trail Project

Mitigation Monitoring and Reporting Program

A negative declaration was prepared to comply with the California Environmental Quality Act (CEQA) for the Crescent City Harbor District Promenade and Coastal Trail Project. The negative declaration identified potential environmental impacts as well as mitigation measures to reduce the impacts, where feasible.

CEQA provides that when an agency approves a project for which mitigation is required, that agency must adopt a mitigation monitoring and reporting program (MMRP) that identifies how the mitigation measures will be implemented. The MMRP addresses those mitigation measures identified in the negative declaration that are the responsibility of the lead agency to implement. CEQA's mandate is rather brief and provides flexibility in designing their MMRP's dependent upon the project and its circumstances.

This MMRP has been prepared to comply with Section 21081.6(a) (1) of the Public Resources Code to ensure that the effective implementation of the mitigation measures that are within the authority of the Harbor District are implemented throughout all phases of construction of the proposed project. When the project is undertaken, the pertinent mitigation measures will be included in the terms and conditions of the contracts let for construction. The Harbor District's construction inspectors will undertake regular inspections of the job site to ensure that contractors are implementing the mitigation measures and complying with their contract. The Harbor District's CEO/Harbormaster (identified in the table below as Harbor) will be responsible for ensuring that mitigation measures that are the responsibility of the District are carried out.

Mitigation Measure	Implementation Documentation	Monitoring Activity	Timing	Monitoring Responsibility
Biological Resources				
Indirect impacts to the marine environment during construction will be avoided through the use of best management practices during construction of the project, pursuant to Hydrology and Water Quality Mitigation Measure HYD-1 as follows. **HYD-1)** The following BMPs shall be implemented during the construction of the proposed project to reduce potential water quality impacts: • A Storm Water Pollution Prevention Plan (SWPPP) and emergency response plan will be required prior to the commencement of construction to reduce, to the maximum extent practicable, pollutants entering flowing, standing, or ground water. • At all times during construction activities, the contractor shall minimize the area disturbed by excavation, grading, or earth moving to prevent the release of excessive fugitive dust. During periods of high winds (i.e. wind speed sufficient to that fugitive dust leaves the site) contractor shall cover or treat areas of exposed soil and active portions of the construction site to prevent fugitive dust. • No construction materials, equipment, debris, or waste shall be placed or stored where it may be subject to wave, wind, or rain erosion and dispersion. Material handling on and offsite shall be required to comply with California Vehicle Code Sec. 23114 with regard to covering loads to prevent materials spills onto public roads. • All construction equipment shall be equipped and maintained to meet applicable EPA and CARB emission requirements for the duration of the construction activities. • Throughout construction, contractor shall adjacent paved areas free of visible soil, sand or other debris. • If stockpiled on or offsite, soil and aggregate materials shall be covered with secured plastic sheeting and divert runoff around them. • Drainage courses, creeks, or catch basins shall be protected with straw bales, silt fences, and/or straw wattles. • Storm drain inlets from sediment-laden runoff shall be protected with sand bag barriers, filter fabric fences, straw wattles, block and gravel filters, and excavated drop inlet sediment traps. • Vehicle and equipment parking and vehicle maintenance shall be conducted in designated upland areas away from creeks or storm drain inlets. • Major maintenance, repair, and washing of vehicles and other equipment shall be conducted offsite or in a designated and controlled area. • Construction debris, plant and organic material, trash, and hazardous materials shall be collected and properly disposed.	Contract Language and notes on construction plans	Review and approve contract specifications and construction plans for inclusion	Throughout Project	Construction Manager

Mitigation Measure	Implementation Documentation	Monitoring Activity	Timing	Monitoring Responsibility
The project as approved will avoid impacts to the identified special-status plant habitat on site with the exception of areas of Beach Pea. Mitigation Measure BIO-1 includes the requirement that the Harbor District develop a beach pea replacement plan that will result in a 1:1 ratio for the impacted area. Construction sheet C2.43 provides a replacement area that meets and/or exceeds the 1:1 replacement ratio. **BIO-1)** The applicant shall develop an on-site compensatory beach pea replanting plan approved by the DFG and any other resource agency with jurisdiction. Approximately 584 square feet of impacts would occur due to the project. At a minimum, the plan shall: result in 1:1 replacement of beach pea replanting area with similar target density to directly impacted populations; include a planting plan showing extent and density of proposed planting; include maintenance and monitoring of the mitigation site; include specific success criteria aimed at reestablishing no net loss in habitat area or total mitigation area density.	Contract Language and notes on construction plans	Review and approve contract specifications and construction plans for inclusion	Phase 3	Construction Manager and Harbor
Phase 2 of the project may involve the need to deter marine mammals from a small rip-rap extension of the Anchor Way Groin. Mitigation measure BIO-2 (copy attached) includes the requirement that a biologist knowledgeable in the identification of marine mammals conduct sea lion surveys immediately prior to the implementation of any deterrence methods. **BIO-2)** Any deterrence of California sea lions shall be conducted pursuant to the Marine Mammal Protection Act and in accordance with NMFS January 2008 “Potential Deterrence Methods for Pacific Harbor Seals & California Sea Lions”, or superseding NMFS guidelines or regulations. In addition, deterrence methods shall not result in the following: serious injury or mortality, deterrence of ESA-listed species, violation of federal or state laws or local ordinances, risk to human safety, or the taking of non-target marine mammals.	Contract Language and notes on construction plans	Review and approve contract specifications and construction plans for inclusion	Phase 2	Construction Manager and Harbor
The northerly section of the Coastal Trail has been designed to avoid two one-parameter wetlands. In order to prevent access to the wetlands and associated impacts, a fence or physical barrier is to be constructed concurrent with these sections of the Coastal Trail. Mitigation Measure BIO-3 has been incorporated into the project. **BIO-3)** A fence or physical barrier which deters trail users from entering the one-parameter wetlands to the north of the dredge ponds shall be constructed adjacent to the one-parameter wetlands and concurrently with trail construction.	Contract Language and notes on construction plans	Review and approve contract specifications and construction plans for inclusion	Phase 1	Construction Manager and Harbor

Mitigation Measure	Implementation Documentation	Monitoring Activity	Timing	Monitoring Responsibility
Cultural Resources				
A review of the California Historical Resources Information System for the Inner Boat Basin Reconstruction Project found an absence of historical and archaeological resources in the Harbor area. Although no historic or archaeological resources were identified in past studies in and around the project area, and the likelihood for uncovering such resources is low in view of the previously disturbed and developed nature of the project site, CUL-1 and 2 have been incorporated into the project. **CUL-1)** Earthmoving, grading, and excavation activities will be monitored by construction and/or Harbor District personnel or their agents, for the presence of historical, archaeological, or paleontological artifacts. Construction in the immediate vicinity shall be immediately halted if suspected cultural resources are uncovered. Any suspected cultural resources unearthed will be inspected by a qualified archaeologist, and any reporting, curation, or preservation recommendations made by the archaeologist will be implemented prior to commencing any project activities in the area of discovery. **CUL-2)** If human remains are uncovered as a result of the project, construction activities in the immediate vicinity of the remains shall be halted, the County of Del Norte Community Development Department, County Coroner, Native American Heritage Commission (NAHC), and Elk Valley Rancheria Tribal representatives shall be notified. Any human remains shall be treated in accordance with NAHC treatment and disposition requirements, and in accordance with all applicable federal, state, local, and tribal requirements prior to commencing any project activities in the area of discovery.	Contract Language and notes on construction plans	Review and approve contract specifications and construction plans for inclusion	Throughout Project	Construction Manager
Geology and Soils				
The project location has the potential for liquefaction or other ground failure as is common throughout the coastal plain of Del Norte County. Implementation of mitigation measure GEO-1 (copy attached) will ensure that any unstable soil conditions would be mitigated as part of the design and construction of the project. **GEO-1)** The proposed project shall be constructed using the recommendations of the 2011 Treadwell & Rollo geotechnical investigation and Treadwell & Rollo supplemental geotechnical consultation, in addition to the requirements of the California Building Code (CBC), to minimize any geophysical risks associated with construction of the proposed project, as follows: • Where applicable, the recommendations contained in the latest edition of the California Building Code (CBC) shall be followed to reduce the potential for damage to the project from earthquakes.	Contract Language and notes on construction plans	Review and approve contract specifications and construction plans for inclusion	Throughout Project	Construction Manager

Water Quality				
Indirect impacts to the marine environment during construction will be avoided through the use of best management practices during construction of the project, pursuant to Hydrology and Water Quality Mitigation Measure HYD-1 as attached. **HYD-1)** The following BMPs shall be implemented during the construction of the proposed project to reduce potential water quality impacts: • A Storm Water Pollution Prevention Plan (SWPPP) and emergency response plan will be required prior to the commencement of construction to reduce, to the maximum extent practicable, pollutants entering flowing, standing, or ground water. • At all times during construction activities, the contractor shall minimize the area disturbed by excavation, grading, or earth moving to prevent the release of excessive fugitive dust. During periods of high winds (i.e. wind speed sufficient to that fugitive dust leaves the site) contractor shall cover or treat areas of exposed soil and active portions of the construction site to prevent fugitive dust. • No construction materials, equipment, debris, or waste shall be placed or stored where it may be subject to wave, wind, or rain erosion and dispersion. Material handling on and offsite shall be required to comply with California Vehicle Code Sec. 23114 with regard to covering loads to prevent materials spills onto public roads. • All construction equipment shall be equipped and maintained to meet applicable EPA and CARB emission requirements for the duration of the construction activities. • Throughout construction, contractor shall adjacent paved areas free of visible soil, sand or other debris. • If stockpiled on or offsite, soil and aggregate materials shall be covered with secured plastic sheeting and divert runoff around them. • Drainage courses, creeks, or catch basins shall be protected with straw bales, silt fences, and/or straw wattles. • Storm drain inlets from sediment-laden runoff shall be protected with sand bag barriers, filter fabric fences, straw wattles, block and gravel filters, and excavated drop inlet sediment traps. • Vehicle and equipment parking and vehicle maintenance shall be conducted in designated upland areas away from creeks or storm drain inlets. • Major maintenance, repair, and washing of vehicles and other equipment shall be conducted offsite or in a designated and controlled area. • Construction debris, plant and organic material, trash, and hazardous materials shall be collected and properly disposed.	Contract Language and notes on construction plans	Review and approve contract specifications and construction plans for inclusion	Throughout Project	Construction Manager and Harbor

Noise				
Construction operations would cause minor and temporary noise generation. Mitigation Measure NOI-1 (copy attached) will lessen the impact of this potential for temporary noise generated by construction of the project. **NOI-1)** Noise producing equipment used during construction shall be restricted to daylight hours Monday through Saturday. Effective mufflers shall be fitted to gas-powered and diesel-powered equipment. Construction equipment shall be shut down when not in use for longer than 10 minutes.	Contract Language and notes on construction plans	Review and approve contract specifications and construction plans for inclusion	Throughout Project	Construction Manager

NOTICE OF INTENT
TO ADOPT A
MITIGATED NEGATIVE DECLARATION

NOTICE IS HEREBY GIVEN that, based on a "preliminary analysis", the acting lead agency intends to adopt a mitigated negative declaration for the project(s) listed on this notice.

A copy of the proposed Mitigated Negative Declaration is available for public review at the offices of the Crescent City Harbor District, 101 Citizen's Dock Road, Crescent City, CA, 95531. Additional information may be obtained by contacting the Harbor District office at (707) 464-6174, extension 29.

The public review period for proposed negative declarations is 30 days from the date of this notice. This proposed mitigated negative declaration is intended for adoption by the Crescent City Harbor District Board of Commissioners as "lead agency". The Board of Harbor Commissioners will consider the project(s) listed at the following hearing:

DATE OF HEARING: September 4, 2012
TIME: 6:30 p.m
PLACE: Harbor District Office
101 Citizens Dock Road, Crescent City, CA

ITEM(S) TO BE CONSIDERED:

*** Crescent City Harbor District Promenade and Coastal Trail Project – The project includes the development of design guidelines and construction of a waterfront promenade, a coastal trail, restrooms, and associated facilities predominantly within existing developed portions of the Harbor. The project would generally improve access, safety, and amenities available to Harbor visitors by constructing 1) a waterfront promenade consisting of a 12 ft. wide ADA compliant concrete walkway around the Inner Boat Basin, on Citizen's Dock Road, and along Anchor Way; 2) a multi-use coastal trail consisting of a 14 ft. wide ADA compliant asphalt trail from Huston Street on the north end to Anchor Way on the south end; 3) informational and directional signage associated with the coastal trail and waterfront promenade; and 4) two new public restrooms, one on the north side of the Inner Boat Basin and one on Anchor Way adjacent to South Beach. The project site is located within the Crescent City Harbor, west of Highway 101, and is accessible from Citizen's Dock Road and from Anchor Way.

DATE: August 3, 2012 Crescent City Harbor District

PUBLISH: August 7, 2012

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

May 9, 2012

Ernest Perry
Crescent City Harbor District
101 Citizens Dock Road
Crescent City, CA 95531

Subject: Crescent City Harbor District Waterfront Promenade & Coastal Trail Project
SCH#: 2012042019

Dear Ernest Perry:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on May 8, 2012, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2012042019
Project Title Crescent City Harbor District Waterfront Promenade & Coastal Trail Project
Lead Agency Crescent City Harbor District

Type MND Mitigated Negative Declaration

Description The project includes development of design guidelines and construction of a waterfront promenade, a segment of the coastal trail, public restrooms (two) and associated facilities predominately within existing developed portions of the Harbor. The project would generally improve access, safety, and available amenities to Harbor visitors by constructing several improvements, including a 12 foot wide, ADA compliant, concrete waterfront promenade; a multi-use segment of the Coastal Trail, approximately 14 feet wide and ADA compliant; directional signs and interpretive panels to be associated with each and construction of two new ADA compliant public restrooms.

Lead Agency Contact

Name Ernest Perry
Agency Crescent City Harbor District
Phone 707 464 6174 x28 **Fax**
email
Address 101 Citizens Dock Road
City Crescent City **State** CA **Zip** 95531

Project Location

County Del Norte
City Crescent City
Region
Lat / Long
Cross Streets Citizens Dock Road and Hwy 101
Parcel No. 117-020-16, 170-11; 180-11, 21; 020-29, 390-30
Township 16N **Range** 1W **Section** 28 **Base** HB&M

Proximity to:

Highways Hwy 101
Airports No
Railways No
Waterways Pacific Ocean, Elk Creek
Schools No
Land Use Existing commercial & recreational harbor/Harbor Dependent Commercial & Recreation/Harbor Dependent Commercial & Recreation

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Flood Plain/Flooding; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Sewer Capacity; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse; Other Issues

Reviewing Agencies Resources Agency; California Coastal Commission; Department of Fish and Game, Region 1E; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 1; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 1; Native American Heritage Commission

Date Received 04/09/2012 **Start of Review** 04/09/2012 **End of Review** 05/08/2012

Note: Blanks in data fields result from insufficient information provided by lead agency.

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

May 10, 2012

Ernest Perry
Crescent City Harbor District
101 Citizens Dock Road
Crescent City, CA 95531

Subject: Crescent City Harbor District Waterfront Promenade & Coastal Trail Project
SCH#: 2012042019

Dear Ernest Perry:

The enclosed comment (s) on your Mitigated Negative Declaration was (were) received by the State Clearinghouse after the end of the state review period, which closed on May 8, 2012. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2012042019) when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

CALIFORNIA
Water Boards

North Coast Regional Water Quality Control Board

May 8, 2012

5/8/12 late

Mr. Ernest Perry
c/o Mr. Richard Young, CEO- Harbormaster
Crescent City Harbor District
101 Citizens Dock Road
Crescent City, CA 95531

Dear Mr. Perry and Mr. Young:

Subject: Comments on the Crescent City Harbor District Waterfront Promenade and Coastal Trail Project, SCH No. 2012042019

Thank you for the opportunity to comment on Crescent City Harbor District Waterfront Promenade and Coastal Trail Project (project) located at Citizens Dock Road and Highway 101 in Del Norte County. The North Coast Regional Water Quality Control Board (Regional Water Board) is a responsible agency for this project, with jurisdiction over the quality of ground and surface waters (including wetlands) and the protection of the beneficial uses of those waters.

The proposed project includes construction of a 12-foot concrete waterfront promenade, a 4,600-foot long and 10-foot wide coastal trail with 2-foot gravel shoulders, asphalt and gravel improvements on the whaler Island footpath, reconfiguration of existing parking, and demolition and reconstruction of 2 public restrooms.

We have the following comments:

- When conducting the demolition of the existing restrooms on the project site the waste material should be disposed of property. We have provided offsite disposal/reuse information that should be included into the project plans.
- The project has a potential to impact wetlands; we have included wetlands and waters of the State and mitigation information to help offset these impacts. We recommend the use of the storm water and Low Impact Development (LID) information to be used in order to help mitigate potential impacts to water quality.
- The project may include permanent physical deterrence measures preventing California Sea Lions from reentering the existing Harbor. We have included habitat connectivity information in order to offset this potential impact.
- If the future use of new restrooms and utilities should be connected to on-site sewage or wells, please refer to the Individual On-Site Wastewater Treatment Systems (OWTS) information provided to offset any adverse impacts. Coverage under the General Construction Storm Water Permit, a 401 Certification, or a Waiver of Waste Discharge Requirements may be required by our agency for this project.

Offsite disposal/reuse

Waste material generated during site preparation and construction proposed for offsite disposal must be fully characterized to ensure that any contaminated material is properly handled and disposed of. The proposed criteria for approval of offsite use/disposal should be made available to regulatory agencies to ensure that contaminated material is not allowed to be dispersed at another location where it may adversely impact human health and/or the environment. Given individual offsite reuse/disposal location site characteristics and the characteristics of the material to be reused/disposed of, more preparation and permitting may be necessary to permit such offsite activities. Onsite disposal and disturbed areas should be promptly stabilized to prevent any potential discharge of sediment.

Storm Water and Low Impact Development

The Regional Water Board recommends the use of LID and best management practices (BMPs) to mitigate potential impacts to water quality. LID BMPs that treat and retain (infiltrate, capture, evapotranspirate and store) storm water runoff on the project site are efficient and cost effective.

LID is a development site design strategy with a goal of maintaining or reproducing the pre-development hydrologic system through the use of design techniques to create a functionally equivalent hydrologic setting. LID emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. Hydrologic functions of storage, infiltration, and ground water recharge, as well as the volume and frequency of discharges, are maintained through the use of integrated and distributed storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of flow paths and runoff time. LID seeks to mimic the pre-development site hydrology through infiltration, interception, reuse, and evapotranspiration. LID requires that the storm water runoff volume from small storms be retained onsite.

Other LID strategies include the preservation and protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable trees, flood plains, woodlands, native vegetation and permeable soils. Natural vegetation and soil filters storm water runoff and reduces the volume and pollutant loads of storm water runoff. Other benefits from LID implementation include reducing global warming impacts from new development (preserving carbon sequestering in native soils and retaining native vegetation), increasing water supply (by encouraging ground water recharge) and reducing energy consumption.

LID recommends the use of landscape-based BMPs that filter storm water runoff using vegetation and amended soil prior to infiltration. Examples of these types of BMPs are rain gardens and vegetated swales. LID BMPs need to be sized to treat the storm water runoff from all impervious surfaces (e.g. roads, roofs, walkways, patios) using the Storm Water Low Impact Development Technical Design Manual found at www.srcity.org/stormwaterLID (required to be used for projects within Santa Rosa and parts of Sonoma County, but recommended for projects elsewhere), or using the following sizing criteria:

1. The volume of runoff produced from the 85th percentile of 24-hour rainfall event, as determined from the local historical rainfall record; or

2. The volume of runoff produced by the 85th percentile 24-hour rainfall event, determined using the maximized capture storm water volume for the area, from the formula recommended

in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, p. 170-178 (1998); or

3. The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook-Industrial/Commercial (1993).

BMPs to prevent erosion and the release of sediment or hazardous materials during construction activities should be included in the subsequent environmental review documents to prevent sediment and other pollutants reaching surface waters or leaving the site in storm water runoff. These can include scheduling grading to take place during the dry season, identifying staging areas for work vehicles that are separated from sensitive areas, training employees in procedures for cleaning up spills of hazardous materials, and erosion and sediment control techniques.

Wetlands and Waters of the State

The Regional Water Board's Water Quality Control Plan for the North Coast Basin (Basin Plan) and the California Water Code define waters of the state as follows: "'Waters of the state' refers to any surface water or groundwater, including saline waters, within the boundaries of the state (Water Code §13050 (e)." This definition is broader than that of "waters of the United States" and consequently should always be acknowledged and considered when determining impacts upon water resources.

Any adverse impacts to, or loss of, natural or constructed wetlands and their beneficial uses due to development and construction activities must be fully permitted and mitigated. Impacts to waters of the State should first be adequately evaluated to determine if the impacts can be avoided or minimized. All efforts to first avoid and second to minimize impacts to waters of the State must be fully exhausted prior to deciding to mitigate for their loss. If a project's impacts to waters of the State are deemed unavoidable, then compensatory mitigation (for acreage, function and value) will be necessary for any unavoidable impacts. Our staff may require greater than 1:1 mitigation ratio as a condition of approval for this project.

Mitigation

In general the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services, taking into account such watershed scale features and aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources (including availability of water rights), trends in land use, ecological benefits, and compatibility with adjacent land uses. Mitigation should be located where it will help protect or restore the health and condition of aquatic resources within a watershed or other appropriate area within an ecological landscape.

Wherever possible, existing watershed and environmental planning information should be analyzed in advance of mitigation to: (a) Determine the location of relatively intact, natural areas in a watershed (b) identify those areas for preservation and protection, and (c) identify nearby degraded areas that are amenable to enhancement, restoration or establishment, and that would contribute to the sustainability of natural areas and the overall health of a watershed's aquatic resources.

Habitat Connectivity

"Habitat connectivity" refers to the need for plant and animal populations to have some mobility over the landscape to avoid becoming both physically and genetically isolated. A large body of research has demonstrated that isolated populations face a high probability of eventual extinction, even if their immediate habitats are spared. In general, the smaller an isolated population, the more quickly it will become extinct. Urban development typically fragments habitats by creating artificial landscapes, which are movement barriers for most species. Unless mitigation measures are taken, buildings, roads, and artificial landscaping prevent healthy wetland and riparian corridors.

In the context of wetlands, habitat connectivity refers to two related phenomena:

1. The need of some animals to have access to both wetland and upland habitats at different stages of their life cycle; and

2. The ecological relationship between separate wetlands. Some wetland communities and their associated species comprise networks of "patches" throughout a landscape. Wetland plants and animals have adapted to the presence of wetland complexes within a watershed and are dependent on moving among the wetlands within the complex, either regularly or in response to environmental stressors such as flood or drought, local food shortage, predator pressure, or influx of pollution. Removing one such water from the complex will reduce the biological quality of the rest. Thus, the simplified wetland complex will eventually be incapable of supporting some species, even though some wetlands remain.

As noted above, habitat connectivity is critical to biodiversity maintenance, especially given the effects of global climate change. Significant range shifts and other responses to global climate change are already occurring. The ability of biotic populations to move across the landscape may be critical to their survival in coming decades.

Attempts to manage the adverse effects of urban development form a large part of the workload of the Regional Water Board's nonpoint source, storm water, and water quality certification programs, as well as our efforts to establish total maximum daily loads for impaired water bodies. Many of the water bodies currently on the State's list of impaired water bodies are affected by conditions within the purview of local agency planning. However, after-the-fact regulatory control is at best a partial substitute for planning which avoids water quality degradation. We, therefore, welcome the opportunity to work with you on this and other planning projects.

Individual On-Site Wastewater Treatment Systems (OWTS)

The Water Quality Control Plan for the North Coast Region (Basin Plan), outlines the Region's water bodies, their beneficial uses, and sets water quality objectives to protect those uses. The Basin Plan's Policy on the Control of Water Quality with Respect to On-Site Waste Treatment and Disposal Practice (On-Site Systems Policy) contains siting criteria for OWTS, including minimum setbacks from perennial and ephemeral watercourses and water supply wells, and minimum depths to anticipated high ground water. The Policy also includes site evaluation methods, OWTS design criteria, and other technical guidelines for the approval of on-site waste treatment and disposal systems. This policy applies to the discharge of wastes from residential and small commercial establishments. OWTS treating large volume and/or concentrated wastewater loads require additional permitting criteria and may require the Regional Water

Board to establish waste discharge requirements for the discharge. For some OWTS, in particular, subdivision developments, commercial establishments, and OWTS receiving greater than 1,500 gallons per day of waste flow, an analysis of the cumulative impacts of the discharge on groundwater and surface waters may also be required to ensure compliance with all water quality objectives.

At a minimum, all OWTS included in this project must comply with all Basin Plan requirements and any additional requirements established by the local regulatory agency.

The following permits may be required for this project:

Construction General Storm Water Permit: Land disturbances on projects of one acre or more require coverage under the construction general storm water permit. If the land disturbance will be one acre or more, the owner of the property will need to apply for coverage under this permit prior to the commencement of activities on-site. This permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies BMPs to implement and maintain to minimize pollutant discharges from a construction site. The permit also requires a risk level analysis for the project based on erosion risk and sensitivity of the receiving waters, inspections of construction sites before and after storm events, and every 24 hours during extended storm events, storm event monitoring, and electronic document and data submittal. The permit requires the use of LID to treat post-construction storm water runoff from impervious surfaces. Owners may find the permit at http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

Waste Discharge Requirements (WDRs) or a Conditional Waiver of WDRs: Under authority of the Water Code, the Regional Water Board may issue WDRs for any project which discharges or threatens to discharge waste to waters of the State. Projects that may impact waters of the State (including discharges of wastewater, reclaimed wastewater, post-construction storm water runoff, grading activities within stream courses or wetlands, ground disturbance subject to erosion or sediment mobilization, and removal of riparian vegetation in some cases) require permitting by the Regional Water Board. The Regional Water Board may also require permits for on-site septic systems accepting 1,500 gallons or more per day. An application may be printed from the State Water Resources Control Board website at: www.swrcb.ca.gov/sbforms/.

Water Quality Certification (401 Certification): 401 Permits are issued for activities resulting in dredge or fill within waters of the United States. All projects must be evaluated for the presence of jurisdictional wetlands and other waters of the State. Destruction of or impacts to these waters should be avoided. Under the Clean Water Act Sections 401 and 404, disturbing wetlands requires a permit from the United States Army Corps of Engineers (ACOE) and a state 401 permit. Please contact Mark Neely from our office at (707) 576-2689 for a 401 Permit or other permit action.

If you have any questions or comments, please contact me at (707) 570-3761 or mdougherty@waterboards.ca.gov.

Sincerely,

Mona Dougherty
Senior Water Resources Control Engineer

120508_MA_Response Crescent City Harbor Dist Waterfront Promenade and Coastal Trail

cc: Scott Morgan, State Clearinghouse, P.O. Box, 3044, Sacramento, CA 95812
Re: SCH No. 2012042019

0128711001-11044

Initial Study &
Mitigated Negative Declaration

Crescent City Harbor District Promenade and Coastal Trail

June 2012

Prepared for:

Prepared by:

WINZLER & KELLY

718 Third Street
Eureka, CA 95501

Table of Contents

CRESCENT CITY HARBOR DISTRICT
101 Citizens Dock Road, Crescent City, CA 95531 (707) 464-6174

INITIAL STUDY and CHECKLIST

PROJECT: **Crescent City Harbor District Promenade and Coastal Trail**

LEAD AGENCY: Crescent City Harbor District
101 Citizens Dock Road
Crescent City, CA 95531

LEAD AGENCY CONTACT PERSON:
Richard Young, CEO-Harbormaster
Crescent City Harbor District
101 Citizens Dock Road, Crescent City, CA 95531
Phone: 707-464-6174
Email:

THIS *INITIAL STUDY and CHECKLIST* PREPARED BY:
Winzler & Kelly
718 Third Street
Eureka, CA 95501
(707) 443-8326

PROJECT LOCATION: Del Norte County, CA (Appendix A - Figure 1)

PROPERTY OWNERS: Crescent City Harbor District

GENERAL PLAN DESIGNATION: Harbor Dependant Recreation (HDR), Harbor Dependant Commercial (HDC), Harbor Related (HR) Harbor Dependant (HD), Greenery (G).

ZONING DESIGNATION: Harbor Dependant Recreation (HDR), Harbor Related (HR) Harbor Dependant (HD), Greenery (G). Proposed future designation: Harbor Dependent Maine Commercial (HDMC), Harbor Visitor Serving Commercial (HVSC), Harbor Dependent Recreation (HDR), Harbor Greenery (HG).

PARCEL NUMBERS:

- 118-020-29 Harbor owned;
- 118-390-18 Optional route of Coastal Trail at Brown Parcel;
- 118-390-30 Harbor owned;
- 117-020-16 Harbor owned;
- 117-170-11 Harbor owned;
- 117-180-11 Harbor owned;
- 117-180-17 Privately owned. The Coastal Trail route is proposed to be within the dedicated right of way for Starfish Way. (Pcl. 2, Bk. 5 Pg. 82 P.M.);
- 117-180-21 Harbor owned;
- 117-180-13 Privately owned. Small encroachment at South Beach ADA access ramp may be removed in final design.

1.0 PROJECT DESCRIPTION

PROJECT DESCRIPTION

Project Location

The project is located within the Crescent City Harbor on the west side of Highway 101 near the southern end of Crescent City in Del Norte County, California. Refer to Figure 1 and Figure 2 for vicinity and site mapping. The project site is bounded by Huston Street and Sunset Circle to the northwest and by Anchor Way Groin to the southeast. Crescent Beach lies to the immediate southeast of the Harbor. The site is accessed from the south by Anchor Way off of Highway 101 and from the north by Citizens Dock Road. The site is within the Sister Rocks USGS quadrangle map in section 28, township 16N, range 1W. The project site is predominantly within Harbor District ownership, with a small portion of the trail located on a right-of-way owned by the City of Crescent City.

Project Description

The project includes the development of design guidelines and construction of a waterfront promenade, a coastal trail, restrooms, and associated facilities predominantly within existing developed portions of the Harbor, as shown in figures 3.1 to 3.13. The project would generally improve access, safety, and available amenities available to Harbor visitors by constructing several improvements, as listed below:

1. **Waterfront Promenade** – an approximately 12' wide ADA-compliant concrete walkway around the Inner Boat Basin, on Citizen's Dock Road, and on each side of Anchor Way. The promenade would extend a total of approximately 7,500 linear feet.
    - Stormwater infrastructure (including landscaping and drainage swale filter features)
    - Six viewing platforms (designated areas along promenade with benches)
        - Five of the viewing platforms are cantilevered out over the RSP and are supported with 12" diameter steel piles located in the rip rap area above the mean high water line.
    - Four pedestrian wind shelters (concrete spine wall with etched glass inserts and cantilevered roof)
    - View platform on existing rip-rap extension of the Anchor Way Groin on the harbor side of the groin.
    - Lowered cantilevered walkway on the water side of the Chart Room restaurant supported by 12" diameter steel piles located in the rip rap area above the mean high water line
    - Landscaping and landscape furniture (seating, trash cans, bike racks, etc)
    - Pedestrian guardrails where promenade is 24" or more above adjacent grade
    - Three designated zones for interpretive and/or public art
    - Screening (i.e. concrete screen walls) for utilities and dumpsters
    - Traffic calming features at intersections of promenade with vehicular roadways
    - "No spill" decorative light fixtures
    - Promenade intersections with and connections to coastal trail (see below)

- Reconfigured and new parking in existing paved areas

2. **Multi-use Coastal Trail** - an approximately 14' wide ADA-compliant asphalt multi-use trail from Huston Street in the north to Anchor Way in the south. At the northern end of the trail, two potential routes have been identified; one following Huston Street, and the other crossing private property with both routes terminating a Sunset Circle (see figure 3.1). The trail would extend a total of approximately 4,600 linear feet.
    - 10' wide concrete trail with 2' gravel shoulders
    - Stormwater infrastructure
    - "Wave field," consisting of a series of graded three-foot-high moguls invoking waves; located in open green area adjacent to Highway 101
    - Gateway structures at vehicular entrance to Inner Boat Basin parking lot and pedestrian entry to Harbor ("Battery") Beach
    - ADA-compliant ramp to Crescent Beach
    - Landscaping and landscape furniture (seating, trash cans, bike racks, etc)
    - Traffic calming features
    - "No spill" decorative light fixtures
    - Pedestrian guardrails/fencing
    - Improved asphalt and gravel footpath on Whaler Island

3. **Signs and Displays (to be associated with both the Promenade and the Coastal Trail)**
    - Manual on Uniform Traffic Control Devices (MUTCD) Signage (safety, warnings, and traffic control)
    - Wayfinding and identification signs
    - Interpretive signs and displays
    - Gateway and Harbor Directory signs

4. **Restrooms** –demolition of two existing restrooms and replacement with two ADA-compliant restroom buildings, including exterior lighting, connections to existing utilities, and reconfiguration of existing parking areas.
    - North Restroom at Inner Boat Basin – Construct approximately 1,200 sf facility with showers, laundry facility, and attached enclosed 270 sf fish cleaning station. Demolition of existing restroom.
    - South Restroom on Anchor Way Groin – Construct approximately 800 sf. facility with outdoor showers. Demolition of existing substandard restroom.

2.0 PUBLIC AGENCIES WITH JURISDICTIONAL AUTHORITY

The Crescent City Harbor District is the CEQA lead agency for the proposed project. Other agencies with potential jurisdictional authority (e.g., responsible and trustee agencies) are listed below.

Federal

- U.S. Army Corps of Engineers (USACE)
- U.S. Fish & Wildlife Service (FWS)
- National Marine Fisheries Service (NMFS)

State

- Regional Water Quality Control Board (RWQCB)
- California Coastal Commission (CCC)
- California Department of Fish & Game (DFG)
- Caltrans

Local

- City of Crescent City
- Del Norte County

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Population/Housing
☐ Agricultural & Forestry Resources	☐ Hazards & Hazardous Materials	☐ Public Services
☐ Air Quality	☒ Hydrology/Water Quality	☐ Recreation
☒ Biological Resources	☐ Land Use/Planning	☐ Transportation/Traffic
☒ Cultural Resources	☐ Mineral Resources	☐ Utilities/Service Systems
☒ Geology/Soils	☐ Noise	☒ Mandatory Findings of Significance

DETERMINATION

(To be completed by the Lead Agency) On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. .

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

Richard Young, CEO-Harbormaster
Crescent City Harbor District

4.0 EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each questions. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be citied in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The analysis of each issue should identify:

   a) the significance criteria or threshold used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significant.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Background

Scenic resources within the proposed project area include natural and constructed seaside harbor features. Harbor features (e.g., boat basins, piers, visitor and fisheries facilities, natural dune and marine habitats, Whaler's Island, and the Coast Guard station) contribute to a rugged maritime character of the working Harbor. The general visual character of the Harbor includes scenic waterfront and ocean views, commercial maritime activities (e.g., fishing boats and repair infrastructure, crab pot staging, fishing nets), recreational activities (e.g., walking paths, recreational vehicle camping, recreational boating, picnic facilities, family activities). The existing Harbor facilities are generally somewhat aged and deteriorated, particularly in areas subject to damage from the 2011 tsunami that caused substantial damage to the inner boat basin within the Harbor. Ongoing tsunami repairs and related harbor dredging activities have temporarily added a degree of visible material and equipment storage and operation in and around the Harbor.

According to the 2006 Crescent City Harbor Master Plan prepared by the RRM Design Group:

> "*The California Coastal Commission has raised a statewide concern with the incremental deterioration of scenic landscape and coastal public viewsheds, and Public Resource Code Sections 30251 and 30253 of the Coastal Act requires the protection of the scenic and visual qualities of coastal areas. These concerns include grading and land form alteration, compatibility with surrounding waterfront character, views from off-shore areas, and restoring and enhancing the visual quality of degraded areas. The Coastal Commission prefers avoidance of impacts through site selection and design alternatives rather than mitigation through landscape screening. The waterfront character of Crescent City Harbor should be respected in the architecture, lighting, and landscaping of new development. Landscaping could be introduced to frame key views of and from the harbor. New uses should incorporate design measures that reduce long-term maintenance requirements.*"

Discussion

a) Scenic maritime and coastal views are available from throughout the Harbor. Current views are generally unobstructed, though several existing Harbor features obstruct views from some vantage points. The proposed project includes implementation of several components that were identified as improvement opportunities in the Crescent City Harbor Master Plan. These proposed project components would occur predominantly within existing developed portions of the Harbor and would not substantially alter or degrade and existing scenic vista associated with the Harbor. The proposed project would include elements (e.g., signs, viewing platforms, wind shelters, restrooms, lighting, landscaping, railings, and artwork) that have been designed to complement and integrate with the existing maritime views of the Harbor. Existing Harbor views are not expected to be substantially obstructed as a result of the project because no large or tall structures are proposed. Therefore impacts would be ***less than significant***.

b) The Harbor lies to the west of US Highway 101 in an area which is listed by the California Scenic Highway Mapping System as an "Eligible State Scenic Highway." South of the project area, Highway 101 is an "Officially Designated State Scenic Highway" through the Del Norte Redwoods State Park. The coastal stretch of Highway 101 in the project vicinity is a highly scenic stretch of California coastal highway with exceptional views of the Pacific Ocean, beaches, waterfront commercial and residential buildings, piers, fishing boats and other coastal views. The project would result in minor site grading and minor impacts to existing vegetation, as discussed below, but would not substantially alter the scenic nature of the surroundings or the scenic views available from Highway 101. Minor site grading would alter the existing ground surface topography throughout the project construction footprint, but the primary changes to topography visible from Highway 101 would occur only in the tree-studded field between the inner boat basin parking area and the highway. This area would be subject to grading to construct a proposed "wave field" feature that would be revegetated to match existing conditions. The existing trees in this area would be retained unless their removal is necessitated by disease or structural defect which would make individual trees hazardous.

   The proposed project would not cause substantial changes to the existing scenic views available from Highway 101. The project features, including those visible from Highway 101, have been designed in part to generally improve the aesthetic quality of the Harbor, and, as such would not contribute to a significant impact on scenic resources visible from Highway 101. Therefore impacts would be ***less than significant***.

c) As discussed above, the proposed project has been designed to generally improve the aesthetic quality of the Harbor, and, as such would not contribute to a significant impact on scenic resources. Construction of small buildings, railings, walkways, signs, and grading and landscaping associated with the proposed project would be relatively minor and would be designed to improve the existing visual nature of the Harbor. The project would, therefore, not cause damage to scenic resources and/or substantially degrade existing visual character in the project area. This impact would be ***less than significant***.

d) As discussed in the project description, the proposed project would include "no-spill" lighting to accent certain features, such as interpretive art, trail sections, landscaping, and an access ramp. The restrooms would also be lighted with exterior and interior lighting. If not properly shielded, new lights could impact the night-time visual resources. As such, all proposed lighting would be designed and constructed to conform to all applicable performance standards for light and glare including shielding and focusing all lighting downward. With incorporation of these performance standards, outdoor light and glare impacts would be ***less than significant***.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE AND FOREST RESOURCES: Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?				X

Discussion

a, b, e) According to the County of Del Norte Local Coastal Use Plan (General Plan Coastal Element or Local Coastal Program [LCP]), prime agricultural lands may be defined by a number of different rating systems, including: areas mapped as USDA Class I or Class II soils under the Land Compatibility Classification System, areas with soils Storie Index Rating of 80 through 100, areas meeting the Williamson Act definition of prime agricultural lands (definition parallels Coastal Act definition), areas meeting the Del Norte County General Plan definition of prime agricultural lands (actively used areas with a minimum of 20 acres of contiguous ownership which qualify for a rating of 80 through 100 on the Storie Index). The Del Norte County LCP requires that development on coastal prime agricultural lands shall not be permitted unless allowable under Section 30241 of the Coastal Act. Section 30241 of the Coastal Act requires that the maximum amount of prime agricultural land be maintained in agricultural production, and that conflicts between urban and agricultural uses be minimized by a variety of means,

including assuring that public facility expansions and nonagricultural development do not impair agricultural viability through degraded air or water quality.
The proposed Harbor improvements predominantly fall within developed areas that are not within or adjacent to prime agricultural lands. The Harbor lands do not have the capacity to support agriculture , are not rated as prime agricultural soils, and are not intended under the Harbor Master Plan, Del Norte County General Plan, LCP, or Coastal Act for such use. ***No impact*** would occur**.**

c, d) Similarly, the project is not located in any area zoned for forest land, timberland, or Timberland Production-zoned area and, therefore, would not result in the loss or conversion of any forest land. ***No impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct Implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?			X	

Discussion

a, b, c) The project site is located within the North Coast Air Basin (NCAB) and the jurisdiction of the North Coastal Unified Air Quality Management District (NCUAQMD). The NCAB currently meets all federal air quality standards; however, it has been designated as non-attainment (exceeds maximum limits) for California Ambient Air Quality Standards for particulate matter less than ten microns in size (PM_{10}). To address this, the NCUAQMD adopted a Particulate Matter Attainment Plan in 1995. This plan presents available information about the nature and causes of PM_{10} standard exceedance, and identifies cost-effective control measures to reduce PM_{10} emissions, to levels necessary to meet California Ambient Air Quality Standards.

The Del Norte County General Plan calls for the County to continue to solicit and consider comments from local and regional agencies on projects that may affect regional

air quality and to encourage that development be located and designed to minimize direct and indirect air pollutants.

The proposed project would generate particulate construction emissions in the form of dust and vehicle emissions as a result of earthwork, paving, and other construction activities. While the NCAB is in non-attainment for PM_{10}, the temporary nature of construction activities combined with implementation of standard NCUAQMD dust and CO_2 emission reduction measures during construction (e.g., watering of construction site, covering haul trucks, street sweeping haul routes, landscaping/covering freshly graded areas immediately after grading, etc.) would avoid significant impacts. To reduce potential impacts to air quality, standard construction best management practices (BMPs), including several that would substantially reduce dust and other air pollutants during the construction period have been incorporated in Hydrology and Water Quality Mitigation Measure HYD -1.

In the long term, the proposed project would not substantially add to the level of PM_{10} or other emissions such that it would cause a cumulatively considerable net increase of pollutant emissions in the area. Although the proposed project may attract a small number of additional vehicles to the Harbor, this increase would be minor and would not cause a significant increase in the vehicle emissions. Furthermore, the proposed pedestrian facilities would provide a safer and more attractive non-motorized transportation or recreation alternative that may result in an offset of any increased vehicle emissions. The proposed project would not obstruct implementation of the NCUAQMD particulate matter attainment plan, violate air quality standards, or contribute substantially to an existing or projected air quality violation. The project would be consistent with applicable General Plan policies related to air resources and a ***less than significant impact*** would occur. As discussed above, see also Hydrology and Water Quality Mitigation Measure HYD -1 for BMPs that would reduce dust emissions.

d) The proposed project is not located adjacent to a sensitive receptor (e.g., hospitals, daycare centers, schools, etc.) and would not result in substantial air pollutant concentrations. Therefore, ***no impact*** would occur.

e) The construction phase would include a number of operations and materials which may produce a minor amount of odors that may be objectionable. However, the production of such odors would be temporary and localized such that any odors would rapidly dissipate in the breezy open-air conditions associated with the seaside setting. This low level odor production would likely be experienced only by those working or passing by in the immediate area during construction. A ***less than significant impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	

Background

I. Analysis Methodology

The following analysis is based on the 2011 W&K biological resources study and wetlands delineation (Appendices A and B). The biological study includes: (1) a description of existing habitats and site features related to biological resources; (2) a review of California Department of Fish and Game (DFG) California Natural Diversity Database (CNDDB) and US Fish and Wildlife Service (FWS) species list databases listing special-status plant and animal species that have been previously recorded in the region in which the proposed project would occur; and (3) an assessment of the likelihood that the project area contains populations of any the recorded special-status species from the vicinity or habitat that may support any of those species. The wetland delineation identifies jurisdictional wetlands within the project area using federal and state delineation criteria, procedures, and definitions. The wetland boundary was evaluated using the USACE (three-parameter), and Coastal Commission (one-parameter) methodologies. Prior studies, including the 2007 Final Biological Assessment for NMFS Inner Basin Sea Wall

Repair Project, Crescent City Harbor District (FEMA-1628-DR-CA, PW #1387) were also used for background information on special-status species and habitats.

II. Applicable Regulations

Impacts to Wetlands and Waters - The USACE has jurisdiction over wetlands as defined in the Corps Wetlands Delineation Manual (Environmental Laboratory 1987). Pursuant to the Clean Water Act, a USACE Section 404 permit would be required for any fill or dredging within jurisdictional wetlands or waters of the U.S. Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACOE for the construction of any structure in or over any navigable water of the United States, including all tidal waters seaward of the mean high tide. The California Coastal Commission also has jurisdiction over wetlands as defined in the California Coastal Act, including one-, two-, and three-parameter wetlands. Impacts to waters are additionally subject to be subject to 401-water quality certification by the North Coast Regional Water Quality Control Board (RWQCB). The USACE does not regulate wetland buffers, development adjacent to wetlands, but the Coastal Commission regulates buffers around environmentally sensitive habitat areas (ESHA), including Coastal Act wetlands.

Special-status Species – Special-status species include those plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species and designated critical habitat. Special-status species evaluated for CEQA may also include: DFG Species of Special Concern, US Fish and Wildlife Service (FWS) Birds of Conservation Concern, species included in FWS Recovery Plans, and FWS special-status invertebrates. Plant species on California Native Plant Society (CNPS) Lists 1 and 2 are also considered special-status plant species under CEQA. Prior to issuance of any federal permit or authorization for any project which may affect federally listed threatened or endangered species or critical habitat, the FWS and/or National Marine Fisheries Service (NMFS) must conduct consultation under Section 7 of the ESA. The DFG has jurisdiction over species listed as threatened or endangered under California Fish and Game Code Section 2080.

Coastal Zone Policies - The Del Norte County and Crescent City General Plans/Local Coastal Programs (LCP) and the California Coastal Act contain several policies that apply to biological resources, including, among others: protection of environmentally sensitive coastal habitats, protection of sensitive species, protection of wetlands, establishment of ESHA buffer zones, and the protection of water resources. The entire Harbor is within the California Coastal Zone, with retained Coastal Commission jurisdiction in areas seaward of the historic mean high tide line (State Land Grant Boundary) and appealable local (Del Norte County and Crescent City) jurisdiction in non-tidelands. For discussion regarding local and state Coastal Zone jurisdiction and combined coastal development permit authorization, see Land Use Planning section.

The Coastal Act includes several provisions which requiring the protection of fish and wildlife species and habitats within the Coastal Zone. The Coastal Act definition of wetland is set forth in Section 30121 of the Act which states: "Wetland" means 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. Coastal wetlands are similarly defined in the Del Norte County LCP as areas "which may be covered periodically or permanently with shallow water…" Under the Act and the LCP, impacts to wetlands shall only be permitted under certain conditions identified in Section 30233 of the Coastal Act. Section 30233 requires that diking, filling, or dredging of wetlands shall be permitted for certain types of projects only if there is no feasible less environmentally damaging alternative, and if feasible mitigation measures have been provided to minimize adverse environmental effects.

The Coastal Act also calls for protection of environmentally ESHA from direct and indirect impacts associated with coastal development. ESHA designations are based on the presence of rare habitats and/or populations of rare, sensitive, or especially valuable species. The presence of ESHA is generally evaluated on a case-by-case basis during review of coastal development permit applications, but may include: coastal wetlands, streams, rivers, marine habitat, terrestrial natural communities identified in the CNDDB, and habitats that support CESA- or ESA-listed species. Based on site-specific conditions, ESHA "buffers" within 100 feet of ESHA may also be subject to regulation to prevent indirect impact to ESHA.

III. Existing Conditions

A. Habitat Types

Past Harbor development has altered most of the natural features, native habitats, and plant communities within the project area. Undeveloped areas generally consist of upland ruderal vegetation communicates and maintained lawns or landscaping, with the exception of Whaler Island. The habitat types of the project area identified in the 2011 W&K biological resources study and wetlands delineation are described below.

1. Wetland Habitats:

The 2011 W&K wetland delineation of the project site identified a total of approximately 0.26 acres of one- and two-parameter wetlands pursuant to Coastal Commission methodology in addition to approximately 0.24 acres of three-parameter USACE jurisdictional wetlands (see Table 1, below; see also Figure 3.1 to 3.12). All wetland habitats associated with the Harbor likely meet the California Coastal Act definition of ESHA. The National Wetlands Inventory based on remote sensing techniques, does not identify any wetlands on the project site, with the exception of the estuarine and marine deepwater of the Harbor (FWS 1987).

Table 1: Crescent City Harbor Delineated Wetlands

Wetland Type	square feet	acres
1-Parameter with Riparian Vegetation	10,674	0.25
2-Parameter	439	0.01
3-Parameter Ditch	9,932	0.23
3-Parameter Palustrine Emergent Wetland	579	0.01

Detailed descriptions of the onsite wetland habitats and wetland delineation maps for the project area are included in Appendices A and B, available for review at the office of the Crescent City Harbor District, 101 Citizens Dock Road, Crescent City, CA 95531.

2. Marine and Tidal Habitats

The Crescent City Harbor includes marine and tidal habitats. All areas of the Harbor below the mean high water line (5.85 feet NAVD88 datum) are subject to USACE jurisdiction under Section 10 of the Harbors and Rivers Act of 1899, as described in detail in the 2011 W&K Wetland Delineation. All areas below the mean higher high water (6.49 feet NAVD88 datum) are subject to USACE jurisdiction under Section 404 of the Clean Water Act. The marine and intertidal habitats associated with the Harbor likely meet the California Coastal Act definition of ESHA.

Onsite marine and intertidal habitats have been heavily modified as a result of past Harbor development. Historic sandy beaches similar to those to the north and south of the Harbor have been replaced with imported fill, rip raped seawalls, and constructed boat basins protected by groins and breakwaters. Although heavily modified, the intertidal and open water habitats within the Harbor create suitable habitat for several marine and intertidal species, including the California sea lions that frequent several low-lying constructed features within the Harbor. The Harbor is identified as Essential Fish Habitat (EFH) under the Magnuson-Stephens Fisheries Conservation Act and provides suitable habitat for the Southern Oregon/Northern Coasts coho salmon (SONCC).

3. Upland Habitats

The following natural communities may be ESHA, as defined by the California Coastal Act. As such, special consideration may be required for any activities in or near these areas.

Dune mat - This upland vegetation type occurs on a small stretch of beach in the northern portion of the project area. Characteristic species associated with the dune mat include: yellow sand verbena (*Abronia latifolia*), beach bursage (*Ambrosia chamissonis*), and sea rocket (*Cakile maritima*). Limited elements of this vegetation type also occur at the northern end of Crescent Beach and near the boat launch on Whaler Island, but cover and diversity of characteristic native species were generally low in these areas. These areas were mapped as “degraded dune” for planning purposes but are not likely habitats warranting special protection.

Northern coastal bluff scrub and northern coastal scrub - These upland vegetation types occur over much of the undeveloped portion of Whaler Island. Characteristic species associated with northern coastal bluff scrub include: seaside daisy (*Erigeron glaucus*), sea pink (*Armeria maritima*), maritime plantain (*Plantago maritima*), headland(curly) wallflower (*Erysimum menziesii* ssp. *concium*), and bluff lettuce (*Dudleya farinosa*). Northern coastal bluff scrub on Whaler Island is comprised of (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), salal (*Gaultheria shallon*), and Henderson’s angelica (*Angelica hendersonii*).

Northern foredune grassland - Several stands of *Leymus mollis* form areas of this upland habitat type in the northwest portion of the study area near areas of dune mat vegetation.

Conifer individuals with non-native grass understory - A maintained upland non-native lawn studded with a conifer overstory of predominantly shore pine (*Pinus contorta*) is located within the eastern portion of the Harbor between existing parking areas and Highway 101. This area is unlikely to have any special protection for its biological resources, although certain wildlife or bird species may utilize the area for foraging or nesting.

B. Special-status Species

The 2011 W&K biological resources study evaluated the DFG California Natural Diversity Database (CNDDB) and FWS listed and proposed threatened and endangered species and special-status species with potential to occur in the project vicinity. The W&K study included those species listed by the FWS species list for Del Norte County and CNDDB species records from the project area, including all adjacent USGS 7.5-minute quadrangles. W&K reviewed available literature sources to identify the habitat requirements and distribution of the listed special-status species known to occur in the vicinity. As a result, W&K identified two state- and federally-listed marine animal species, one state-listed fish, and four CNDDB-listed plant species with the potential to be impacted by the project. These species are discussed below:

Steller sea lion

The Steller sea lion is federally-listed threatened, state-listed endangered, and is additionally protected under the federal Marine Mammal Protection Act (MMPA). Steller sea lions are known to occur approximately 4 miles north of the project area on St. George Reef rocks, but are not known to occur in the Harbor area. There is no designated critical habitat for the Steller sea lion within the project area or vicinity. Although Steller sea lions may occur infrequently within the Harbor, the sea lions commonly found at constructed haul-out sites within the Harbor have been identified as California sea lions, which are protected under the MMPA, but are not threatened or endangered.

Southern Oregon/Northern California (SONCC) coho salmon (Oncorhynchus kisutch)

The federally threatened and state endangered SONCC coho occurs in Elk Creek, which flows into the northern end of the Crescent City Harbor approximately 0.25 miles north of the project area. Coho spend a portion of their life cycle in freshwater and a portion in marine waters. Critical habitat for the coho includes all accessible reaches of all rivers (including estuarine areas and tributaries) between the Mattole River in California and the Elk River in Oregon (64 Federal Register 2409-24062), including Elk Creek. Although the ditches and wetlands within the project area do not support the coho salmon, the coho may be present seasonally within the adjacent marine waters of the Harbor and in nearby Elk Creek.

Coastal cutthroat trout (Oncorhynchus clarkii clarkia)

The state species of special concern coastal cutthroat trout occupies a variety of habitat types including low and upper reaches of large and small river systems, estuaries, sloughs, ponds, lakes, and nearshore ocean waters in the project area. The ditches and wetlands within the project area do not meet the habitat requirements for coastal cutthroat trout, but the fish may be present seasonally in the nearshore marine waters of the Harbor.

Wolf's evening primrose (Oenothera wolfii) - CNPS List 1B.1
This species occurs along near the beach in extreme northern portion of the Harbor, although some of the individuals may be hybrids. Individuals of the non-native species *O. glazioviana* were observed growing near the northwestern boundary of the study area. One non-flowering individual was identified northeast of the RV park, but its species identity was not certain.

Beach pea (Lathyrus japonicus) - CNPS List 2.1
This species was identified on the south side of the Anchor Way breakwater, intermixed with ice plant growing in gravel areas associated with the rock slope protection. Isolated patches of beach pea totaling approximately 1,340 square feet are currently located along the south edge of Anchor Way from Starfish way to Whaler Island (see figures 3.10 – 3.11). Plant coverage within the mapped populations ranged from 5% to 80%. Small scattered populations of beach pea were also identified growing on the natural sandy substrate of the beaches to the north and south of the Harbor.

Tracy's romanzoffia (Romanzoffia tracyi) - CNPS List 2.3
Two small populations of Tracy's romanzoffia occur near coastal bluff scrub and coastal scrub vegetation in rocky areas adjacent to an existing trail on Whaler Island. The populations totaling approximately seven square feet have approximately 90% to 100% cover coverage.

Headland (curly) wallflower (Erysimum menziesii ssp.concium), no status
The headland wallflower is a FWS-identified regionally significant species. The plant occurs intermittently across much of Whaler Island at a density generally less than 5%.

Discussion

a) As discussed above, the project area contains habitat for and populations of several special-status or protected species, including California sea lions, coho salmon, cutthroat trout, Wolf's evening primrose, beach pea, Tracy's romanzoffia, and the headland wallflower. Project construction has the potential to cause direct and indirect impacts to these special-status species without incorporation of mitigation measures.

The project does not include significant construction below the mean higher high water of the marine environment or within a creek, and, therefore, direct impacts to coho salmon and cutthroat trout would not occur as a result of the project. Indirect impacts to these and other species in the marine environment would be avoided through the use of best management practices during construction of the project, pursuant to Hydrology and Water Quality Mitigation Measure HYD -1.

The project would avoid impacts to the identified special-status plants and plant habitat on site with the exception of areas of beach pea that would be impacted by the construction of the promenade along the south side of Anchor Way (see Figures 3.10 and 3.11). Isolated patches of beach pea totaling approximately 1,340 square feet are currently located along the south edge of Anchor Way from Starfish way to Whaler Island. Approximately 584 square feet of beach pea in this area will be directly impacted by the project. As such, Mitigation Measure BIO-1 includes the requirement that the Harbor District develop a beach pea replacement plan that will result in a 1:1 ratio for

impacted plants. On the south side of Anchor Way, the proposed promenade will be mostly separated from the remaining beach pea populations by existing K-rail, to remain in place, and sections of proposed guard rail. Access to the populations not subject to direct impact from the project would remain available along certain sections of the promenade. However, access to the populations would not lead to increased indirect impacts because the project would concentrate most pedestrian traffic on the promenade. Although pedestrian impacts to the remaining beach pea populations may occur, implementation of the project would not cause an increase in the likelihood of this indirect impact. Therefore, this impact would be ***less than significant impact after mitigation.***

The project would include permanent physical deterrence measures preventing California sea lions from reentering the existing haul-out site located on a small rip-rap extension of the Anchor Way Groin in the Outer Boat Basin of the Harbor. California sea lions would be allowed continued access to existing nearby floating docks. The displacement of the sea lions would reduce the potential for human-sea lion interaction while maintaining a safe haul-out site. The MMPA provides authority to government officials or their employees to deter "nuisance" marine mammals, including the California sea lion, to prevent damage to public property or to protect the public from potential threats by a nuisance animal. NMFS has issued interim advice for animal deterrence pending development and approval of formal guidelines and regulations for safe and legal deterrence of MMPA-protected marine mammals. This interim guidance issued in January 2008 is titled "Potential Deterrence Methods for Pacific Harbor Seals & California Sea Lions" and may be located online at http://www.nwr.noaa.gov/Marine-Mammals/Seals-and-Sea-Lions/upload/Deter-Pinnipeds.pdf. In order to ensure that sea-lion deterrence is conducted in a safe, humane, and legal manner, the project shall implement all NMFS guidance as discussed in Mitigation Measure BIO-2. Deterrence of the threatened Steller sea lion is not permitted under the Endangered Species Act. Although the Steller sea lion is not known to occur in the Harbor individuals may be present at certain times and precaution should be taken to confirm its absence prior to implementing any sea lion deterrence methods. Mitigation Measure BIO-2, therefore, includes the requirement that a biologist knowledgeable in the identification of marine mammals conduct sea lion surveys immediately prior to the implementation of any deterrence methods. This impact would be ***less than significant impact after mitigation***.

b) As discussed above, several sensitive habitats have been identified within the Harbor area. These habitats include: one-, two-, and three-parameter wetlands; coastal dunes; northern coastal bluff scrub; tidal areas; and marine habitat. Also discussed above, these identified sensitive habitats are protected under local, state, and federal regulations.

The proposed project design has been modified to avoid direct impacts to identified sensitive habitats present in the Harbor area and most proposed project improvements are located in previously developed upland areas. The project will not cause direct impacts to: wetlands under the jurisdiction of the USACE or Coastal Commission; coastal dunes; northern coastal bluff scrub; tidal areas; or marine habitat. Subject to final design, the lowered promenade on the water side of the Chart Room may cause a minor

(approximately 50 to 100 square foot) impact within in USACE Section 404 jurisdiction below mean higher high water (6.49' NAVD88) and within Section 10 jurisdiction below the mean high water (5.85' NAVD88). Should the final design require jurisdictional impacts, the project will trigger USACE Section 10 and/or Section 404 permitting and, likely, RWQCB Section 401 certification.

The project would cause direct impacts to the mowed field under the sparse conifer trees near Highway 101 as a result of grading associated with the construction of a "wave field" area. Trees would not be removed as a result of the project unless they are determined to present an immediate threat due to disease or defect. The 2011 W&K biological resource study states that this area does not exhibit the qualities of an ESHA under the jurisdiction of the Coastal Commission due to 1) the absence of natural understory, 2) it is not connected with any surrounding similar habitat, and 3) it could have been planted as part of the past Harbor development. The area also does not provide habitat for any special-status species. Because the area was not identified as a sensitive natural habitat area and because it will maintain similar habitat value following construction, there would not be any substantial disturbance to natural biotic habitats associated with the construction of the "wave field." Earthwork conducted in this area has the potential to introduce pollutants to the water and air without proper safeguards. To reduce potential impacts to water and air quality, standard construction BMPs for dust control, sediment control, erosion prevention, and emission control practices during and following the construction period will be implemented as discussed in Hydrology and Water Quality Mitigation Measure HYD -1.

Some features of the proposed project are located in close proximity to identified sensitive habitats, including ESHA under the protection of the California Coastal Commission. Although the project avoids all direct impacts to the marine and tidal environments by locating all proposed project elements above the high tide line, most of the project occurs within close proximity of these habitats. The promenade, portions of the coastal trail, restrooms, and wind shelters would occur in close proximity to areas of marine and tidal habitat. Also, the northern portion of the proposed coastal trail would be carefully aligned within upland areas to avoid direct impacts to two one-parameter (riparian) jurisdictional wetlands (see Figures 3.1 and 3.2), which consist of two patches of small willows growing in concrete rubble. This segment of trail is proposed to be located adjacent to these two patches of one-parameter riparian wetlands. Construction and operation of the proposed project in close proximity to marine, tidal, and wetland habitats has the potential to cause indirect impacts to the habitats. Temporary indirect impacts to these habitats associated with construction would generally be avoided through implementation of Mitigation Measure HYD-1, which would substantially reduce the potential for pollution. The promenade and project features within the developed portions of the Harbor are not anticipated to cause long term indirect impacts related to degradation of the adjacent marine and tidal environments because: 1) the existing features of the Harbor in the area of the proposed promenade would be indistinguishable from the proposed features in terms of the functionality of the adjacent marine and tidal habitats, and 2) the topographical and physical (fences, railings, etc.) separation of the marine and tidal environments from the proposed promenade

improvements would prevent direct access to the habitats by facility users. Construction and operation of the coastal trail immediately adjacent to two one-parameter wetlands in the northern portion of the project area may cause temporary and long-term indirect impacts to the function of the habitats. These willow-dominated habitats likely meet the Coastal Commission definition of ESHA. Possible impacts to these areas include wildlife disturbance related to an increased rate of human disturbance and physical habitat disturbance related to unauthorized entry of trail users into the wetlands. In order to prevent to prevent access to the wetlands and associated impacts, a fence or physical barrier which prevents trail user entry to the wetlands should be constructed concurrent with the trail should at the edge of the trail. This measure has been incorporated into the project with Mitigation Measure BIO-3, below and a ***less than significant impact after mitigation*** would occur.

c) As discussed briefly above and in detail in the 2011 W&K wetland delineation for the project site, there are approximately 0.24 acres of three-parameter USACE jurisdictional wetland within the project area (see Figures 3.1, 3.2, and 3.3). These include: 1) a three-parameter linear wetland ditch on the eastern boundary of the site, adjacent to Highway 101; 2) a small three-parameter wetland in the extreme northern portion of the project area at the toe-of-slope of the northernmost part of the diked road around the dredge ponds. USACE jurisdiction also extends to all tidally influenced waters seaward of the mean higher high water (6.49' NAGVD88), which includes all marine and tidal environments seaward of the project. The project would not have direct impacts to any USACE-jurisdictional wetlands because all project construction would occur outside of wetlands, including 3-parameter wetlands. As discussed above and subject to final design, the lowered promenade on the water side of the Chart Room may cause a minor (approximately 50 to 100 square foot) impact within in USACE Section 404 jurisdiction below mean higher high water (6.49' NAVD88) and within Section 10 jurisdiction below the mean high water (5.85' NAVD88). Should the final design require jurisdictional impacts, the project will trigger USACE Section 10 and/or Section 404 permitting and, likely, RWQCB Section 401 certification. The USACE mandate to cause "no net loss" through issuance of Section 404 and Section 10 permits would require mitigation for any minor impacts related to the lowered walkway, and, as such, the lowered walkway would not cause a significant impact to jurisdictional waters.

The project would not cause net loss of wetlands due to removal, filling, diking, or hydrological modification to any federally protected wetland, and, therefore ***a less than significant impact*** would occur.

d) With the exception of restricting access of the California sea lion to a portion of an existing dock, the project would not interfere substantially with the movement of any fish or wildlife species. Landward of the high tide line, the project site is predominantly developed uplands and, therefore, does not meet the habitat requirements for any native resident or migratory fish or meet the criteria for established native resident or migratory wildlife corridors. The project will not directly impact nor substantially restrict access to any identified sensitive habitat in the project area. As discussed above, the project would include permanent physical deterrence measures preventing California sea lions from

reentering the existing haul-out site in the Outer Boat Basin of the Harbor. The project, therefore, has the potential to interfere substantially with the movement of native California sea lions that currently use the area. Under the project, California sea lions would be allowed continued access to existing nearby floating docks. In addition, in order to prevent substantial interference with California sea lion movement, the project shall implement all NMFS guidance as discussed in Mitigation Measure BIO-2. A ***less than significant impact after mitigation*** would occur because California sea lion deterrence would occur in accordance with NMFS recommendations.

e) The Del Norte County LCP includes several Coastal Act-based policies that apply to biological resources, including among others: protection of environmentally sensitive coastal habitats, protection of sensitive species, protection of wetlands, establishment of buffer zones, and the protection of water resources. These policies apply on all project lands subject to Del Norte County jurisdiction, including all Harbor areas landward of the historic mean high tide line (State Land Grant Boundary).

Review and approval by Del Norte County under these policies (or combined jurisdiction review under the California Coastal Commission) would ensure that the project would not conflict with local policies adopted to protect biological resources. A ***less than significant impact*** would occur.

f) Several state and federal plans prepared for the protection of threatened and endangered species may apply to varying degrees in the project area, in particular the marine environment, which supports threatened and endangered anadromous fish species. Based on the discussions above, the proposed project would not significantly impact any threatened or endangered species or habitat and, therefore, would not conflict with any related conservation plans. A ***less than significant impact*** would occur.

Mitigation

BIO-1) The applicant shall develop an on-site compensatory beach pea replanting plan approved by the DFG and any other resource agency with jurisdiction. Approximately 584 square feet of impacts would occur due to the project. At a minimum, the plan shall: result in 1:1 replacement of beach pea replanting area with similar target density to directly impacted populations; include a planting plan showing extent and density of proposed planting; include maintenance and monitoring of the mitigation site; include specific success criteria aimed at reestablishing no net loss in habitat area or total mitigation area density.

BIO-2) Any deterrence of California sea lions shall be conducted pursuant to the Marine Mammal Protection Act and in accordance with NMFS January 2008 "Potential Deterrence Methods for Pacific Harbor Seals & California Sea Lions," or superseding NMFS guidelines or regulations. In addition, deterrence methods shall not result in the following: serious injury or mortality, deterrence of ESA-listed species, violation of federal or state laws or local ordinances, risk to human safety, or the taking of non-target marine mammals.

BIO-3) A fence or physical barrier which deters trail users from entering the one-parameter wetlands to the north of the dredge ponds shall be constructed adjacent the one-parameter wetlands and concurrently with trail construction.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion

a, b, c, d) Under §15064.5, a historical or archaeological resource includes: sites listed or eligible for the California Register of Historical Resources; any resource included in a local register of historical or archaeological resources; any resource which a lead agency determines to be historically significant (provided the evidence in the record supports the finding).

A 2010 review of the California Historical Resources Information System conducted by Vicky Bates, Coordinator, North Coastal Information Center (NCIC), California Historical Resources Information System for the Crescent City Harbor District Inner Boat Basin Rehabilitation Project, found an absence of historical and archeological resources in the Harbor area. Similarly, the 2006 Crescent City Harbor Master Plan identified a lack of archaeological resources in the Harbor area.

Because there are no identified historic, archaeological, or paleontological resources in the project area, no change in the significance of such resources would be likely to occur as a result of the project. Although no historic or archaeological resources were identified during past studies in and around the project area, the proposed project includes minor ground disturbance related to construction of promenade features, the coastal trail, and "wave-field" that has a potential to unearth buried historic resources, archaeological resources, paleontological resources, and/or human remains. The likelihood for uncovering such resources during the project is low because of the previously disturbed and developed nature of the project site, the lack of known resources, and the limited scope of earthwork related to the project. However unlikely, any disturbance or destruction of an unearthed cultural resource related to the project may cause a significant impact. The impact would be ***less than significant after mitigation*** with implementation of Mitigation Measures CUL-1 and -2.

Mitigation

CUL-1) Earthmoving, grading, and excavation activities will be monitored by construction and/or Harbor District personnel or their agents, for the presence of historical,

archaeological, or paleontological artifacts. Construction the immediate vicinity shall be immediately halted if suspected cultural resources are uncovered. Any suspected cultural resources unearthed will be inspected by a qualified archaeologist, and any reporting, curation, or preservation recommendations made by the archaeologist will be implemented prior to commencing any project activities in the area of the discovery.

CUL-2) If human remains are uncovered as a result of the project, construction activities in the immediate vicinity of the remains shall be halted, the County of Del Norte Community Development Department, County Coroner, Native American Heritage Commission (NAHC), and Elk Valley Rancheria Tribal representatives shall be notified. Any human remains shall be treated in accordance with NAHC treatment and disposition requirements, and in accordance with all applicable federal, state, local, and tribal requirements prior to commencing any project activities in the area of the discovery.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a know fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?		X		
iii) Seismic-related ground failure, including liquefaction?		X		
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

Background

In October of 2011, Treadwell & Rollo prepared a geotechnical consultation for the onshore areas of the Crescent City Harbor, including the project area. The information provided below is an excerpt from the geotechnical report:

The on-shore portion of the site is relatively flat with ground surface elevations in the vicinity of the planned on-shore improvements (walkway abutments and restroom building) ranging from approximately 12 to 14 feet. The land portion of the site is underlain by fill, native beach sand, and rock. The basin is underlain by a thin layer of sand and silt over bedrock or bedrock. The fill and beach sand generally consist of loose to very dense sand and silty sand. The bedrock primarily consists of crushed to intensely fractured, weak, friable, plastic moderate to deeply weathered mudstone/claystone.

The site is not within a state-designated seismic hazard zone. However, during a major earthquake on a segment of one of the nearby faults, strong to very strong shaking is expected to occur at the project site. Strong shaking during an earthquake can result in ground failure such as that associated with soil liquefaction, lateral spreading, and cyclic densification.

The Treadwell & Rollo report further evaluates seismic hazards (including: ground shaking, liquefaction, liquefaction induced settlement, lateral spreading, cyclic densification, and fault rupture) and slope hazards (static and seismic slope stability) related to the site. The report also includes geotechnical recommendations related to methods of earthwork, restroom building foundations, walkway abutment foundations, floor slabs, gabion wall design, and seismic design.

Discussion

a) *i)* The Alquist-Priolo Earthquake Fault Zoning (AP) Act was passed into law following the destructive 1971 San Fernando earthquake. The AP Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the AP Act is to insure public safety by prohibiting locating most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The project site is not bisected by any known fault and is not located within an AP Earthquake Fault Zone according to the AP Earthquake Fault Zone Maps prepared by the California Geological Society (Treadwell & Rollo 2011, 2011b). This impact would be ***less than significant.***

ii) The project is located within a seismically active region in which earthquakes are common and large earthquakes are possible. Strong seismic shaking is a regional hazard that could cause major damage to the project area. The extent of ground-shaking during an earthquake is controlled by the earthquake magnitude and intensity, distance to the epicenter, and the geologic conditions in the area. Treadwell & Rollo (2011) identified that "*During a major earthquake on a segment of one of the nearby faults, strong to very strong shaking is expected to occur at the project site. Strong shaking during an earthquake can result in ground failure such as that associated with soil liquefaction, lateral spreading, and cyclic densification.*" Treadwell & Rollo further state "*The intensity of earthquake ground motions at the site will depend upon the characteristics of the generating fault, distance from the rupture, magnitude and duration of the earthquake, and specific subsurface conditions. We judge ground shaking at the site during a major earthquake on one of the nearby regional faults will be strong.*" The nearby active faults could cause strong seismic shaking that would have the potential to expose people or structures to potential substantial adverse effects. The project site may

be subject to an increased risk of ground shaking due to a greater depth of soft alluvial soils of the beach. Although the project could be seriously damaged by earthquakes, there are few proposed project components that would expose persons or structures to potential substantial seismic ground shaking hazards. Implementation of mitigation measure GEO-1 would reduce the potential geotechnical impacts related to strong seismic ground shaking to a less than significant level. This impact would be ***less than significant with mitigation incorporated.***

iii) Liquefaction is the transformation of saturated, loose, fine-grained sediment to a fluid-like state because of earthquake shaking or other rapid loading. Liquefaction is known to occur in loose or moderately saturated granular soils with poor drainage, such as silty sands. The project area is not mapped by the California Geological Survey (CGS) under the Seismic Hazards Mapping Act, which addresses non-surface rupture hazards such as landslides and liquefaction. As discussed in the Treadwell & Rollo 2011 supplemental geotechnical consultation, the site is underlain by relatively fine material including fill, native beach sand, and rock that may be subject to liquefaction during a seismic event. The proposed project would not include residential development, occupied structures, or critical facilities that would be subject to liquefaction, but project components may still be subject to failure in the event of liquefaction (Treadwell & Rollo 2011). Therefore, the project would expose persons or structures to potential substantial seismically-induced ground failure and liquefaction hazards. Implementation of mitigation measure GEO-1, described above, would reduce potential geotechnical impacts related to liquefaction to a less than significant level. This impact would be ***less than significant with mitigation incorporated.***

iv) The project area is generally level and is therefore not subject to landslides. There is no apparent visual evidence of recent active landslides that would affect the project. Slope stability hazards associated with the proposed project are highly unlikely due to the topographic setting of the surrounding area. Implementation of the proposed project would not adversely impact persons or structures due to landslides. Therefore, ***no impact*** would occur.

b) Construction activities, including cut, fill, removal of vegetation, and operation of heavy equipment would disturb soil and, therefore, have the potential to cause erosion. Subject to regulatory approval, an erosion control plan and storm water pollution prevention plan (if greater than 1 acre of soil is disturbed) would be prepared for the project prior to the start of construction and soil disturbance. The erosion control plan would include best management practices (BMPs) designed to reduce erosion of exposed soil and minimize the sediment entrained in runoff from the site during construction. BMPs may include: silt fences, straw bales and wattles, soil stabilization controls, site watering for controlling dust, and sediment detention basins. All disturbed areas would be re-vegetated following construction with native, non-invasive grass species, or non-persistent hybrids that would serve to stabilize site conditions and prevent invasive species from colonizing. Implementation of an erosion control plan would reduce potential impacts to soil erosion or the loss of topsoil to ***less than significant*** levels. See also Hydrology and Water Quality Mitigation HYD-1.

c) As described in *a) iv* above, there is potential for liquefaction or other ground failure due to the location of the project. Implementation of mitigation measure GEO-1 would ensure that unstable soil conditions such as liquefaction, subsidence, or lateral spreading would be mitigated to a less than significant level as part of the design and construction of the proposed project. This impact would be ***less than significant with mitigation incorporated.***

d) Soil volume change, known as expansion, occurs when expansive soils undergo alternating cycles of swelling and shrinking associated with wetting and drying.. Expansive soils are common throughout California and can cause damage to foundations and slabs unless properly treated during construction. High clay content soils were not identified at the project site (Treadwell & Rollo 2011). As such, the risks to life or property associated with expansive soils would be ***less than significant***.

e) The proposed project would not involve the construction or use of septic tanks or an onsite wastewater disposal system. Therefore, implementation of the proposed project would result in ***no impact*** to soils associated with the use of such wastewater treatment systems.

Mitigation

GEO-1) The proposed project shall be constructed using the recommendations of the 2011 Treadwell & Rollo geotechnical investigation and Treadwell & Rollo supplemental geotechnical consultation, in addition to the requirements of the California Building Code (CBC), to minimize any geophysical risks associated with construction of the proposed project, as follows:

- Where applicable, the recommendations contained in the latest edition of the California Building Code (CBC) shall be followed to reduce the potential for damage to the project from earthquakes.

Project design, engineering, and construction shall be in accordance with the recommendations of the 2011 Treadwell & Rollo Crescent City Harbor Supplemental Geotechnical Consultation, including: Section 7.1 Earthwork and Grading; Section 7.2 Restroom Building Foundations; Section 7.3 Walkway Abutment Foundations; Section 7.4 Floor Slabs; Section 7.5 Gabion Wall Design; Section 7.6 Rock Slope Protection and Gabion Wall Considerations; Section 7.7 Seismic Design; and Section 7.8 Geotechnical Services During Construction.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

Background

Climate change refers to change in the Earth's weather patterns including the rise in the Earth's temperature due to an increase in heat-trapping or "greenhouse" gases (GHGs) in the atmosphere. Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of GHGs that contribute to global warming or global climate change have a broader, global impact. Global warming is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the Earth's atmosphere. The principal GHGs contributing to global warming are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and fluorinated compounds. These gases allow visible and ultraviolet light from the sun to pass through the atmosphere, but they prevent heat from escaping back out into space. Among the potential implications of global warming are rising sea levels, and adverse impacts to water supply, water quality, agriculture, forestry, and habitats. In addition, global warming may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health. Like most criteria and toxic air contaminants, much of the GHG production comes from motor vehicles. GHG emissions can be reduced to some degree by improved coordination of land use and transportation planning on the city, county and subregional level, and other measures to reduce automobile use. Energy conservation measures also can contribute to reductions in GHG emissions.

The California Global Warming Solutions Act of 2006 (Assembly Bill 32) definitively established the state's climate change policy and set GHG reduction targets (Health & Safety Code §38500 et seq.). The state set its target at reducing greenhouse gases to 1990 levels by 2020.

The North Coast Unified Air Quality Management District (NCUAQMD) does not have rules, regulations, or thresholds of significance for non-stationary or construction-related GHG emissions, but currently recommends that GHG emissions be analyzed for CEQA purposes pursuant to BAAQMD guidance. For land use development projects (i.e., residential, commercial, industrial, and public land uses and facilities), the BAAQMD advisory threshold of significance for GHG emissions is (1) compliance with a qualified climate action plan or qualified general plan (not applicable to the NCUAQMD); (2) annual GHG emissions less than 1,100 metric tons of carbon dioxide equivalent ($MTCO_2e$); or (3) annual GHG emissions less than 4.6 metric tons per service population (residents plus employees). BAAQMD estimates that the following types of development projects will exceed the GHG operational threshold of 1,100 $MTCO_2e$ annually: 56 single-family dwelling-unit project; 83-room hotel; 9,000 square-foot

regional shopping center; 53,000 square-foot general office building; 22,000 square-foot medical office building (BAAQMD 2011).

For discussion related to sea level rise, refer to hydrology and water quality section.

Discussion

a) Construction of the project would cause GHG emissions as a result of combustion of fossil fuels used in construction equipment. Use of a variety of construction materials would contribute indirectly the GHG emissions, because of the emissions associated with their manufacture. The construction-related greenhouse gas emissions would be minor and short-term and would not constitute a significant impact based on BAAQMD thresholds. The project may result in a minor increase in motor vehicle use of the Harbor area, but improved non-motorized access and amenities in and around the Harbor would offset this minor increase. Therefore, the project would not significantly increase greenhouse emissions. The project would have ***less than significant impact.***

b) The proposed project is consistent with all the applicable local plans, policies and regulations and would not conflict with the provisions of AB 32, the applicable air quality plan, or any other state or regional plan, policy or regulation of an agency adopted for the purpose of reducing greenhouse gas emissions. The project would have ***no impact.***

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Discussion

a) The project would result in the use of common equipment fuels and lubricants, and common construction materials, such as asphalt, concrete, paint, stain, and treated wood products. The project does not involve the transport, use, or disposal of hazardous materials, and thus would not create a significant hazard to the public associated with these materials. *A **less than significant impact*** would occur.

b) There would be no substantial concentration hazardous materials use, storage, or transportation associated with the operation of the proposed project over the long term. However, construction activities would include the use of small quantities of ordinary equipment fuels and lubricants with the potential to be released to the environment in the event of a spill. In the unlikely event of a fuel or lubricant spill, released fluids would be controlled and disposed of in accordance with applicable regulations, and in accordance with Mitigation Measure HYD-1, as discussed below. As such, there would be no substantial risk of upset and accident conditions involving the release of hazardous materials into the environment. If hazardous materials are released or discovered during construction, the construction contractor would be required to comply with local, state, and federal regulations pertaining to the discovery of such material. A ***less than significant impact*** would occur. See also Hydrology and Water Quality Mitigation Measure HYD-1, below.

c) The two closest schools are Crescent Elk at a distance of 0.9 mile and Joe Hamilton at a distance of one mile from the project. The project would not cause the release of hazardous emissions or acutely hazardous materials, substances, or waste. Therefore, ***no impact*** would occur.

d) The State Water Resources Control Board's (SWRCB) Geotracker website indicates that the project area (including all sites within 2,500 feet of the central portion of the Harbor) includes the following state-listed hazardous materials clean-up sites (SWRCB 2010):

SITE NAME	CLEANUP STATUS	ADDRESS
BP, CRESCENT CITY	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	317 HIGHWAY 101, SOUTH
CASH OIL, CRESCENT CITY	COMPLETED - CASE CLOSED	300 HIGHWAY 101, SOUTH
CROWLEY MARITIME OIL TERMINALS	COMPLETED - CASE CLOSED	HIGHWAY 101, SOUTH
DEVAULT, STEWART	COMPLETED - CASE CLOSED	297 HIGHWAY 101, SOUTH
HARBOR EXXON	OPEN - SITE ASSESSMENT	800 HIGHWAY 101, SOUTH
HECTOR BROWN PROPERTY	OPEN - SITE ASSESSMENT	441 HIGHWAY 101 SOUTH
OTTEN'S, HARBOR	COMPLETED - CASE CLOSED	101 CITIZEN DOCK ROAD
WHITELEY, THOMAS J., INC.	OPEN - SITE ASSESSMENT	800 HIGHWAY 101, SOUTH

Leaking Underground Tank (LUST) Cleanup Sites

Other Cleanup Sites

Closed Sites

According to the Geotracker website, the four closed cases are the locations of past spills or leaks which have been remediated and no further action is required. Each of these closed sites is outside of the project footprint along the Highway 101 corridor. Of the four open cases in the general vicinity of the project, two, including BP Crescent City and Crowley Maritime sites, lie to the north and south of the project area, respectively. The remaining two open case sites, including the Hector Brown and the Whiteley, sites lie within the southeastern portion of the Harbor in an area that would not be subject to impacts caused by the project.

As discussed above, the project is located in the vicinity of several a sites which are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 ("Cortese list"). However, these sites are either closed clean-up cases or are open cases, but out of the area of project impact. As such, the project would not result in a significant hazard to the public or the environment related to the Cortese list sites. *A **less than significant impact*** would occur.

e-f) The proposed project is not located within an airport land use plan, within two miles of a public airport or public use airport, or within the vicinity of a private airstrip. The public Del Norte County Regional Airport - Jack McNamara Field is located approximately two miles north of the project site. The project does not include new development for human occupation, and does not include structures which could potentially represent a hazard to aviation. The project would not result in airport-related safety hazards for people residing or working in the project area. ***No impact*** would occur.

g) The Del Norte County Office of Emergency Services (OES) coordinates countywide response to disasters. OES is responsible for alerting and notifying appropriate agencies when disaster strikes; coordinating all agencies that respond; ensuring resources are available and mobilized in times of disaster; developing plans and procedures for response to and recovery from disasters; and developing and providing preparedness materials for the public. The OES would coordinate evacuation planning in the event of seismic events, tsunamis, slope failure, floods, storms, fires, and hazardous materials spills.

The project is located within an area of State of California mapped tsunami inundation projections and may experience a tsunami in the event of a strong earthquake originating over a broad portion of the Pacific Ocean. The proposed project would not impair implementation of or physically interfere with implementation of tsunami or other evacuation plans because it would not obstruct evacuation routes and would not necessitate any changes to existing evacuation plans. Furthermore, the project does not include development that would significantly increase the number of people exposed to potential emergencies. *A **less than significant impact*** would occur.

h) The project does not involve wildlands with substantial risk of wildfire and would not result in the intermixing of residences or other structures with wildlands. The project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, and ***no impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through stream or river course alteration, in a manner which would result in substantial erosion or siltation onsite or offsite?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		X		
f) Otherwise substantially degrade water quality?		X		
g) Place housing within a 100-year flood hazard Area 1as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood				

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	

Discussion

a, f) Construction of the proposed project would require the use of gasoline and diesel-powered equipment, such as trucks, excavators, graders, bulldozers, backhoes, compactors, and generators. Chemicals such as diesel, gasoline, lubricants, hydraulic fluid, transmission fluid, paints, solvents, glues, and other substances would be utilized during construction. An accidental release of any of these substances could degrade surface or ground water and could flow to the adjacent marine environment. As such, the Harbor District or construction contractor should prepare an emergency response plan should specific actions to be taken in the unlikely event of spillage, leakage, or upset during construction. The impact would be ***less than significant after mitigation*** with implementation of Mitigation Measure HYD-1.

Construction activities can introduce pollutants to stormwater runoff, including sediment, paints, solvents, pavement, construction debris and trash, as well as hydrocarbons and other fluids from construction vehicles. The most likely pollutant from the proposed project would be sediment created by soil disturbance during or immediately after construction. These potential pollutants would be regulated under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order Number 2009-0009-DWQ, NPDES Number CAS000002; a.k.a construction general permit). This construction general permit offers NPDES coverage for stormwater discharges with construction activities of more than 1.0 acre. The proposed project includes 4.37 acres of construction activities and would be subject to NPDES requirements. The construction general permit requires the development and implementation of a storm water pollution prevention plan (SWPPP). A SWPPP must contain site plans that show the construction area, existing and proposed buildings, roadways, storm water collection/discharge points, general existing and proposed topography, and drainage patterns across the project. As described in section A of the construction general permit, a SWPPP must include: BMPs the discharger will use to protect stormwater runoff; a visual monitoring program; a chemical monitoring program for non-visible pollutants to be implemented in the event of a BMP failure; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Because the proposed project would be required to adhere to these requirements, and because the project would not generate or discharge wastewater or industrial flows to wetlands, creeks, waters of the U.S., the project would not violate any water quality standards or waste discharge requirements, or

otherwise substantially degrade water quality. The impact would be ***less than significant after mitigation*** with implementation of Mitigation Measures HYD-1.

b) The proposed project and all of Del Norte County is within an area of high annual rainfall, where groundwater recharge substantially exceeds water withdrawals. The project would not require a substantial volume of water to construct, and would use only a minor amount of water following construction for restrooms, landscaping, and maintenance activities. Although project construction would result in an approximately 1.61 acre increase in the area of existing impervious surface in the project, it would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Any increase in stormwater runoff that results from the project would either infiltrate to the ground or flow to existing stormwater inlets, ditches, wetlands, and marine waters in the project area. Therefore, ***a less than significant impact*** would occur.

c, d) The proposed project would cause only minor changes to the project area relative to the existing patterns drainage. There would be no disturbance to any water drainage pattern that would have the potential to cause erosion, sedimentation, or flooding on- or offsite. Therefore, a ***no impact*** would occur.

e) The proposed project would result in an approximately 1.61-acre permanent increase in impervious surface, predominantly related to construction of the coastal trail. This would represent an approximately 2.1% increase in impervious surface found within the Harbor. The promenade areas and parking reconfiguration areas would occur primarily on areas of existing pavement and would not substantially add to the area of impervious surface. Stormwater flow increases related to the additional impervious surface are expected to be minor and would drain in a similar fashion before and after project construction.

Proposed construction would cause a short-term increase in the potential for soil disturbance, use of construction materials, and potential fuel/lubricant leaks. The risk of significant runoff pollution impact related to construction activities would be reduced through the implementation of an emergency response plan and BMPs under Mitigation Measure HYD-1. Following construction, runoff from parking areas would contain similar levels of common vehicle-related contaminants (petroleum, trash, dust, etc.) that occur prior to construction, because any increase in vehicular use of the area would be minor. Thus, the project would not create or contribute runoff water which would, in the long term, would provide substantial additional sources of polluted runoff or result in substantial erosion or siltation onsite or offsite during operation. A ***less than significant impact after mitigation*** would occur with implementation of Mitigation Measure HYD-1.

g, h) The proposed project is located predominantly outside of the 100-year floodplain within Zone X, as shown on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Del Norte County Community Pannel Number 06015C0331E (September 26, 2008). Zone X is characterized by: areas with less than 0.02% annual chance of flooding; areas of 1% annual chance of flood with average depth

of less than one foot; and areas protected by levees from 1% annual chance of flood. The northern half of the Anchor Way Groin and a small portion of existing paved parking area to the south of the inner boat basin are mapped as Zone V, coastal flood zone with velocity hazard (wave action) with no base flood elevation established. Land to the north of the northernmost paved portion of the Harbor and west of Highway 101 in the project area is mapped as Zone VE, coastal flood zone with velocity hazard (wave action) with base flood elevation established.

The proposed project would result in construction and minor fill in FEMA Flood Zone V and VE. Proposed construction within these flood zones would include the northern portion of the coastal trail, segments of the promenade, and reconfiguration of some of the existing parking areas on the groin and near the inner boat basin. Construction of project features within FEMA flood does not include housing. The proposed project would not place structures within a 100-year flood hazard area which would impede or redirect flood flows. Therefore, ***no impact*** would occur.

i) Based upon the topography of the project site, most of the areas that are subject to flooding would experience relatively shallow flooding during a 100 year flood event. Areas that may flood during a 100 year event are immediately adjacent to FEMA Zone X areas, where substantial flooding would occur very rarely (0.02% annual chance) and would be relatively safe in the event of a flood of adjacent Zone V and Zone VE areas. Furthermore, the Zone X portions of the Harbor are well connected to several non-flood prone evacuation routes via Highway 101. The project would, therefore, not expose people or structures to a significant risk of loss, injury or death involving related to flooding.

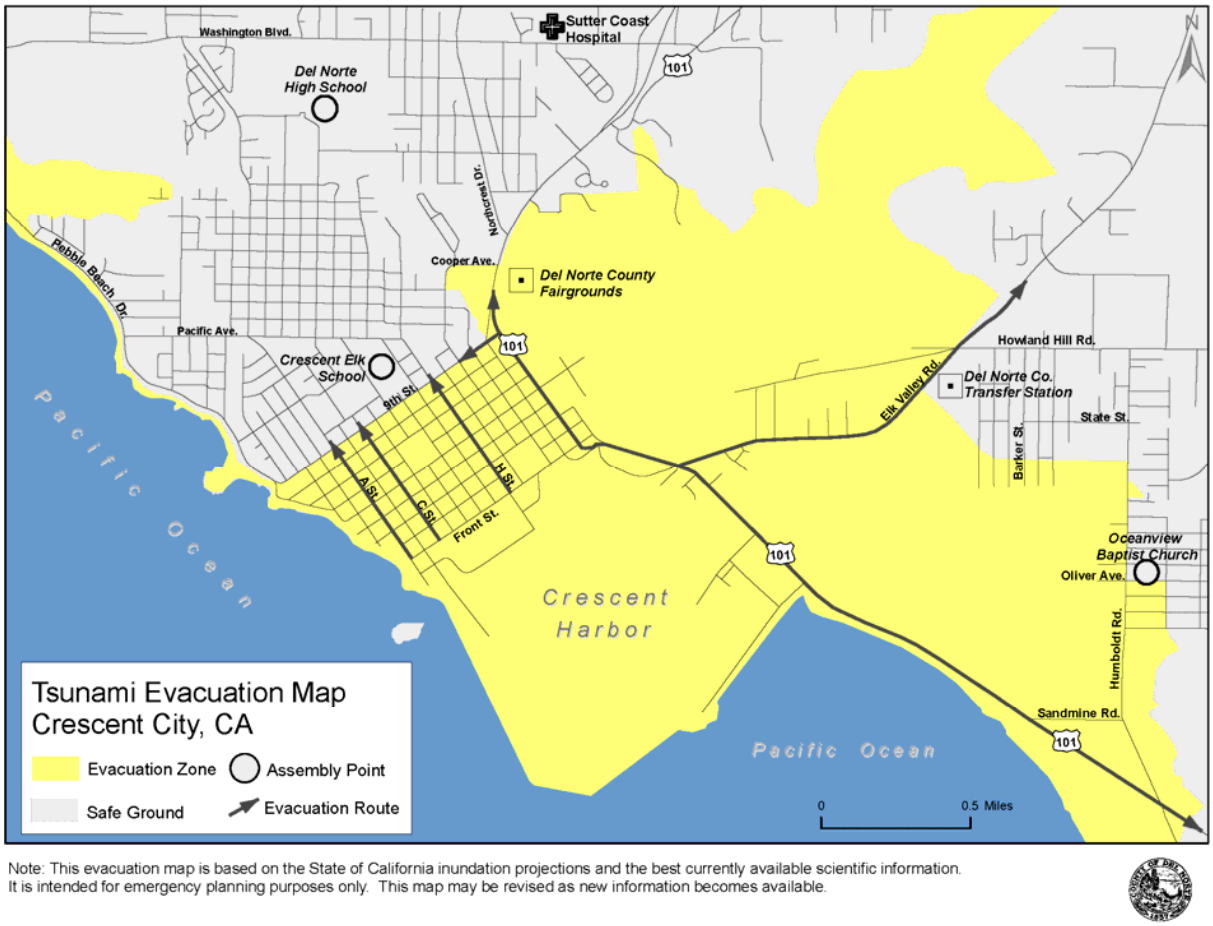
Sea level rise is perhaps the best documented and most accepted impact of climate change related to GHG production. Climate models indicate that California's coast may experience rising sea levels unless emissions of greenhouse gases are dramatically reduced from current levels. The effects of sea level rise will have impacts on all projects located near the coast at low elevations. According to the State Lands Commission's 2011 State of California Sea level Rise Interim Guidance Document, using 2000 as a baseline year, sea level is expected to rise 7 inches by 2030 and 14 inches by 2050. Sea level rise may be offset by localized subsidence or tectonic uplift. In the Crescent City area, there is roughly 0.1 inches of annual localized tectonic uplift, a rate which exceeds the actual sea level rise witnessed from 1933 to 2006. This uplift would continue to be a mitigating factor in the impact of sea level rise on the Harbor, but it may diminished as many climate and sea level rise models show a rapidly increased rate of sea level rise in the coming century.

Because the Crescent City Harbor is in a low-lying, coastal area, it would be subject to increased inundation and flooding in the event the predicted sea level rise occurs. The proposed project would, therefore, be in an area vulnerable to sea level rise. Because the project will be built within the existing Harbor, which is currently protected from flooding by rip-rap and other durable surfaces, the proposed improvements should not experience additional flooding when built. However, as the sea level rises, the Harbor

and the proposed improvements may experience an increased frequency, duration, and depth of flooding during high tide events. The project, therefore, may experience low velocity tidal inundation at some time in the future. During inundation, the facilities would likely not be used as intended, but positive drainage would allow the project to recover from inundation immediately following tidal recession. Because the flooding would not have a high velocity or depth, there would be no substantial danger to visitors or structures. As inundation becomes more severe and frequent, visitors would likely avoid use of the trail and other facilities during flooding events. As such, sea level rise would not cause substantial harm to the proposed project. Therefore, ***a less than significant impact*** would occur.

j) Tsunamis are long-wavelength, long-period ocean waves generated by an abrupt movement of large volumes of water. These waves can be caused by underwater earthquakes, landslides, volcanic eruptions, meteoric impacts, or onshore slope failures. As identified in the Crescent City Harbor Master Plan (RRM Design Group 2006) "Perhaps the biggest safety issue affecting the Harbor is its vulnerability to tsunamis as witnessed by the April 1964 event that decimated the Harbor." The Harbor is configured and positioned relative to the underwater Mendocino fracture zone such that it is particularly susceptible tsunamis generated around the Pacific Rim. As such, the Harbor has experienced two relatively major tsunami events in just the past 50 years; the Alaska Good Friday earthquake tsunami in 1964, and the Sendai, Japan tsunami in March of 2011. Each of these earthquakes caused significant damage to the Harbor. In November 2006, a quake in the Kuril Islands created a tsunami surge that hit the harbor causing severe damage to Inner Boat Basin. Because of the tsunami-prone orientation of the Harbor, it is at a relatively high risk of future tsunami inundation and damage. The State of California inundation projections depicted in the Crescent City Tsunami Evacuation Map, included below, identify the project area within the tsunami evacuation zone.

Inset 1: Tsunami Evacuation Map



Note: This evacuation map is based on the State of California inundation projections and the best currently available scientific information. It is intended for emergency planning purposes only. This map may be revised as new information becomes available.

Source: County of Del Norte

As such, the project may be subject to inundation and severe damage in the event of a tsunami. The project would not include the development of any occupied structures, but would construct several Harbor improvements that would be susceptible to damage from a tsunami. The project would also attract additional visitors to the tsunami evacuation zone. The project area has been subject to past evacuation planning, and established tsunami warning signs and evacuation routes are in place. However, tsunami evacuation plans would not change as a result of the project. Existing tsunami signs and information would either remain unchanged or be replaced with new signs such that there would be a net gain in warning, informational, and instructional tsunami signage within the Harbor. Although it is within the potential tsunami inundation zone, because tsunami evacuation plans exist and the project would not impede any identified evacuation route, the impact would be ***less than significant***.

Mitigation

HYD -1) The following BMPs shall be implemented during the construction of the proposed project to reduce potential water quality impacts:

- A Storm Water Pollution Prevention Plan (SWPPP) and emergency response plan will be required prior to the commencement of construction to reduce, to the maximum extent practicable, pollutants entering flowing, standing, or ground water.
- At all times during construction activities, the contractor shall minimize the area disturbed by excavation, grading, or earth moving to prevent the release of excessive fugitive dust. During periods of high winds (i.e. wind speed sufficient to that fugitive dust leaves the site) contractor shall cover or treat areas of exposed soil and active portions of the construction site to prevent fugitive dust.
- No construction materials, equipment, debris, or waste shall be placed or stored where it may be subject to wave, wind, or rain erosion and dispersion. Material handling on and offsite shall be required to comply with California Vehicle Code Sec. 23114 with regard to covering loads to prevent materials spills onto public roads.
- All construction equipment shall be equipped and maintained to meet applicable EPA and CARB emission requirements for the duration of the construction activities.
- Throughout construction, contractor shall adjacent paved areas free of visible soil, sand or other debris.
- If stockpiled on or offsite, soil and aggregate materials shall be covered with secured plastic sheeting and divert runoff around them.
- Drainage courses, creeks, or catch basins shall be protected with straw bales, silt fences, and/or straw wattles.
- Storm drain inlets from sediment-laden runoff shall be protected with sand bag barriers, filter fabric fences, straw wattles, block and gravel filters, and excavated drop inlet sediment traps.
- Vehicle and equipment parking and vehicle maintenance shall be conducted in designated upland areas away from creeks or storm drain inlets,
- Major maintenance, repair, and washing of vehicles and other equipment shall be conducted offsite or in a designated and controlled area.
- Construction debris, plant and organic material, trash, and hazardous materials shall be collected and properly disposed.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	

Discussion

a) The proposed project is entirely within the existing Crescent City Harbor area located between Highway 101 and the Pacific Ocean. The Harbor is not positioned within any community such that the project would have the potential to physically divide an established community. The project would improve accessibility and amenities within the Harbor area, including constructing a trail, promenade, restrooms, and wind shelters. These improvements would help to increase the connectivity the Harbor to Crescent City and may, therefore, result in a small increase in non-motorized users within and beyond the Harbor. The project would not remove existing streets, would not develop impediments to cross-town vehicular, pedestrian or bicycle movement, and would not otherwise physically divide an established community. Therefore, ***no impact*** would occur.

b) The project lies predominantly in unincorporated Del Norte County, with the northern portion extending into Crescent City limits. The entire Harbor and project area are within the California Coastal Zone; with all tidally influenced areas (including historically tidally influenced lands seaward of the state lands grant boundary) subject to retained Coastal Commission jurisdiction, and all areas landward subject to appealable local coastal jurisdiction under Del Norte County and Crescent City. The Harbor District has worked with the County of Del Norte Board of Supervisors to approve a resolution authorizing consolidated coastal development permitting under state review for all projects of the Harbor under county jurisdiction (Ernie Perry, personal communication, September 22, 2011). Within the appealable Crescent City coastal zone jurisdiction, the coastal development permit for the project would be reviewed by the local agency unless approved for consolidation with the state permit. In order to construct the project, the Harbor District must obtain the appropriate local and state, or combined, coastal development permits, and in doing so would be in compliance with the Coastal Act and local coastal plans.

The Del Norte County General Plan and Coastal Land Use Plan contain applicable policies adopted for the purpose of avoiding or mitigating environmental effects. Discussions regarding resource specific topics addressed in the General Plan and Coastal Land Use Plan may be found in the resource specific sections of this Initial Study. The

General Plan and Coastal Land Use Plan also included relevant land use planning policies, as discussed in this section. Although most of the Harbor lies outside of the city limits, the Crescent City General Plan land use element includes the entire Harbor within the urban boundary. City and county general plans identify similar designations and zoning within the Harbor. According to the County General Plan, the proposed project occurs within Harbor Dependant Recreation (HDR), Harbor Related (HR) Harbor Dependant (HD), and Greenery (G). Within the city limits, the proposed trail would cross harbor dependant (HD) and visitor/local commercial (VLC) Crescent City General Plan land use designations. These land use designations and zones allow development types included in the proposed project, in addition to generally encouraging visitor and tourism development that would be congruous with the commercial nature of portions of the Harbor.

The County General Plan includes provisions for maintaining public access in the harbor area. Subject to the exceptions discussed below, the General Plan requires that *"No development shall be permitted within the harbor area which would interrupt public access both to and along the shoreline." (Chapter 21.47.020)* Exceptions to unrestricted public access under Chapter 21.47.030 and 21.47.040 include situations in public which "*access would constitute a hazard to the public,"* and "*temporary interruptions of public access to the shoreline"* which are *"necessary to protect the public from a hazard and/or are necessary for maintenance of existing development."* Examples include: dredging and dredge spoils disposal; paving and/or concrete work, construction of new development, repair and maintenance of existing development, field surveys and examinations, and landscape construction. The project would be consistent with Chapter 21.47.020 in that it would improve public access to and along the shoreline within the Harbor. During construction, the project would cause temporary closures within areas of active construction pursuant to the exceptions listed in Chapter 21.47.030 and 21.47.040. Therefore the project would cause temporary public access restrictions as provided in the General Plan in order to complete a project that would improve long-term public access.

The Crescent City Harbor Master Plan (RRM Design Group 2006) includes several goals and policies relevant to the proposed project, listed below:

- *Goal 1: A Harbor with protected, maintained, and enhanced resources that balances the environmental, social, and economic needs of various Harbor user groups.*
    - *Policy 6: Visitor Serving and Recreational Facilities. Enhance public enjoyment of the Crescent City Harbor waterfront by protecting and, where feasible and appropriate, providing a range of opportunities for coastal recreation and visitor serving facilities.*
- *Goal 2: Access - Provide enhanced access for all Harbor users and visitors.*
    - *Policy 1: Access to Vessels and Water. Maintain and enhance access to the water, boats, and boating facilities. Maintain the overall launching capability of the Harbor at levels in consideration of demand and safety, the availability of parking, economic circumstances, and dredging needs.*

  - *Policy 2: Shoreline Access. Maintain public access to the beaches, oceans, and Harbor properties, and enhance such access where feasible and consistent with public safety.*
  - *Policy 4: Extend the California Coastal Trail. Crescent City Harbor District supports the extension of the California Coastal Trail from the city limits to the west to Crescent Beach to the east as a continuous pedestrian thoroughfare with maximum access to the water's edge.*
  - *Policy 5: ADA Accessibility. Crescent City Harbor District will retrofit its public facilities to bring them into compliance with the Americans with Disabilities Act ADA and will require leaseholders to bring their facilities into ADA compliance in conjunction with any remodeling or improvements to their leaseholds.*
- *Goal 6: A reconfigured and refurbished marina that will accommodate more slips with modern docks and utilities that would support a mix of commercial and recreational vessels and modern support facilities for the marina.*
  - *Policy 2: Marina Support Facilities. Replace the existing public restrooms with new restrooms, facilities for showers, and fish cleaning.*
  - *Policy 3: Reconfigure and Landscape Parking Facilities. Reconfigure existing parking areas to provide more efficient layout, utilizing street trees to help delineate parking spaces and increase the attractiveness of the parking facilities.*
  - *Policy 5: Waterfront Promenade. Construct a minimum 10-ft wide waterfront promenade at the top of the rock revetments framing the Inner Boat Basin as a continuous promenade overlooking the marina.*
- *Goal 8: Continue to serve as the heart and the working waterfront of Crescent City Harbor and as the primary location for land-based Harbor Dependent Commercial uses.*
  - *Policy 2: Citizen's Dock Road: (a) As the primary access and entryway to the Harbor, improve Citizen's Dock Road with perpendicular parking on both sides of the street with trees and landscaping. (b) Provide attractive entry signage where Citizen's Dock Road meets Highway 101.*
  - *Policy 8: Waterfront Promenade (a) Provide for a continuous waterfront promenade starting at the mouth of the Inner Boat Basin, crossing at Citizen's Dock and then turning inward to the Central Harbor area to Starfish Way, along the north side of Starfish Way to Anchor Way, in such a way as to provide for a clear public access through the Central Harbor area. (b) Preclude public access where it would conflict with the synchrolift and fish processing facilities.*
- *Goal 9: A land area that remains a scenic entry to Crescent City Harbor providing a strong sense of entry to the Harbor and its facilities*

  - *Policy 2: Coastal Trail. Provide for the improvement of a coastal trail along the northern edge of the parking lot serving the Inner Boat Basin where it adjoins Highway 101 corridor greenway so that it can hook in to the extension of the coastal trail being sponsored by the city of Crescent City to the west.*
  - *Policy 4: Preserve the Corridor. With the exception of the access roads, the possible widening of Highway 101, and the Lighthouse Maritime Museum, maintain and preserve the remainder of the corridor as the scenic gateway to Crescent City Harbor.*
  - *Policy 5: Limitations on Use (a) Greenery Allow uses and developments consistent with the Greenery designation including landscape entry features, turf and tree landscaping, directional signage, public events, public gathering and picnic places, plazas, coastal trails, pathways, and a new road access connection to the far western end of the Greenery designation. (b) Harbor Related Museum, educational facilities, interpretive exhibits, entry statement, wayfinding improvements.*
- *Goal 10: To revitalize this underutilized [western uplands] area to accommodate visitor serving facilities and to preserve the ongoing continuing use of the dredge spoils site disposal of dredge tailings.*
  - *Policy 4: Coastal Trail. In conjunction with the new hotel and restaurant development, further extensions of the coastal trail should be installed seaward from the hotel and restaurant improvements.*
- *Goal 11: [Anchor Way Groin] To serve as an upland support area for a mix of Harbor Dependent Recreational and Harbor Related Uses.*
  - *Policy 3: Waterfront Promenade. Construct a continuous waterfront promenade along the western and eastern rock revetments lining the Anchor Way Groin with lighting and wayfinding signage*
  - *Policy 4: Parking. Reconfigure existing parking facilities to provide for a more efficient layout of parking spaces and vehicular circulation. It should also include boat trailer parking associated with the boat launch ramp.*

The master plan goals and policies, above, were generated as part of a comprehensive Harbor planning effort, and in large part, form the basis for concept for the proposed project. Because many of the features of the proposed project arose from this planning effort, there is a high degree of overlap and consistency between the project and the master plan. As such, the proposed project would not conflict with the goals and policies put forth in the master plan.

The proposed project would not substantially alter the existing conditions from a land use perspective, because only minor development that is compatible with existing facilities and land use policies is proposed. Therefore, the proposed project would not conflict

with existing General Plan land use, policies, designations, or zoning. Based on the discussion above, a ***less than significant impact*** would occur.

c) Although sections of the County of Del Norte Local Coastal Element apply to natural habitat conservation, Del Norte County does not have a specific habitat conservation plan or a natural community conservation plan that would apply to any part of the proposed project. The FWS has developed an action plan for the federally endangered western lily (*Lilium occidentale*) that occurs in the adjacent Crescent City Marsh Wildlife Area. The plan calls for habitat restoration and improving drainage conditions for the western lily populations at the Wildlife Area. The project would not have any direct or indirect impact on the specie, its habitat, or action plan. NMFS has designated essential fish habitat (EFH) extending seaward from the to the high tide line along the in and around the Harbor. Essential fish habitat means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. The project would not have an adverse impact on the marine water environment or the EFH because it includes only a minor amount of construction predominantly on existing developed upland areas. Furthermore, BMPs specified in Mitigation Measure HYD-1 would control the release of sediment and other potential pollutants to the adjacent marine waters.

As discussed above, the project has been designed and would be constructed to comply with all applicable local, state, and federal policies, codes, and plans related to habitat conservation planning and natural community conservation. Therefore, a ***less than significant impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Discussion

a-b) Construction of the proposed Project would not result in the loss of mineral resources because there are no mineral resources found within the project area. The project also does not require a substantial amount of any mineral resource for construction. Therefore, ***no impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE: Would the project:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Discussion

a, c) The Del Norte County Code and Zoning Regulations do not contain a decibel rating (County of Del Norte 2010). Noise produced by the project would be predominantly related to construction that would not result in levels above typical local, state, or federal noise standards. A minor noise increase may also occur as a result of additional motorized traffic and additional Harbor visitor use. These increases would not cause a substantial increase in noise levels. Therefore, the project would not cause exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

The project is located within the existing Harbor area near the southern end of Crescent City. No schools, hospitals, or other sensitive receptors are in the immediate vicinity of the project. The primary existing sources of noise in the project area are: motor vehicle traffic on Highway 101 and smaller city and county roads; commercial and recreational boating and fishing-related noise in from within the Harbor; boat equipment maintenance from areas within the Harbor; and the natural sounds of the water and wildlife. The project construction process would result in a minor temporary increase in noise levels in the immediate project area. The project would not cause a substantial increase in traffic or traffic- related noise within the Harbor. Long-term operation of the project would require routine maintenance, such as landscaping and incidental repairs, that would not exceed any applicable standards or expose persons to excessive noise.

As discussed above, a ***less than significant impact*** would occur.

b) Construction of the project would cause minor, temporary groundborne noise in the immediate vicinity of active heavy equipment. Due to the limited amount of construction involving heavy equipment and the limited duration of such activities, this level of groundborne noise would not be excessive. Therefore, a ***less than significant impact*** would occur.

d) As discussed above, construction-related activities that increase noise levels at the project site would be minor and temporary in nature and would occur only during construction. It is expected that the primary sources of construction noise would include trucks, tractors, backhoes, compressors, and similar equipment. Although the noise levels and duration would be limited, construction related noise could be disruptive to nearby residences and other nearby offsite facilities, in addition to Harbor users. To lessen the impact of temporary noise, implementation of Mitigation Measure NOI-1 is recommended. The project would have a ***less than significant impact after mitigation***.

e, f) The Project site is not located within 2 miles of a public airport or in the vicinity of a private airstrip, and thus would not expose people working or residing in the area due to excessive noise levels. ***No impact*** would occur.

Mitigation

NOI -1) Noise producing equipment used during construction shall be restricted to daylight hours Monday through Saturday. Effective mufflers shall be fitted to gas-powered and diesel-powered equipment. Construction equipment shall be shut down when not in use for longer than 10 minutes.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Discussion

a) The project would result in construction of minor Harbor related improvements, trails, and a promenade. The project would not extend new roads through undeveloped areas or otherwise allow increased access to or development within undeveloped areas such that a change in the existing population or housing in the area would be impacted. Therefore, ***no impact*** would occur.

b, c) No existing housing occurs within the project area and the proposed project would not displace existing housing or people, and would not necessitate the construction of replacement housing. Therefore, ***no impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?				X
d) Parks?			X	
e) Other public facilities?				X

Discussion

a, b) The Del Norte County Sheriff, Crescent City Police Department, Crescent City Volunteer Fire Department and the Crescent Fire Protection District are responsible for emergency response and evacuation in the project area. These departments provide critical emergency response services and would serve as the primary response agencies in the event of an emergency incident. The Volunteer Fire Department operates a fire hall

approximately 3/4 miles northwest of the project area. Three Crescent Fire Protection fire stations serve the area; one approximately one and one half miles east in the Bertsch Tract neighborhood, and the Cooper and Washington stations to the north by approximately one and two miles, respectively. The Del Norte County Sheriff Department and Crescent City Police offices are located in downtown Crescent City, approximately one mile northwest of the proposed project.

The project will occur within the existing developed Harbor and would not require the extension or alteration of police, fire, or any other emergency service into areas not currently served. Although the project would cause a minor change to the way in which some Harbor visitors accessed and use the facility, the change would not cause a related significant increase in the need for emergency services. As such, the project would not result in significant adverse effects on service ratios for the police or fire departments. A ***less than significant*** impact would occur.

c) The Del Norte Unified School District operates seven public schools in the area. There are also three private schools in the Crescent City area. The County Office of Education also provides educational services, such as alternative education and juvenile hall. A branch of College of the Redwoods is the only college in Del Norte County, with the main campus in the City of Eureka, California approximately 94 miles to the south. Humboldt State University is located approximately 76 miles south in Arcata, California. The project would not require or result in the provisioning of new or expanded school facilities and would have ***no impact*** on school district service ratios or school facilities.

d) The proposed path would be a new recreational facility, and would enhance connectivity and safety for alternative transportation in the vicinity of the project. In particular, the path would allow increased alternative transportation opportunities in and around the Harbor and the nearby beach recreation areas on the west side of Highway 101. The proposed project would substantially upgrade public visitor facilities within the existing harbor and would not contribute to any substantial physical deterioration of parks or other recreational facilities. Therefore, a ***less than significant impact*** would occur.

e) The Harbor itself is a government/public facility which would receive several new or improved visitor facilities as a result of the project. The project, as mitigated and designed, would not result in significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for the Harbor. As such, ***no impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Discussion

a) The proposed trail and improvements to pedestrian amenities may cause a minor increase in the number of people who pass through the project area to access other regional recreational facilities. Any increase would likely be minor and would not increase the use of or demand for other recreational facilities. The Harbor facilities also may experience an increase in use, but would be designed and constructed to resist physical deterioration from the anticipated level of use. Therefore, a ***less than significant impact*** would occur.

b) The proposed project includes a trail, promenade, reconfigured visitor parking, and other visitor facilities, but would not require the construction or expansion of other recreational facilities which could result in adverse physical effects. As mitigated herein, construction of the proposed project itself would also not have a significant adverse impact on the environment. As such, a ***less than significant impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation systems, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.			X	
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

Discussion

a, b) The proposed project would not significantly increase vehicle traffic in and around the Harbor. Although the improved amenities resulting from the project may draw additional users to the Harbor, the addition of a trail accessing the area from Crescent City and from Crescent Beach would allow users to easily access the Harbor using alternative transportation. As such, some of the existing and new users would likely use the trail to access the Harbor, thereby offsetting the increase in the number of users accessing the site in motor vehicles.

With regard to roads and intersections, the project design standards are based upon the requirements of Manual on Uniform Traffic Control Devices (MUTCD) and American Association of State Highway and Transportation Officials (AASHTO). The project would not conflict with effective circulation system performance or intersection level of service standards. The project: (1) would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system; (2) would take into account all modes of transportation, including mass transit and non-motorized travel; and (3) would not conflict with any congestion management program, including level of service standards and travel demand measures. Therefore, a ***less than significant impact*** would occur.

c) The proposed project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. Therefore, ***no impact*** would occur.

d) The project may cause an increase in alternative transportation use in the project area because of the new trail and promenade. While alternative transportation can be incompatible with motor vehicle uses, as discussed above, the project has been designed to safely accommodate both uses. Design features aimed at improving compatibility include: separation of trail from roads, lighting, and appropriate signs.

With incorporation of the design features described above, the proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses. Therefore, a ***less than significant impact*** would occur.

e) The proposed trail would not substantially alter the existing emergency access in the area. The project occurs within developed portions of the Harbor in close proximity to several access routes that could be used by emergency vehicles and personnel. A ***less than significant impact*** would occur.

f) The 1984 Del Norte County Local Coastal Element and the California Coastal Act stress the importance of developing recreational facilities in the coastal zone (County of Del Norte 1984). The Del Norte County General Plan lists trail-related policies, including supporting the development of multi-use trails, trail connectivity, and providing trail access to recreation areas (County of Del Norte 2003). The 2006 Harbor Master Plan The proposed project is consistent with these coastal recreation and transportation policies and would help implement rather than conflict with adopted policies, plans and programs regarding public transit, bicycle, and pedestrian facilities and would not decrease the performance or safety of such facilities. Therefore, ***no impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Discussion

a, b, e) The project would result in the reconstruction of two existing public restroom facilities and addition of one public fish cleaning station. The reconstructed facilities serve a similar function to those they replace, but may experience a higher level of use because of their increased capacity and improved amenities. Because existing high-flow plumbing fixtures would be replaced with low-flow as a result of the reconstruction, the total water use would not be substantially increased. The project would, therefore produce a similar volume of wastewater as the existing facilities. It would not require or result in new or expanded water or wastewater treatment facilities. Therefore, ***a less than significant impact*** would occur.

c) As discussed in the Hydrology and Water Quality section, above, the proposed project would cause minor grading and construction disturbance to existing developed and disturbed upland areas. The BMPs discussed in Mitigation Measure HYD-1 would reduce the impact of these activities on water quality to a less than significant level.

There are no proposed significant changes to the existing stormwater infrastructure and the site runoff would occur in a similar fashion before and after the project. Runoff would flow to same receiving waters via existing stormwater infrastructure. Because existing drainage facilities would accommodate stormwater runoff, the proposed project would not require the construction of drainage facilities that would cause significant environmental effects. Therefore, a ***less than significant impact*** would occur.

d) The proposed project would not create a substantial increased demand for water service or capacity. The project would require a minor amount of water during construction. During long-term operation of the project, water would be required for operation of the restrooms, fish cleaning station, landscaping, and cleaning activities. The temporary and long-term demand would not represent a significant increase over existing conditions and could be met by existing entitlements and resources. Therefore, the project would not result in the need for the construction of new water supply facilities, or the expansion of existing facilities. A ***less than significant impact*** would occur.

f, g) The proposed project would generate a minor amount of solid waste during construction. Any waste generated by construction would be transported to an approved local or regional recycling or disposal facility by the construction contractor in compliance with federal, state, and local statutes and regulations related to solid waste. Therefore, a ***less than significant impact*** would occur.

Issues and Supporting Information	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Discussion

a) As analyzed herein, with implementation of the recommended mitigation measures, the proposed project would not:

- Substantially degrade environmental quality;
- Substantially reduce habitat for a fish or wildlife species;
- Cause a fish or wildlife population to fall below self-sustaining levels;
- Threaten to eliminate a plant or animal community;
- Reduce the numbers or range of a rare, threatened, or endangered species;
- Eliminate important examples of the major periods of California history or pre-history;

As discussed in the biology section, construction of the proposed viewing platform would result in the deterrence of California sea lions from this elevated area infrequently used by the sea lions. The infrequent use of the elevated area by California sea lions can result in conflicts between the sea lions and the general public. The species is not federally- or state-listed as threatened or endangered, but the project would displace the species from the existing structure that serves as haul-out habitat. This action would result in a minor reduction in the habitat available to the species, but would not cause a significant impact

if conducted pursuant to Mitigation Measure BIO-1, which requires adherence to established NMFS protocol for deterrence of marine mammals. The potential impacts related to the reduction of habitat for the California sea lion would be ***less than significant with incorporation of mitigation measures*** (see also biological resources section).

Additionally, the project would cause direct impact to approximately 584 square feet of beach pea, a CNPS List 2.1 species. As such, the applicant shall develop an on-site compensatory beach pea replanting plan approved by the DFG and any other resource agency with jurisdiction, as specified in Mitigation Measure BIO-1, above. The potential impacts related to the reduction of habitat for the beach pea would be ***less than significant with incorporation of mitigation measures*** (see also biological resources section).

The proposed project would not eliminate important examples of California's history or prehistory (See the Cultural Resources Section). The Project's potential impacts on historic and prehistoric resources would be reduced to ***less than significant with incorporation of mitigation measures***.

b) As discussed herein, the proposed project predominantly avoids significant adverse impacts to the environment. The identified significant potential environmental effects of the project would be reduced to less than significant with incorporation of the identified mitigation measures.

The Harbor is currently undergoing an Inner Boat Basin Reconstruction project, which is intended to repair damage sustained in the 2011 tsunami. The reconstruction project would result in: dredge and disposal of 7,424 cubic yards of tsunami-generated silt; replacement of 8,506 cubic yards rock slope protection; removal and replacement of 161 pilings; removal and replacement of 1,035 individual docks (57,000 square feet); construction of a wave attenuators; installation of four new ADA/Architectural Barriers Act (ABA) compliant gangways; replace dock utilities; and installation of a fire protection system. According to the 2010 Harbor District NEPA environmental assessment and finding of no significant impact (EA/FONSI) for the project, the proposed project would have the potential to impact air and water quality, biological resources, noise, flood related hazards, cultural resources (CCHD 2010). The EA/FONSI identifies several mitigation measures that would reduce or eliminate these impacts.

Because the proposed project would not result in significant impacts after mitigation, and because impacts related to other known projects in area have been shown to be avoidable or mitigable, the proposed project would not contribute to any significant cumulative impacts which may occur in the area in the future. Therefore, a ***less than significant impact*** would occur with respect to cumulative impacts.

c) As discussed herein, the proposed project would not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

5.0 REFERENCES

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.

Attachment A
Figures

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Cartography: GLD

Project Location
U.S Highway
Major Roads
Local Roads

N

0 0.5 1 Miles

1 inch = 1 miles printed at 8.5x11

Sources: NOAA Fisheries: Aerial 2009 0.5 meter resolution; StreetMap USA - TeleAtlas

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Figure 1
Vicinity Map

Harbor Promenade and Trail
Crescent City Harbor District

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Cartography:GLD

Project Area

Project Study Boundary

City Boundary

Harbor District Boundary

0 300 600 ft

1 inch = 600 feet printed at 8.5x11

Sources: Alta: Aerial @ 1ft resolution;
Winzler & Kelly: field data, 4/26/11; 5/5/11.

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Figure 2
Project Overview

Harbor Promenade and Trail
Crescent City Harbor District

Supplemental Legend: Proposed Design Features and Potential Impacts

Special Status Plants

- Beach pea - individuals
- Tracy's romanzoffia - clusters (*Romanzoffia tracyi*)
- Conifer Individuals (*Pinus contortus*)
- Beach pea (*Lathyrus japonicas*)
- Wolf's evening-primrose (*Oenothera wolfii*)
- Curly wallflower (*Erysimum menziesii ssp. Concinum*

Sensitive Habitat

- Coastal Dune
- Degraded Dune
- Northern Coastal Bluff Scrub

Wetland Delineation

- 1 parameter
- Ditch
- Forested Palustrine Wetland (3 - Parameter)
- Palustrine Emergent Wetland (3 - Parameter)

Potential Direct Impacts

- Potential Direct Impacts to Beach pea (*Lathyrus japonicas*)

(Total Cummulative Direct Impacts = 583.4sf)

Proposed Design Features

(Based on 30% Design Drawings)

- Trail Footprint
- Swale Bridge
- Edge of Pavement
- Edge of Shoulder
- Curb & Sidewalk
- Pedestrian Guardrail
- Fence
- Swale

Boundaries

- Property Line
- City Boundary
- Harbor District Boundary

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Cartography:GLD

See Figures 3.1 - 3.13 for associated features

Sources: Design: Crescent City Harbor District, Crow Clay & Associates, Winzler & Kelly, Alta Planning & Design, Stover Engineering; Aerial: @ 1ft resolution from Alta Planning & Design; Field Data: Winzler & Kelly (4/26/11 and 5/5/11).

Figure 3.0
Supplemental Legend
Proposed Design Features, Resources, and Potential Impacts

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Harbor Promenade and Trail
Crescent City Harbor District

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Cartography:GLD

NOTE: See Supplemental Legend Figure 3.0

City Boundary
Property Line
Harbor District Boundary

Proposed Design Features

Trail Footprint
Edge of Pavement
Edge of Shoulder
Curb & SideWalk
Guardrail
Fence
Swale

Page 1 of 13

1 2 3 4 5
6 7 8 9 10
11
12

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1 inch = 100 feet printed at 8.5x11

Sources: See Supplemental Legend

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Figure 3.1
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

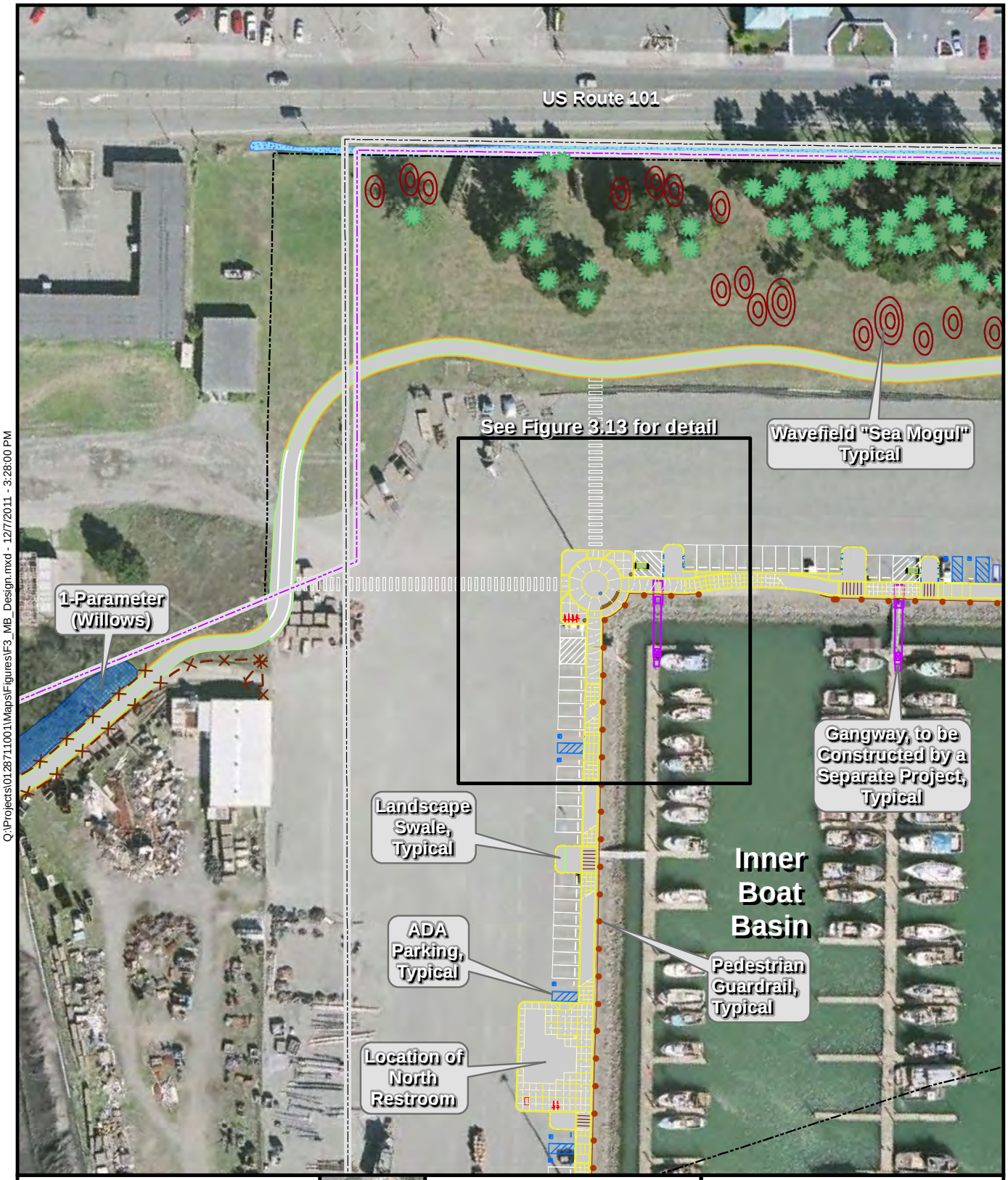

Figure 3.2
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

Figure 3.3
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

Figure 3.4
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

Figure 3.5
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

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Cartography:GLD

NOTE: See Supplemental Legend Figure 3.0

City Boundary
Property Line
Harbor District Boundary

Proposed Design Features

Trail Footprint
Edge of Pavement
Edge of Shoulder
Curb & SideWalk
Guardrail
Fence
Swale

Page 6 of 13

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1 inch = 100 feet printed at 8.5x11

Sources: See Supplemental Legend

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Figure 3.6
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

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Cartography:GLD

NOTE: See Supplemental Legend Figure 3.0

City Boundary
Property Line
Harbor District Boundary

Proposed Design Features

Trail Footprint
Edge of Pavement
Edge of Shoulder
Curb & SideWalk
Guardrail
Fence
Swale

Page 7 of 13

1 2 3 4 5
6 7 8 9 10
11
12

0 50 100 ft

1 inch = 100 feet printed at 8.5x11

Sources: See Supplemental Legend

WINZLER & KELLY
www.w-and-k.com

Figure 3.7
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

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Cartography:GLD

NOTE: See Supplemental Legend Figure 3.0

City Boundary
Property Line
Harbor District Boundary

Proposed Design Features

Trail Footprint
Edge of Pavement
Edge of Shoulder
Curb & SideWalk
Guardrail
Fence
Swale

Page 8 of 13

1 2 3 4 5
6 7 8 9 10
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0 50 100 ft

1 inch = 100 feet printed at 8.5x11

Sources: See Supplemental Legend

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Figure 3.8
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District


No Wetlands,
Special Status Plants,
or Project Design
on this Page
NOTE: See Supplemental Legend Figure 3.0
City Boundary
Property Line
Harbor District Boundary
Proposed Design Features
Trail Footprint
Edge of Pavement
Edge of Shoulder
Curb & SideWalk
Guardrail
Fence
Swale
Page 9 of 13
1 2 3 4 5
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0 50 100 ft
1 inch = 100 feet printed at 8.5x11
Sources: See Supplemental Legend
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Figure 3.9
Proposed Design Features,
Resources, and Potential Impacts
Harbor Promenade and Trail
Crescent City Harbor District
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Cartography:GLD

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Cartography:GLD

NOTE: See Supplemental Legend Figure 3.0

City Boundary
Property Line
Harbor District Boundary

Proposed Design Features

Trail Footprint
Edge of Pavement
Edge of Shoulder
Curb & SideWalk
Guardrail
Fence
Swale

Page 10 of 13

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6 7 8 9 10
11
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0 50 100 ft

1 inch = 100 feet printed at 8.5x11

Sources: See Supplemental Legend

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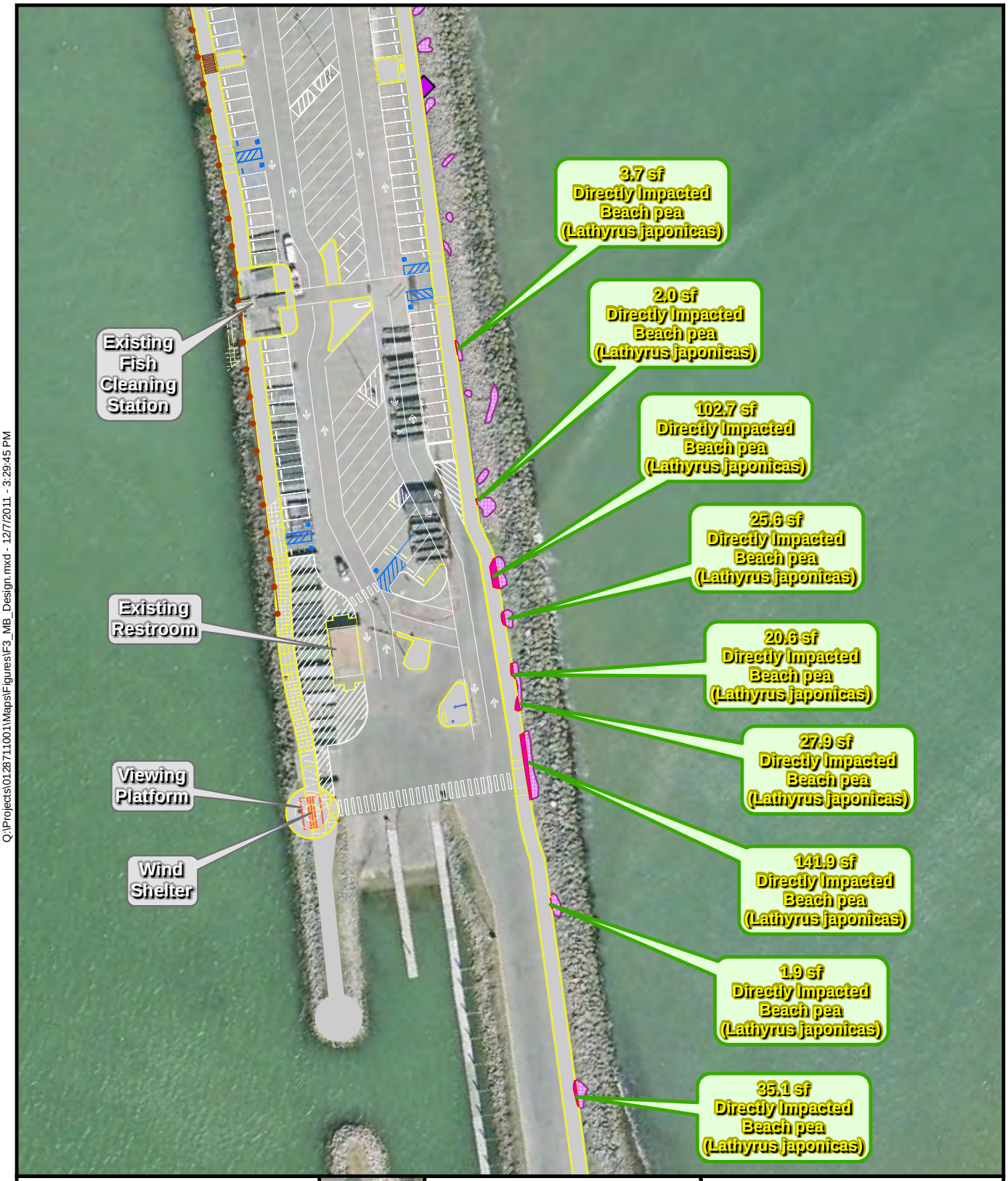
Figure 3.10
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District



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Cartography:GLD

NOTE: See Supplemental Legend Figure 3.0

City Boundary — Property Line

Harbor District Boundary

Proposed Design Features

Trail Footprint — Guardrail

Edge of Pavement — Fence

Edge of Shoulder — Swale

Curb & SideWalk

Page 11 of 13

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6 7 8 9 10
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0 50 100 ft

1 inch = 100 feet printed at 8.5x11

Sources: See Supplemental Legend

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Figure 3.11
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

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Cartography:GLD

NOTE: See Supplemental Legend Figure 3.0

City Boundary
Property Line
Harbor District Boundary

Proposed Design Features

Trail Footprint
Edge of Pavement
Edge of Shoulder
Curb & SideWalk
Guardrail
Fence
Swale

Page 12 of 13

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6 7 8 9 10
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0 50 100 ft

1 inch = 100 feet printed at 8.5x11

Sources: See Supplemental Legend

WINZLER & KELLY
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Figure 3.12
Proposed Design Features, Resources, and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

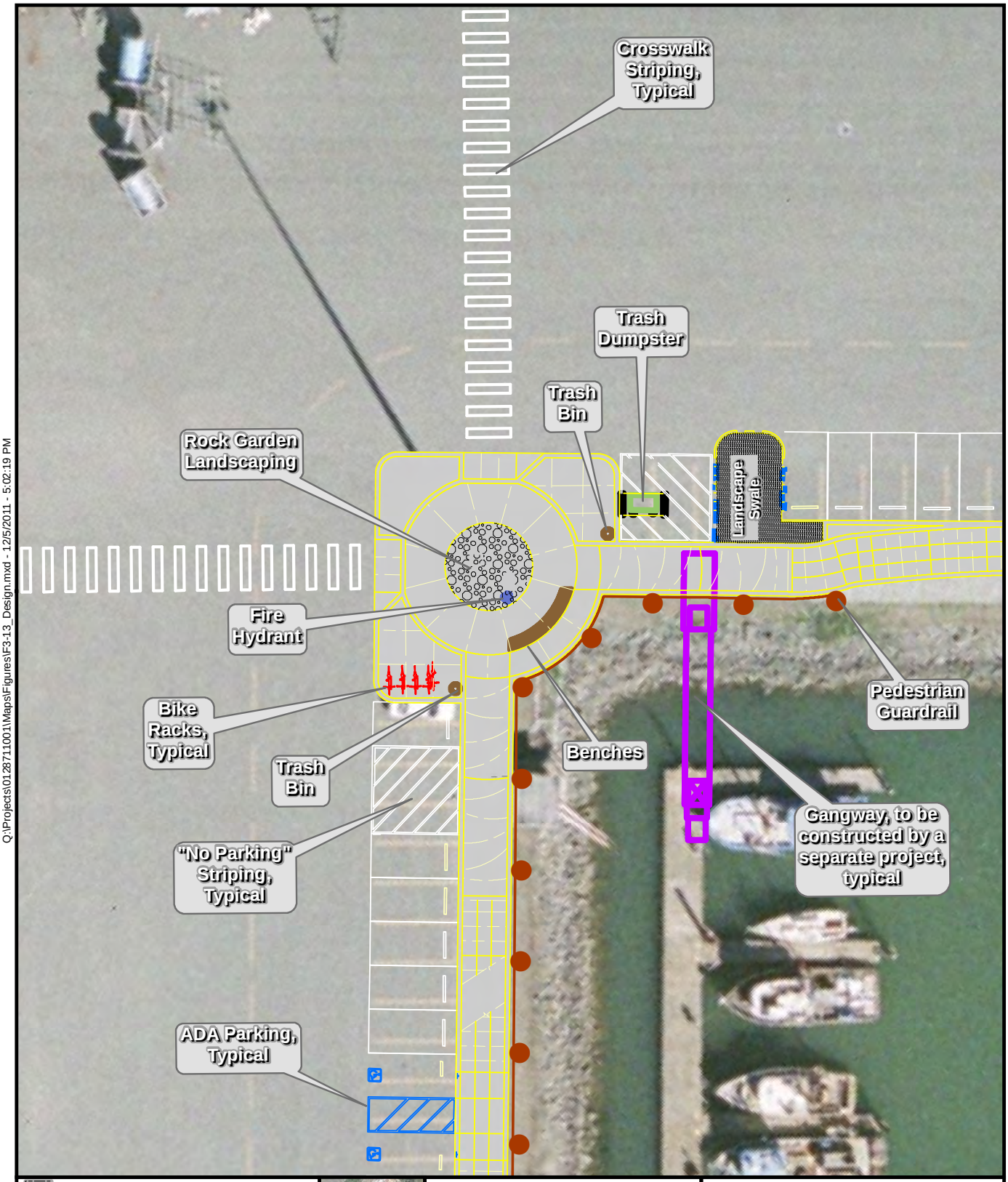

Figure 3.13
Proposed Design Features and Potential Impacts

Harbor Promenade and Trail
Crescent City Harbor District

Appendix A

Biological Resources Study and Botanical Surveys for Crescent City Harbor (Winzler & Kelly 2011)

WINZLER & KELLY

MEMORANDUM

TO: Rob Holmlund (Project Planner) Josh Wolf (Project Engineer)

FROM: Lia Webb (Ecologist and Wetland Scientist)

DATE: October 19, 2011

RE: **Biological Resources Study and Botanical Surveys for Crescent City Harbor Site Plan Update, Crescent City, CA**

JOB #: 01287-10001-11041

INTRODUCTION

The Crescent City Harbor District proposes improvements throughout the District, including, but not limited to, a waterfront promenade, a multi-use non-motorized trail, public restrooms, and related amenities (such as benches and interpretive signs). This Biological Resources Study describes the existing biological environment based on literature/data review and field investigation(s). The Study summarizes technical documents (e.g., focused species studies, wetland assessments, biological assessments, etc.) related to biological resources within the Project Study Boundary (PSB). Analysis methods, results, and recommendations are presented herein. Results of seasonally-appropriate botanical surveys are also presented herein. Figures are provided in Attachment A. Results of the wetland delineation are provided under separate cover (Winzler & Kelly, 2011).

PROJECT LOCATION

The Crescent City Harbor is located immediately south of the main residential and commercial portions of Crescent City in Del Norte County, California (Figure 1). Highway 101 lies northeast of the project site. The Harbor is bounded by Huston Street and Sunset Circle to the northwest and by Anchor Way and Whaler Island breakwater at the southeast (the harbor outlet faces southwest). Immediately southeast of the Harbor is Crescent Beach and further south is Enderts Beach. The site is accessed from the south by Anchor Way off of Highway 101, which leads along the edge of the southern breakwater directly to the Whaler Island parking lot. A second access to the site is provided a bit further to the north at Citizen Dock Road, which leads directly to Citizen Dock. The latitude/longitude of project site is generally 41°45’38” north and 124°4’36” west. The site is on the Sister Rocks quadrangle map (USGS, 1966) northern boundary, Section 28, Township 16N, Range 1W, and just to the south of the Crescent City quadrangle (USGS, 1975). The site includes approximately 5 acres of privately owned land, which includes developed areas for visitor serving purposes immediately facing Highway 101. The remaining 70 acres are owned or controlled by the Harbor District. There are a variety of activities within the Harbor including, but not limited to, commercial fishing, recreational

boating, restaurants, one motel (privately owned), parking areas, a commercial marina, and a recreational marina.

According to the revised coastal zone boundary maps, *Post LCP Certification Permit and Appeal Jurisdictio*n (California Coastal Commission, 1986), Sisters Rock quadrangle (Map 3), the Crescent City Harbor and project site are shown to be within the Coastal Zone, with primary jurisdiction by the County of Del Norte under their Local Coastal Program (LCP) (appeal jurisdiction to the California Coastal Commission) for areas landward of the original mean high tide line, and primary jurisdiction of the Commission for areas seaward of this line. The Coastal Commission describes the historic mean high tide line (and in this case the state lands grant line, according to the Harbor District) as "generally following Starfish Way from Anchor Way to Citizens Dock Road", and from here, the jurisdictional boundary may continue around "the water line" of the boat basin, and then connect to the shoreline to the west (although at which location is unclear). These details of the precise location of the primary jurisdiction for the Coastal Commission versus County jurisdiction may be a moot point for the project site as the County of Del Norte and the Harbor District have a resolution of the Board of Supervisors agreeing to consolidated permit review for areas within the Harbor (pers. com., Ernie Perry, Harbor District, September 22, 2011). Therefore, a consolidated/single Coastal Development Permit (CDP) application will be submitted to the Coastal Commission, when appropriate, thus eliminating the need to split the jurisdictional areas.

METHODOLOGY

Project Study Boundary

The Project Biologist worked in coordination with the Project Engineer/Planner and the Applicant, to develop the limits of the Project Study Boundary (PSB). The PSB is a terminology adopted from definitions and permit procedures promulgated by the U.S. Army Corp of Engineers (USACE). The PSB includes areas where alternative layouts/footprints are being considered, fill prisms, new right-of-way (ROW) limits, areas needed for utility relocation, construction access roads and staging areas, driveway realignments, and construction easements, when deemed appropriate for proposed project. Adjacent areas were included on a case-by-case basis depending on site access, parcel boundaries, property ownerships, property owner participation in the project, etc. Where possible, areas within 100 feet of a proposed project footprint were included in the PSB for initial existing conditions data collection to provide allowances for variation in the exact project footprint and in order to assess potential for offsite and indirect impacts to occur. For the proposed project, the PSB for wetland delineation was mostly confined to the project site due to private property and access constraints. Visual assessment of adjacent lands was conducted to the extent practical, for example it was possible to evaluate areas within 100 feet for the botanical survey without leaving the project site (thus the PSB for the botanical survey is larger than the PSB for the wetland delineation). Wetland delineations on private property cannot be conducted without access permission, although vicinity information is provided in the results section of the wetland delineation report (Winzler & Kelly, 2011) that describes apparent and substantial wetland areas at a reconnaissance level in the vicinity of the project site.

Research Methods

The initial analysis of the PSB consisted of review of existing environmental literature and data, including: the *California Natural Diversity Database* (CNDDB) [DFG, 2010]; the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants* (CNPS, 2010); and lists of special-status species that may occur in the project area as provided by the U.S. Fish and Wildlife Service (FWS) [FWS, 2010], NOAA Fisheries, and the California Department of Fish and Game (DFG) [DFG, 2010a]. Additional existing data was reviewed when available, such as soil and ecological maps and descriptions generated by the Natural Resources Conservation Service (NRCS) [NRCS, 2010] and wetlands mapping from U.S. Fish and Wildlife Service (FWS) National Wetlands Inventory (NWI) [FWS, 1987]. NWI maps are compiled using a variety of remote sensing data sources, including aerial photographs, infrared photography, and soils data. NWI maps do not necessarily represent an accurate extent of jurisdictional wetlands in the study area. Finally, CalFlora database was consulted for site specific species cross reference for potential rare plants in the project vicinity. When available, Geographic Information System (GIS) data was overlaid with the PSB.

Reconnaissance Survey Methods

Prior to conducting field surveys, the Biologist compiled lists of potential sensitive resources as well as other biological considerations, such as invasive species, likely to occur within the vicinity of the PSB. Prior to collecting biological data, the Biologist in conjunction with Project Engineer formulated questions and issues that need to be investigated during the field surveys.
Field evaluation was conducted to obtain information needed to determine the project's level of effects, including consideration of long-term and short-term effects, and the cumulative effects of the project on the biota in the area. The Biologist used aerial photos and maps to investigate the total area at a reconnaissance level prior to conducting field work in order to identify and focus specific areas of potential resources and allow for efficient field efforts.

The Biologist walked the project study area to develop an accurate description of the PSB, mapped the presence of sensitive habitats and species, and documented observations of any invasive species, to evaluate the effects of the proposed project on the PSB. Specific field surveys to determine the presence of special status species (fish, wildlife, or plant that is officially listed as rare, threatened, endangered, or candidate for rare, threatened, or endangered species listing under the state or federal Endangered Species Acts, or of local importance) were conducted at the appropriate blooming or active period for each resource.

Field guidelines mandate written permission from property owners in situations where the work performed could be considered to cause substantial interference or be invasive in nature, ie., boring, trenches, digging with hand tools, cutting vegetation, or activities affecting site improvements. The Biologist coordinated with the Project Engineer and Applicant for assistance to determine actions and/or locations that would require obtaining Rights of Entry (ROE) prior to survey work on private property. ROE has not yet been obtained so the PSB was revised to exclude private properties that would require ROE permission.

Data collection of natural features within the PSB was mapped using a Trimble Global Positioning System (GPS) unit (sub-meter accuracy) that operates with GIS software.

Botanical Survey
Surveys to determine the presence of special status plant species (officially listed as rare, threatened, endangered, or candidate for rare, threatened, or endangered species listing under the state or federal Endangered Species Acts, or of local importance) were conducted at the appropriate blooming or active period for each resource. Fish & Wildlife Service (FWS) and/or other resources agencies were contacted to verify that botanical surveys were being conducted at an appropriate time of year to allow for the micro-variations that occur in climate and bloom period for specific species on a year-to-year basis. Additionally, reference site(s) were viewed where target plant species are known to occur in the project area to verify the species was visible and blooming at the time of surveys. Data collection of listed plant communities and/or individual plants within the PSB was mapped using a Trimble Global Positioning System (GPS) unit (sub-meter accuracy) that operates with GIS software.

Contacts with Agencies and Individuals
The Biologist and/or Planner contacted individuals and agencies during the development of the project on an as needed basis for information and/or negotiation purposes. A section within this report discusses the coordination that has occurred and agreements that have been made to date, if any. Contacts are made primarily to gather information, to negotiate modifications in the project design, and/or to develop methods to reduce/avoid/mitigate potential impacts.

Potential Effects Analysis
Within the limits of the PSB, the Project Biologist evaluated existing conditions and preliminary potential for direct and/or indirect effects to occur to biological resources as a result of proposed project activities. If potential effects resulting from the project could extend beyond the project limits, the potentially affected areas were included in the PSB where feasible. Note that effects definitions for ESA and CESA may vary on a species-specific basis from those provided herein which is more based on CEQA/NEPA and permitting definitions.

RESULTS
On April 26th, 2011, Winzler & Kelly performed a reconnaissance evaluation for the presence/absence of wetlands and the potential for listed/special status species to occur at the project site. On May 5, 2011, a Winzler & Kelly Soil Scientist and Ecologist conducted a wetland delineation within the PSB, results of which are reported under separate cover (Winzler & Kelly, 2011). On April 28 and June 26, 2011, seasonally-appropriate botanical surveys were conducted by a Winzler & Kelly Ecologist and WRA Botanist for special-status plant species, results of which are presented below. Results of the pre-project research, 2011 field reconnaissance evaluation, and 2011 botanical surveys are presented below. Additional general site information is presented for planning purposes, when available, such as soils, invasive plant species, FEMA flood zones, etc.

Vicinity
The site elevation is approximately 0 to 20 feet above mean sea level (msl), and is generally flat coastal terrace with relatively consistent elevation. The climate of the area is temperate and humid with abundant summer fog. The mean annual temperature is 53 degrees Fahrenheit, and average precipitation for Del Norte County is approximately 66 inches per year (NOAA, 2010)

Most of the area within the PSB is developed and highly altered with few natural areas remaining. The National Wetlands Inventory (NWI) map (FWS, 1987) by the U.S. Fish and Wildlife Service shows the closest wetland to the project site (besides waters of the Pacific Ocean) to be a substantial Freshwater Forested/Shrub wetland (PSS1C) and Freshwater Emergent wetland (PEM1C) across Highway 101 to the north of the Anchor way entrance (outside of the PSB). The Crescent Beach area is generally shown as Estuarine and Marine Wetland (M2US2N) and the Pacific Ocean (including the Harbor waters) are mapped as Estuarine and Marine Deepwater (M1UBL). Additionally, a tidally influenced swale was noted during field visits south of Anchor Way near the north end of Crescent Beach, although this is out of the PSB. This swale also appears to receive freshwater inputs from up-gradient area through a culvert under Highway 101.

Wildlife

The site and surrounding area is intersected by highways, roads, driveways, parking lots, and residential and commercial developments. Although habitat connectivity may historically have been present at the site between the eastern and western sides of Highway 101, and the area to the south towards Enderts Beach, the Highway 101 corridor itself provides an existing barrier to wildlife movement. A full wildlife study was not conducted as part of this current review.

Soils

The United States Department of Agriculture NRCS soil survey is not yet updated for the area of interest (NRCS, 2011). General historic soil information is available from the original Soil Survey for the area, but this historic data is likely outdated and/or the site conditions may have been altered through site development and human alterations (USDA, 1966). The soils in the PSB are likely highly altered and non native, placed as road base material. Soil parent material formations for the vicinity are Franciscan with greywacke, sandstone, and shale origins.

Invasive Plants Species

Invasive plant species were not mapped during the field visit. Two species that are considered to be invasive were noted to be present, typically intermixed with other species: Himalayan berry (*Rubus discolor*) and ice plant (*Carpobrotus edulis*). Ice plant was noted growing along the Anchor Way breakwater intermixed with CNPS-listed plant species beach pea, as well as a substantial area at the north beach access (more of a mono crop in this location). These species should be removed from the site where revegetation and/or natural habitat restoration efforts are considered.

Special Status Species

Per the CDFG California Natural Diversity Database, special status species with potential to occur in the project vicinity were summarized using Quad names Sister Rocks and Crescent City. The project location is on the cusp of the Crescent City quad, and therefore, species listed for both quads were considered for potential to occur at the project site. Additionally, the surrounding quad lists were reviewed in case there were additional species known for the area that should be included in the survey but that are not necessarily known at the project site/project quad(s).

There is one federally and state endangered species in the project region, the western lily (*Lilium occidentale*), which is unlikely to occur at the project site due to absence of potential habitat (furthermore, this species was not identified onsite during seasonally appropriate botanical surveys in 2011). There are five state "species of special concern" that occur within the Sister Rocks and Crescent City quads: Pacific tailed frog (*Ascaphus truei),* northern red-legged frog (*Rana aurora),* fork-tailed storm-petrel (*Oceanodroma furcata),* Sonoma tree vole (*Arborimus pomo),* Humboldt marten (*Martes americana humboldtensis.* A sixth species, the coast cutthroat trout (*Oncorhynchus clarkii clarkia)* is also listed for this quad but does not have potential to occur on the site due to absence of habitat, although its presence in adjacent ocean is possible. The Pacific tailed tree frog requires forested permanent high-gradient streams and although it could occur close to the project site, it is highly unlikely to occur on or immediately adjacent to the project site due to absence of potential habitat. The red legged frog is unlikely to occur on the site due to absence of potential habitat which includes standing water/marshy vegetated ponds. The petrel could occur in adjacent deepwater coastal areas and would be unlikely to be effected by proposed project. The tree vole would be unlikely to occur due to absence of potential habitat within the urbanized setting of the project. The Humboldt marten requires extensive mature forest and would be extremely unlikely to occur due to absence of potential habitat within the urbanized setting on and adjacent to the proposed project site. Several plants listed by CNPS are also included in the Table 1 below. Results of seasonally-appropriate botanical surveys conducted in 2011 are presented in a subsequent section below.

Table 1: Potentially Occurring Special-Status Plant and Animal Species in the Project Vicinity

Scientific Name	Common Name	Status	Global Rank	State Rank	Description / Habitat
Plants					
Abronia umbellata var. breviflora	pink sand-verbena	CNPS (1B.1)	G4G5T2	S2.1	Sandy soils, coastal scrub, lees of dunes near strand; open sandy beaches, typically at or below the zone of driftwood accumulation.
Calamagrostis crassiglumis	Thurber's reed grass	CNPS (2.1)	G3Q	S1.2	Northern Coastal Scrub, Freshwater Wetlands, wetland-riparian
Cardamine nuttallii var. *gemmata*	yellow-tubered toothwort	CNPS (1B.3)	G5T3	S2.2	Lower montane coniferous forest | North coast coniferous forest | Ultramafic
Carex lenticularis var. *limnophila*	lagoon sedge	CNPS (2.2)	G5T5	S1S2.2	Wetlands, North Coastal Coniferous Forest, wetland-riparian
Carex lyngbyei	Lyngbye's sedge	CNPS (2.2)	G5	S2.2	Estuaries, coastal salt marsh, brackish marshes. Flowers May-Aug.
Carex praticola	northern meadow sedge	CNPS (2.2)	G5	S2S3	Meadow and seep | Wetland
Carex viridula var. *viridula*	green yellow sedge	CNPS (2.3)	G5T5	S1.3	North coastal coniferous forest, wetland-ripa
Castilleja affinis ssp. *litoralis*	Oregon coast paintbrush	CNPS (2.2)	G4G5T4	S2.2	Dry areas along bluffs, chaparral near coast.
Coastal and Valley Freshwater Marsh			G3	S2.1	Marsh and swamp | Wetland
Coastal Brackish Marsh			G2	S2.1	Marsh and swamp | Wetland
Cochlearia officinalis var. *arctica*	arctic spoonwort	CNPS (2.3)	G5T3T4	S1.3	Coastal bluff scrub (on basaltic sea stack)
Empetrum nigrum ssp. *Hermaphroditum*	mountain crowberry	CNPS (2.2)	G5T5	S2	Northern Coastal Scrub rock outcrops, non wetlands, occasionally found in moist Coastal Prairie
Eriogonum nudum var. *paralinum*	Del Norte buckwheat	CNPS (2.2)	G5T2T4	S2	Sandy to gravelly flats, mesas, coastal bluffs, mixed grassland and manzanita, oak and scattered conifer woodlands

Gilia capitata ssp. *pacifica*	Pacific gilia	CNPS (1B.1)	G5T3T4	S2.2	Coastal bluff scrub | Coastal prairie | Valley and foothill grassland
Gilia millefoliata	dark-eyed gilia	CNPS (1B.2)	G2	S2.2	Coastal dunes
Hesperevax sparsiflora var. *brevifolia*	short-leaved evax	CNPS (1B.2)	G4T2T3	S2S3	Coastal bluff scrub | Coastal dunes
Hierochloe odorata	nodding vanilla-grass	CNPS (2.3)	G5	S1.3	Meadow and seep | Wetland
Lathyrus japonicus	seaside pea	CNPS (2.1)	G5	S1.1	Coastal dunes
Lathyrus palustris	marsh pea	CNPS (2.1)	G5	S2S3	Bog, fen, marsh, swamp wetland, Coastal prairie, Coastal scrub, Lower montane and north coast coniferous forest
Layia carnosa	beach layia	CNPS (1B.1)			Coastal dunes, Coastal scrub(sandy)
Lilium occidentale	western lily	Fed/State (E); CNPS (1B.1)	G1	S1.2	Bogs with poorly drained, slightly acidic organic soils. sea level to 320 feet asl.
Monotropa uniflora	ghost-pipe	CNPS (2.2)	G5	S2S3	Broadleaved upland forest | North coast coniferous forest
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh		G3	S3.2	Marsh and swamp | Wetland
Oenothera wolfii	Wolf's evening-primrose	CNPS (1B.1)	G1	S1.1	Grasslands, coastal strand, roadsides, bluffs. Sandy soils, well drained but adequate moisture. Areas protected from NW exposure, south of a headland, promontory, or near river mouth.
Packera bolanderi var. bolanderi	seacoast ragwort	CNPS (2.2)	G4T4	S1.2	Coastal Strand, Northern Coastal Scrub. Partial canopy increases light and habitat
Phacelia argentea	sand dune phacelia	CNPS (1B.1)	G2	S1.1	Coastal dunes
Pinguicula macroceras	horned butterwort	CNPS (2.2)	G5	S2S3	Bog and fen | Meadow and seep | Ultramafic | Wetland
Polemonium carneum	Oregon polemonium	CNPS (2.2)	G4	S1	Lowlands of mountain ranges and in prairies, to moderate elevations

Potamogeton foliosus ssp. *fibrillosus*	fibrous pondweed	CNPS (2.3)	G5T2T4	S1S2	Marsh and swamp, Wetland, Submerged habitats.
Romanzoffia tracyi	Tracy's romanzoffia	CNPS (2.3)	G4	S1.3	Coastal bluff scrub | Coastal scrub, Ocean bluffs in contact with salt sprays.
Sagittaria sanfordii	Sanford's arrowhead	CNPS (1B.2)	G3	S3	Marsh and swamp | Wetland
Sanguisorba officinalis	great burnet	CNPS (2.2)	G5	S2.2	Riparian, meadows, freshwater-marsh, bogs/fens, moist meadows, shady and mountainous districts
Sidalcea malviflora ssp. *patula*	Siskiyou checkerbloom	CNPS (1B.2)	G5T2	S2	Broadleaved upland forest | Coastal prairie
Sidalcea oregana ssp. *eximia*	coast sidalcea	CNPS (1B.2)	G5T1	S1.2	Lower montane and north coast coniferous forest | Meadow and seep, Wetland
Streptanthus howellii	Howell's jewel-flower	1B.2	G2	S1.2	mountain forests on serpentine soils.
Trientalis europaea	arctic starflower	CNPS (2.2)	G5	S1	Meadows, bogs/fens, coastal
Triquetrella californica	coastal triquetrella	CNPS (1B.2)			
Viola langsdorfii	Langsdorf's violet	CNPS (2.1)	G4	S1.1	Bog and fen | Wetland
Viola palustris	alpine marsh violet	CNPS (2.2)	G5	S1S2	Bog and fen | Coastal scrub | Wetland

Invertebrates					
Coenonympha tullia yontockett	Yontocket satyr butterfly	None	G5T1T2	S1	Coastal dunes, perennial grassland
Haliotis cracherodii	black abalone	E (Fed)			
Juga chacei	Chace juga		G1	S1	Aquatic | Klamath/North coast flowing waters
Limnephilus atercus	Fort Dick limnephilus caddisfly		G4	S1	Aquatic | Klamath/North coast flowing and standing waters
Monadenia fidelis pronotis	rocky coast Pacific sideband		G4G5T1	S1	Coastal bluff scrub
Polites mardon	mardon skipper	C (Fed)			non-migratory, associated with bunchgrass (*Festuca* spp.) in grassland, meadows, grassy forest openings, roadsides, and serpentine balds. Adults feed on various species including early blue violet (*Viola adunca*).
Speyeria zerene hippolyta	Oregon silverspot butterfly	T (Fed)	G5T1	S1	Coastal dunes, larvae feed on *V. adunca*. Pt. St. George.
Fish					
Acipenser medirostris	green sturgeon	T (Fed)			
Eucyclogobius newberryi	tidewater goby	E (Fed)	G3	S2S3	Aquatic | Klamath/North coast flowing waters | South coast flowing waters
Oncorhynchus clarkii clarkii	coast cutthroat trout	SSC (State)	G4T4	S3	Aquatic | Klamath/North coast flowing waters
Oncorhynchus kisutch	S. OR/N. CA coho salmon	T (Fed)			
Reptiles					
Caretta caretta	loggerhead turtle	T (Fed)			
Chelonia mydas (incl. agassizi)	green turtle	T (Fed)			
Dermochelys coriacea	leatherback turtle	E (Fed)			
Lepidochelys olivacea	olive (=Pacific) ridley sea turtle	T (Fed)			

Birds					
Brachyramphus marmoratus	marbled murrelet	T (Fed)			Rocky seastacks, nests in old growth redwoods.
Cerorhinca monocerata	rhinoceros auklet	Watch List (State)	G5	S3	Castle Rock offshore Crescent City; cliffs/caves, burrows, islands and mainland
Charadrius alexandrinus nivosus	western snowy plover	T (Fed)	G4T3	S2	Great Basin standing waters | Sand shore | Wetland
Coccyzus americanus	Western yellow-billed cuckoo	C (Fed)			Riparian nester.
Elanus leucurus	white-tailed kite	FP-Fully Protected (State)	G5	S3	Cismontane woodland | Marsh and swamp | Riparian woodland | Valley and foothill grassland | Wetland
Fratercula cirrhata	tufted puffin	SSC (State)	G5	S2	Protected deepwater coastal communities; known on Castle Rock.
Oceanodroma furcata	fork-tailed storm-petrel	SSC (State)	G5	S1	Protected deepwater coastal communities
Phalacrocorax auritus	double-crested cormorant	Watch List (State)	G5	S3	Riparian forest | Riparian scrub | Riparian woodland
Phoebastris albatrus	short-tailed albatross	E (Fed)			
Strix occidentalis caurina	northern spotted owl	T (Fed)			nests in old growth forest, particularly redwood
Synthliboramphus hypoleucus	Xantus's murrelet	C (Fed)			

Mammals					
Arborimus pomo	Sonoma tree vole	SSC (State)	G3	S3	North coast coniferous forest, Oldgrowth, Redwood
Balaenoptera borealis	sei whale	E (Fed)			
Balaenoptera musculus	blue whale	E (Fed)			
Balaenoptera physalus	fin whale	E (Fed)			
Eumetopias jubatus	Steller (=northern) sea-lion	T (Fed)	G3	S2	Marine intertidal and splash zone, Protected deepwater coastal communities | Rock shore
Martes americana humboldtensis	Humboldt marten	SSC (State)	G5T2T3	S2S3	North coast coniferous forest | Oldgrowth | Redwood
Martes pennanti	fisher, West Coast DPS	C (Fed)			
Megaptera novaengliae	humpback whale	E (Fed)			
Physeter macrocephalus	sperm whale	E (Fed)			
Amphibian					
Ascaphus truei	Pacific tailed frog	SSC (State)	G4	S2S3	Aquatic, Klamath/North coast flowing waters, Lower montane and north coast coniferous forest, Redwood | Riparian forest
Rana aurora	northern red-legged frog	SSC (State)	G4T4	S2	Klamath/North coast flowing waters | Riparian forest | Riparian woodland
Rhyacotriton variegatus	southern torrent salamander	SSC (State)	G3G4	S2S3	Lower montane coniferous forest | Oldgrowth | Redwood | Riparian forest

Source: CNDDB/FWS/CNPS, 2011. Crescent City and Sister Rocks Quads

CNPS = Special-status plant listing by California Native Plant Society (CNPS)

State Key:	E= State and/or Federally Endangered
	T = Threatened
	SSC = State DFG Species of Special Concern
Federal Key:	
(PE) Proposed Endangered	Proposed in the Federal Register as being in danger of extinction
(PT) Proposed Threatened	Proposed as likely to become endangered within the foreseeable future
(E) Endangered	Listed in the Federal Register as being in danger of extinction
(T) Threatened	Listed as likely to become endangered within the foreseeable future
(C) Candidate	Candidate which may become a proposed species

Special Status Plants

A summary of potential plant species that occur in the vicinity of the project site (for the Sister Rocks and Crescent City quadrangles) is provided in Table 1. Special-status plants that are listed on adjacent quadrangles were also considered during the seasonally appropriate botanical surveys. A partial plant list for the project site consisting of plants observed at the project site during 2011 Winzler & Kelly seasonally-appropriate botanical surveys is included at the end of this document as Table 2. The following plants were observed at the project site:

Wolf's evening primrose (*Oenothera wolfii*), CNPS List 1B.1

This species occurs along bluffs and at toe along the beach in eastern and northwest areas. Some of the plants especially in the northwestern area may be hybrids. The Jepson Manual distinguishes the native based on petal size and if the stigma is more or less below the anthers or obviously above. If the petals are in the range of the native, and the stigma is bellow the anthers it is at least a hybrid. The non-native *O. glazioviana* was observed along the northwest boundary of the study area. One small non-flowering individual was encountered along the wetland area delineated just northeast of the RV park, its species identity is not certain.

Sea pea (*Lathyrus japonicus)*, CNPS List 2.1

This species was encountered along most of the south side of the Anchor Way breakwater, intermixed with the RSP and ice plant also growing in the RSP. Plant coverage within the mapped areas where the species was present ranged from 20% to 80%. The substrate is non-natural fill material built up as part of Anchor Way road prism, retaining wall, and breakwater. This is a highly manipulated and man-made area, and the source of these plants is not known. This is an unusual setting for the species to be growing in human-placed and Aeolian/wind deposited sediments in between the breakwater RSP. Small scattered populations growing in natural sandy substrate were mapped on the upper beach in the eastern portion of the study area, as well as along portions of the upper beach in the northern area.

Tracy's romanzoffia (*Romanzoffia tracyi*), CNPS List 2.3

Two small patches occur in rocky areas adjacent to existing trail on Whaler Island and near coastal bluff scrub and coastal scrub vegetation. The areas were mapped and were approximately 3 feet by 2 feet, and 1 foot by 1 foot, with dense coverage of the species within these polygons (90-100% cover).

Headland wallflower (*Erysimum menziesii* ssp.*concium*), no status

This is a regionally significant taxon according to the U.S. Fish and Wildlife Service and therefore was mapped for project planning purposes. According to FWS, there are now two known occurrences in Del Norte county and genetics indicates it is slightly different than Tolowa Dunes population (but related). The plants occur scattered across much of Whaler Island. General areas where this species occurs were mapped, although within these polygons actual density is generally less than 5% as plants seem to occur as individuals and not clumped in swaths. The plant individuals are mapped within and associated with the surrounding mapped habitat of coastal bluff scrub vegetation (50% coverage).

Natural Communities

The following natural communities are potentially considered Environmentally Sensitive Habitat Areas (ESHAs) by at least the California Coastal Commission, therefore for areas within the coastal zone, special consideration will be required for any activities near or within these areas.

Dune Mat (*Abronia latifolia – Ambrosia chamissonis*) Herbaceous Alliance [Sawyer et al. 2009]), G3 S3

This vegetation type, aka "Northern Foredunes," G2 S2.1, (Holland 1986), occurs on a small stretch of beach in the northern project area. Characteristic associated species include: yellow sand verbena (*Abronia latifolia*) beach bursage (*Ambrosia chamissonis*), and sea rocket (*Cakile maritima*). Note: restricted and limited elements of this vegetation occur in other parts of the study area such as the beach in the eastern area (northern end of Crescent Beach) and near the informal kayak launch area on Whaler Island. Cover and diversity of characteristic native species was generally low in these areas. This area was not considered a natural dune formation as it is a dredge materials disposal area with no significant cover of other native dune plants besides scattered cover of beach bursage. These areas were mapped as "dredge materials disposal area" for planning purposes and these are not considered special habitats warranting protection.

Northern Coastal Bluff Scrub (Holland 1986), G2 S2.2

This vegetation occurs over much of Whaler Island. Characteristic associated species include: seaside daisy (*Erigeron glaucus*), sea pink (*Armeria maritima*), maritime plantain (*Plantago maritima*), headland wallflower (*Erysimum menziesii* ssp. *concium*), and bluff lettuce (*Dudleya farinosa*). Note: We are using the older Holland type for this as it does not fit well in MCV classification. The Holland types are still used by the CNDDB including their rarity rankings. Characteristic species for this vegetation occur over most of Whaler Island and are mixed with Northern Coastal Scrub (Holland 1986) and non-native grasses. Characteristic Northern Coastal Scrub species present on Whaler Island include (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), salal (*Gaultheria shallon*), and Henderson's angelica (*Angelica hendersonii*)

Sea lyme grass patches (*Leymus mollis* Herbaceous Alliance [Sawyer et al. 2009]), G4 S2

Also considered "northern foredune grassland" (G1 S1.1). Several stands of *Leymus mollis* occur in the northwest section of the study area and are associated with dune mat vegetation. Note: *Leymus mollis* occurs in other parts of the study area such as along the breakwater to Whaler Island, cover of *Leymus* and ecological setting (eg. growing out of the breakwater etc.) of the plants was not consistent with Northern foredune grassland and therefore this vegetation type was not mapped in these other areas.

Wetlands and Riparian Habitat

The National Wetlands Inventory (FWS, 1987) does not show any wetlands on the project site based on remote sensing mapping techniques. A complete wetland delineation of the project site has been conducted and results of which are presented under separate cover. The wetland delineation includes one and two-parameter Coastal Commission jurisdictional wetlands, if any, Army Corp jurisdictional three parameter wetlands, and riparian vegetation that is not growing as hydrophytes (not supported by wetland soils or hydrology) but which is of interest to some regulatory agencies (particularly the Coastal Commission).

Conifer Individuals / Non-native grass understory
A grassy lawn area that is maintained / mowed includes scattered conifer overstory (mostly shore pine). Although this area is not likely a formal ESHA due to 1) absence of natural understory, 2) the fact that it is not connected with any surrounding similar habitat, and 3) could have been planted as part of the harbor development, the field staff felt it pertinent to collect extent of the conifers for project planning purposes.

Contacts with Agencies and Individuals
To date, contact was made with USFWS to determine the significance of wallflower plants mapped on Whaler Island (see above results section). On February 15, 2011, USFWS communicated their consideration of the plants as a regionally significant complex.

Mr. Jim Baskin of the California Coastal Commission has also been contacted regarding the most current and approved version of the Coastal Zone map of the project vicinity, and reported that there appears to be some uncertainty of the Coastal Commission versus County jurisdictional areas within the Coastal Zone within the vicinity. If a consolidated Coastal Development Permit (CDP) application is submitted for the project to the Coastal Commission, then the various jurisdictional areas within the Coastal Zone (County versus Commission) would be a moot point.

At this point in time, other individuals are not known that would provide additional site-specific information regarding biological resources.

Potential Effects
Within the limits of the PSB, the project specific impacts are not known at this point in time. The project is attempting to avoid impacts to wetlands, and in cases where avoidance cannot occur, the project will minimize and provide replacement habitats. Project impacts will be evaluated once actual project footprint is determined.

CONCLUSION
The above information was based on the information available at the time of analysis and the 2011 field effort, and is for project planning purposes. It should be noted that site conditions can change over time and that the reconnaissance results presented above should be verified prior to planned site disturbance activities.

RECOMMENDATIONS

The following are actions that are recommended based on observations of existing conditions at the project site:

- Special Status Plant Species, Special Status Natural Communities, and Wetlands. Avoidance, minimization, and/or mitigation will need to be developed for project areas that have potential to impact sensitive plan species and/or natural communities, regulated plant communities, and/or wetlands. Mitigation for impacts to listed plant species could include relocating certain species or replacing impacted populations at a nearby location along with monitoring to verify successful establishment of replacement population(s).

- Riparian Impacts. Minimization and avoidance of wetland impacts has been emphasized during the project planning phase of this project. An initial attempt to avoid all impacts to wetlands was made. Several remnant one and/or two parameter riparian areas could be impacted by the proposed project. There areas are not supported by wetland soils and it is likely that they are disconnected from wetland processes. In any case, the project proposes to mitigate the impacts to these vegetated areas by incorporating native habitats into the planting plan of proposed trail project. The replacement riparian vegetation will be of increased value as it will be contiguous compared to existing conditions where small disconnected patches will be impacted within the project footprint.

- California Coastal Commission and Coastal Zone Jurisdictional Boundary: If a consolidated Coastal Development Permit (CDP) application is submitted for the project to the Coastal Commission, then the various jurisdictional areas within the Coastal Zone (County versus Commission) would be a moot point.

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Table 2: PARTIAL PLANT LIST OBSERVED AT THE SITE (June/July 2011).

TAXON	COMMON NAME
Trees	
Alnus rubra	red alder
Picea sitchensis	Sitka spruce
Pinus contorta ssp. contorta	beach pine
Salix hookeriana	Hooker's willow
Salix lasiolepis	arroyo willow
Salix sitchensis	Sitka willow
Shrubs	
Baccharis pilularis	coyote brush
Garrya elliptica	coast silk-tassle
Gaultheria shallon	salal
Lonicera involucrata var. ledebourii	black twinberry
Lupinus arboreus	bush lupine
Myrica californica	wax myrtle
Rubus discolor	Himalayan blackberry
Toxicodendron diversilobum	poison-oak
Vaccinium ovatum	evergreen huckleberry
Herbs	
Abronia latifolia	yellow sand verbena
Achillea millefolium	common yarrow
Agrostis stolonifera	creeping bent-grass
Allium triquetrum	escaped ornamental onion
Ambrosia chamissonis	beach bursage
Ammophilla arenaria	European beachgrass
Anagallis arvensis	scarlet pimpernel
Angelica hendersonii	Henderson's angelica
Anthoxanthum odoratum	sweet vernal grass
Armeria maritima	sea-pink
Artemisia suksdorfii	coastal mugwort
Aster chilensis	common California aster
Athyrium filix-femina	lady fern
Atriplex sp.	saltweed
Avena spp.	wild oat grass
Bellis perennis	English daisy
Briza maxima	rattlesnake grass
Bromus carinatus	California brome
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft chess
Cakile maritima	sea rocket
Calamagrostis nutkaensis	Pacific reed grass
Calandrinia cilata	red maids
Carex obnupta	slough sedge
Carpobrotus chilensis	iceplant
Carpobrotus edulis	iceplant

Chamomilla suaveolens	pineapple weed
Cirsium vulgare	bull thistle
Conium maculatum	poison hemlock
Cotula coronopifolia	brass buttons
Crocosmia sp.	crocosmia
Cynosurus echinatus	hedgehog dogtail grass
Dactylis glomerata	orchard grass
Daucus carota	wild carrot or Queen Anne's lace
Dudleya farinosa	bluff lettuce
Eleocharis macrostachya	creeping spike-rush
Epilobium ciliatum	northern willow herb
Equisetum hyemale ssp. affine	scouring rush
Equisetum telmateia ssp. braunii	giant horsetail
Erigeron glaucus	seaside daisy
Erodium cicutarium	red-stemmed filaree or common stork's bill
Erysimum menziesii ssp.concium	headland wallflower
Festuca arundinacea	tall fescue
Festuca rubra	red fescue
Fragaria chiloensis	beach strawberry
Galium aparine	goose grass
Galium sp.	bedstraw
Geranium dissectum	cut-leaved geranium
Gnaphalium luteo-album	weedy cudweed
Grindelia stricta	gumplant
Holcus lanatus	common velvet grass
Hordeum jubatum	foxtail barley
Hypericum perforatum	Klamath weed or common St. John's-wort
Hypochaeris radicata	hairy cat's-ear
Iris douglasiana	Douglas iris
Juncus effusus	common rush
Junucus breweri	Brewer's rush
Lathyrus japonicus	**sea pea (CNPS List 2.1)**
Leontodon taraxacoides	hawkbit
Leucanthemum vulgare	ox-eye daisy
Leymus mollis ssp. mollis	American dunegrass
Linum bienne	western blue flax
Lolium multiflorum	Italian ryegrass
Lonicera hispidula	hairy honeysuckle
Lotus corniculatus	birdfoot trefoil
Lupinus littoralis	seaside lupine
Lupinus rivularis	riverbank lupine
Malva nicaeenis	bull mallow
Marah oreganus	coast man-root
Medicago polymorpha	bur clover
Melilotus officinalis	yellow sweet clover
Oenothera glazioviana	evening primrose
Oenothera wolfii	**Wolf's evening primrose (CNPS List 1B.1)**
Parentucellia viscosa	yellow parentucellia
Phacelia malviflora	stinging phacelia
Picris echioides	bristly ox-tongue

Plantago coronopus	cut-leaved plantain
Plantago lanceolata	English plantain
Plantago major	common plantain
Plantago maritima	plantain
Polgonum sp.	knotweed
Polygonum paronychia	beach knotweed
Polypodium scouleri	leather-leaf fern
Polypogon monspeliensis	rabbitfoot grass or annual beard grass
Polystichum munitum	sword fern
Potentilla anserina	Pacific silverweed
Prunella vulgaris	self-heal
Pteridium aquilinum var. pubescens	bracken fern
Raphanus sativus	wild radish
Romanzoffia tracyi	**Tracy's romanzoffia (CNPS List 2.3)**
Rubus ursinus	California blackberry
Rumex acetosella	sheep sorrel
Rumex crispus	curly dock
Rumex salicfolius	willow dock
Scirpus americanus	bulrush
Scrophularia californica	coast figwort
Senecio jacobaea	tansy ragwort
Senecio vulgaris	common butterweed
Silene gallica	catchfly
Sisyrinchium bellum	blue-eyed-grass
Sonchus oleraceus	common sow thistle
Spergularia rubra	purple sand spurry
Tanecetum camphoratum	dune tansy
Taraxacum officinale	dandelion
Trifolium dubium	little hop clover
Trifolium pratense	red clover
Trifolium repens	white clover
Trifolium subterraneum	subterranean clover
Trifolium wormskioldii	cow clover
Triphysaria versicolor	owl's clover
Vicia sativa	vetch
Vulpia myorus	Rat's Tail Fescue
Zantedeschia aethiopica	calla lily

Appendix B

Wetland Delineation for Crescent City Harbor (Winzler & Kelly 2011)

01287-10001-11043

WETLANDS DELINEATION FOR CRESCENT CITY HARBOR CRESCENT CITY, CALIFORNIA

October 2011

Applicant:

Crescent City Harbor District
101 Citizens Dock Road
Crescent City, CA 95531
Attention: Ernie Perry

Prepared for:

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APPENDICES

I. SUMMARY

On May 5, 2011, Winzler & Kelly conducted a wetland delineation for the Crescent City Harbor Site Plan Update (the "Project"). The wetland delineation determined the extent of wetlands per U.S. Army Corp of Engineers (COE) wetland definition (three-parameter approach) as well as the California Coastal Commission guidance (one-parameter). The wetland delineation procedure was completed pursuant to the COE 1987 Wetland Delineation Manual and the *Regional Supplement to the COE Wetland Delineation Manual: Western Mountains, Valleys, and Coastal Regions* (COE, 2010) and California Coastal Commission (the "Commission") guidance for wetland delineations. The wetland results are consistent with definitions of both agencies. Figures 1 and 2 (Appendix A to the CEQA ISMND) present the Project site vicinity, site overview, and limits of investigation ["Project Study Boundary" (PSB)]. Wetland delineation field work results are provided on Figure Series 3. Data sheets documenting conditions observed during the investigation are included in Attachment 1.

II. INTRODUCTION

The Crescent City Harbor proposes improvements, including, but not limited to, a waterfront promenade, a multi-use non-motorized trail, public restrooms, and related amenities (such as benches and interpretive signs). This report describes existing conditions from field investigation of wetlands at the project site. Analysis methods, results, and recommendations from the site visit are presented herein.

Location

The Crescent City Harbor is located immediately south of the main residential and commercial portions of Crescent City in Del Norte County, California (Figure 1). Highway 101 lies northeast of the project site. The Harbor is bounded by Huston Street and Sunset Circle to the northwest and by Anchor Way and Whaler Island breakwater at the southeast (the harbor outlet faces southwest). Immediately southeast of the Harbor is Crescent Beach and further south is Enderts Beach. The site is accessed from the south by Anchor Way off of Highway 101, which leads along the edge of the southern breakwater directly to the Whaler Island parking lot. A second access to the site is provided a bit further to the north at Citizen Dock Road, which leads directly to Citizen Dock. The latitude/longitude of project site is generally 41°45'38" north and 124°4'36" west. The site is on the Sister Rocks quadrangle map (USGS, 1966) northern boundary, Section 28, Township 16N, Range 1W, and just to the south of the Crescent City quadrangle (USGS, 1975). The site includes approximately 5 acres of privately owned land, which includes developed areas for visitor serving purposes immediately facing Highway 101. The remaining 70 acres are owned or controlled by the Harbor District. There are a variety of activities within the Harbor including, but not limited to, commercial fishing, recreational boating, restaurants, one motel (privately owned), parking areas, a commercial marina, and a recreational marina.

Coastal Zone

According to the revised coastal zone boundary maps, *Post LCP Certification Permit and Appeal Jurisdictio*n (California Coastal Commission, 1986), Sisters Rock quadrangle (Map 3), the Crescent City Harbor and project site are shown to be within the Coastal Zone, with primary

jurisdiction by the County of Del Norte under their Local Coastal Program (LCP) (appeal jurisdiction to the California Coastal Commission) for areas landward of the original mean high tide line, and primary jurisdiction of the Commission for areas seaward of this line. The Coastal Commission describes the historic mean high tide line (and in this case the state lands grant line, according to the Harbor District) as "generally following Starfish Way from Anchor Way to Citizens Dock Road", and from here, the jurisdictional boundary may continue around "the water line" of the boat basin, and then connect to the shoreline to the west (although at which location is unclear). However, determining the precise location of the primary jurisdiction for the Coastal Commission versus County jurisdiction is not necessary since the Harbor District has an agreement with the County of Del Norte agreeing to consolidated permit review for areas within the Harbor (pers. com., Ernie Perry, Harbor District, September 22, 2011). In addition, the District is currently seeking a consolidated permit process with the City of Crescent City (pers. com., Ernie Perry, Harbor District, September 22, 2011). Therefore, a consolidated/single Coastal Development Permit (CDP) application will be submitted to the Coastal Commission, when appropriate, thus eliminating the need to split the jurisdictional areas.

Project Study Boundary (PSB)

The Project Biologist in coordination with the Project Engineer/Planner and the Applicant, developed the limits of the Wetland Delineation Project Study Boundary (PSB). The PSB is a terminology adopted from definitions and permit procedures promulgated by the U.S. Army Corp of Engineers (USACE). The PSB was drawn to include the maximum extents of potential project elements, including areas where alternative layouts/footprints could be considered, fill prisms, new right-of-way (ROW) limits, areas needed for utility relocation, construction access roads and staging areas, driveway realignments, and/or construction easements, when deemed appropriate for proposed project. Where possible, the PSB included adjacent areas to provide allowances for adjustments in the exact project layout and to assess potential for offsite and indirect impacts (adjacent areas included in PSB depended on site access, parcel boundaries/property ownership, and likelihood for significant environmental resources to be present on these adjacent areas). Due to the existing developed nature of the project area, the PSB for wetland delineation was mostly confined to the Harbor District's property and avoided field investigations on private property. Visual assessment for wetlands and botanical survey on private lands within 100 feet of the project was conducted at a reconnaissance level when possible. Figures 1 and 2 (Appendix A to the CEQA ISMND) present the site vicinity and limits of investigation (Project Study Boundary--PSB). Wetland delineation field work results are provided on Figures Series 3.

III. PURPOSE

The purpose of this investigation was to determine the location of wetlands and extent of riparian vegetation adjacent to the existing developed harbor area in anticipation of the proposed Project that including, but not limited to, waterfront promenade, a multi-use non-motorized trail, , public restrooms, and related amenities (such as benches and interpretive signs). The upland/wetland delineation was performed in accordance with COE as well as Commission's wetlands criteria.

IV. ENVIRONMENTAL SETTING

Vicinity

The site elevation is approximately 0 to 20 feet above mean sea level (msl), and is generally flat coastal terrace with relatively consistent elevation. The climate of the area is temperate and humid with abundant summer fog. The mean annual temperature is 53 degrees Fahrenheit, and average precipitation for Del Norte County is approximately 66 inches per year (NOAA, 2010)

Most of the area within the PSB is developed and highly altered with few natural areas remaining. The National Wetlands Inventory (NWI) map (FWS, 1987) by the U.S. Fish and Wildlife Service shows the closest wetland to the project site (besides waters of the Pacific Ocean) to be a substantial Freshwater Forested/Shrub wetland (PSS1C) and Freshwater Emergent wetland (PEM1C) across Highway 101 to the north of the Anchor way entrance (outside of the PSB). The Crescent Beach area is generally shown as Estuarine and Marine Wetland (M2US2N) and the Pacific Ocean (including the Harbor waters) are mapped as Estuarine and Marine Deepwater (M1UBL). Additionally, a tidally influenced drainage was noted during field visits south of Anchor Way at the north end of Crescent Beach, although this is beyond the PSB and for project information purposes is generally shown but not mapped on Figure Series 3. This drainage also appears to receive freshwater inputs from up-gradient area through a culvert under Highway 101.

Soils

The United States Department of Agriculture NRCS soil survey is not yet updated for the area of interest (NRCS, 2011). General historic soil information is available from the original Soil Survey for the area, but this historic data is likely outdated and/or the site conditions may have been altered through site development and human alterations (USDA, 1966). The soils in the PSB are likely highly altered and non native, placed as road base material. Soil parent material formations for the vicinity are Franciscan with greywacke, sandstone, and shale origins.

V. METHODOLOGY

Wetland Delineation

The wetlands delineation was conducted on May 5, 2011, by Lia Webb, Ecologist and Certified Professional Wetland Scientist, and Karla Knapak, Associate Soil Scientist, Winzler & Kelly. The May 2011 field work revised results of the April 26th, 2011, reconnaissance mapping effort.

To define a wetland, the COE requires that all three parameters (vegetation, soil, and hydrology) show wetland attributes. The wetlands delineation followed the COE guidance from the *Corps of Engineers Wetlands Delineation Manual* (COE, 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (COE, 2010), as well as California Coastal Commission (the "Commission") guidance for wetland delineations. The wetland results are consistent with definitions of both agencies. Botany/soils/hydrology data sheets used are the current standard forms provided by the COE for use (COE, 2010). Data sheets are attached (Attachment 1).

Vegetation, soil, and hydrology data were collected, where possible, at transects across the upland/wetland boundary with two plots (upland/wetland) per transect. Test plots are numbered to correlate with transects, according to order of investigation, and denoted with either a "U" to indicate upland location or "W" for wetland plots (for example, test plot W1T2-U indicates transect 2 at upland plot location). Intermediate plots were placed without collection of data

sheets as appropriate (based on extrapolation from adjacent test plots and verification of hydrologic conditions) and are indicated with an "-int" after the point number (i.e. W1T3-int). Additionally, due to the large project acreage, additional confirmation test pits were collected in many areas to confirm extrapolation of wetland or upland conditions. Data sheets are not recorded at confirmation test pits as they were not deemed necessary in order to document representative conditions. Data sheets that correspond to delineation of ditch areas are keyed with TOB (for Top of Bank) at the beginning of the numerical identification, and with a "W" for wet or "U" for upland plot location along the transect.

Botanical Methodology

Vegetation data collection consisted of listing the species at each plot in each layer. All species within a radius of five feet were listed in the herb layer. The species were then classified as to whether or not they are wetlands indicators, using the standard reference for plant wetlands indicators, *National List of Plant Species that Occur in Wetlands: California (Region O)* (U.S. Department of the Interior, 1988). The standard reference document classifies plants based on the probability that they would be found in wetlands, ranging from Obligate (almost always in wetlands) [OBL], Facultative/wet (67% to 99% in wetlands) [FACW], Facultative (34% to 66% in wetlands) [FAC], Facultative/up (1% to 33% in wetlands) [FACU], to Uplands (less than 1% in wetlands) [UP]. Plants listed as non-indicator status (NI) are considered to be in the upland category. Plants not listed (NL) are included in the upland category. Plants listed as Facultative minus (FAC-) are considered to generally tend towards upland conditions and were therefore previously included in the upland category when conducting the Dominance Test. The new COE guidance document (COE, 2010) includes FAC- species in the FAC category when conducting the Dominance Test. The Dominance Test states if greater than 50% of the dominant plant species at each plot are classified Obligate (OBL), Facultative/wet (FACW), or Facultative (FAC), the vegetation is determined to be hydrophytic (wetland plants). Therefore, FAC- species have been included in the FAC category when conducting the Dominance Test.

Soils Methodology

The 1987 Manual's procedures were combined with the Natural Resources Conservation Service's (NRCS) definition of hydric soils presented in *Changes in Hydric Soils of the United States* and *Field Indicators of Hydric Soils in the United States* (United States Department of Agriculture [U.S.D.A.], 1995 and 2006, respectively), as well as most recent wetland guidance document *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (COE, 2010). Soil pits were dug to an approximate depth of 18 inches. Data on soil color, texture and redoximorphic features was collected. Care was taken to observe mottling (iron concentrations) and to distinguish between chromas of 1 and 2.

Colors were described for the entire depth of the test pit and were compared to the above parameters at a depth of 10 inches. Colors were determined on moist ped surfaces, which had not been crushed, using the Munsell Color Chart (Gretag Macbeth, 2000). Soils with low chromas were verified as being hydric or upland using indicators for depleted matrix (F3) for fine grained soils per *Draft Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (COE, 2010).

Hydrology Methodology

The delineation was performed in late spring of an extraordinarily wet year. Additionally, the reconnaissance visit was conducted in April within the wet-weather season and results of the reconnaissance survey were used to inform the wetland delineation from a wet-season hydrology perspective. Direct evidence of groundwater (soil saturation, standing water, etc.) was possible in most of the wetland plots during the delineation, or was assumed based on geomorphic position and presence of strong hydric soil indicators. Primary wetland hydrologic indicators observed were ponding/surface inundation. Secondary indicators were evaluated and documented, including sparsely vegetated concave surface (B8) and a pass on the "FAC-Neutral Test" (D5).

Wetland Determination

The wetland boundary was evaluated using the COE (three-parameter) methodology. The wetland determination was made with an emphasis on predominance of hydric vegetation and presence of wetland hydrology indicators (one primary or two secondary indicators). An area was determined to be uplands based on absence of the three wetland indicators (soils/botany/hydrology). All wetland plots exhibited a predominance of facultative (FAC) or wetter vegetation and all upland plots exhibited predominance of facultative-up (FACU) or drier vegetation. Areas were mapped as possible one-parameter Coastal Commission jurisdictional wetlands for riparian areas, although these areas the FAC or wetter vegetation is not growing as hydrophytes as it is not supported by presence of wetland soil and hydrology.

The horizontal location of each point along the upland/wetland boundary (location where each transect intersects the upland/wetland boundary) was collected using a handheld GPS Trimble unit (sub-meter accuracy). Flags were not placed to mark the wetland boundary due to the active land-use in the area. In some areas, flags were hung on adjacent vegetation where possible. The delineated boundaries can be relocated with the handheld Trimble GPS and flagging of the boundaries was further determined to not be necessary. To relocate the actual test pit locations (uplands and wetlands), the distance from the upland/wetland boundary line was recorded on individual data sheets. Due to the sub-meter accuracy of the GPS unit and scale of the wetland delineation map for the site, it is more helpful to collect the actual plot locations as relative to the upland/wetland boundary while in the field and record as a measurement on each individual data sheet under "remarks." The horizontal locations of some site infrastructure features that are visible on the aerial were collected to ensure that the base map lines up accurately with the delineation results. Other site infrastructure features of interest were recorded such as noticeable pipe outlets/culverts.

Riparian

Riparian mapping was conducted during the wetland delineation. The extent of riparian vegetation not already mapped as three-parameter wetlands (i.e. lacked wetland soils and/or hydrology) was evaluated based on drip line of riparian-related plant species. In cases where leaning vegetation/falling branches skewed the extent of the dripline, the average dripline was recorded. Where the riparian vegetation is growing in absence of wetland soils and/or hydrology, the plants were determined to not be growing as hydrophytes, and therefore the area is not considered a wetland. On a case-by-case basis, riparian vegetation not growing as hydrophytes may still be determined jurisdictional based on one-parameter (vegetation) by the Commission.

Other Waters of the U.S. / State (Non-tidal)
The project PSB includes a road-side ditch and tidally influenced areas along the coastline and within the harbor. The limits of these other waters are defined below.

Ordinary High Water Mark (OHWM)
Non-tidal Waters of the U.S./State, including wetland ditches, drainages, and creeks, are mapped/ defined at the Ordinary High Water Mark (OHWM) and/or limits of adjacent freshwater emergent wetlands. The OHWM is determined by observance of scour, water-marked vegetation, drift lines, and/or drift deposit.

Other Waters of the U.S. (Tidal)
Under Section 10 of the Rivers and Harbors Act of 1899, for activities in navigable waters the limits of COE jurisdiction is defined at Mean High Water (MHW). Under Section 404 of the Clean Water Act, the limits of COE jurisdiction is defined at the High Tide Line (HTL), which is a site-specific elevation related to the observed level of high tide and extent of saltmarsh habitat (pers. com., April 14, 2010, Mr. Kelley Reid, COE). Per COE guidance, mapping of "Other Waters of the U.S. (Tidal)" can vary from the estimated HTL elevation based on site-specific observations in order to capture limits of unvegetated mud within tidal portions of creeks/sloughs, saltmarsh vegetation, and other site-specific conditions that might extend to higher elevation than the estimated HTL. The HTL should also be adjusted so that vegetated areas (i.e. saltmarsh wetlands, or eel grass beds) are mapped separately as either wetlands or special habitat areas, and are not lumped within definition of "Other Waters" since saltmarsh and eelgrass beds warrant special consideration compared to unvegetated areas within the HTL. According to Laurie Monarres of the Army Corp of Engineers (pers. com., Ward Stover, July 19, 2011), the Mean Higher High Water (MHHW) although lower than the HTL, may serve as a surrogate for the HTL (although, again, if saltmarsh vegetation, drift marks, or other indication of inundation are present inland of the MHHW and/or HTL, then the mapping of COE jurisdiction should take the more conservative approach and include these areas as "Other Waters of the U.S. (Tidal)."

VI. RESULTS

Figures 1 and 2 (Appendix A to the CEQA ISMND) present vicinity map and the PSB limits of investigation. Wetland delineation field work results are provided in Figure Series 3 (Appendix A to the CEQA ISMND). Data sheets documenting conditions observed during the May 5, 2011, investigation are included in Attachment 1. Note that an area mapped as Wetland 5 was determined to be outside of the PSB and data sheets have been excluded from this report. Characteristics of wetland areas are further described below and wetland acreage mapped within the PSB are summarized in Table 1.

Table 1: Existing Areas of Wetlands

	Location	square feet	acres
1 Parameter (Vegetation/Riparian)	Area 1, 2, 3	10,674	0.25
2 Parameter	Adjacent to Area 2	439	0.01
3 parameter (Ditch)	Wetland 4	9,932	0.23
3 Parameter (Palustrine Emergent Wetland)	Wetland 3	579	0.01
This table includes 1, 2, and 3-parameter wetlands observed within the Project Study Boundary (PSB).			

One-Parameter (Riparian / Vegetation)

One parameter riparian vegetation was mapped in the project area and species were determined not to be growing as hydrophytes due to absence of wetland vegetation and soils. **Areas 1, 2, and 3** (Figure 3.1) were determined to consist of riparian dominant species and lacked wetland soils and hydrology. Numerous confirmation soil test pits were installed in the riparian area as confirmation of one-parameter status. Plots at W1T1 and test pit TP-1 provide documentation of existing conditions within the riparian area and adjacent upland conditions. The riparian areas were mapped at the drip line. Soils within the mapped riparian areas consists of silt loams with matrix color 10YR 2/2 to a depth of 18 inches. Adjacent areas beyond the riparian drip line consist of silt loam soils with matrix color 10YR 3/2. Typical vegetation within this area consists of:

Riparian	***Upland***
• velvet grass (*Holcus lanatus*) • horsetail (*Equisetum* sp.) • willow (*Salix* sp.) • California blackberry (*Rubus ursinus*)	• sweet vernal grass (*Anthoxanthum odoratum*) • ripgut (*Bromus* sp.) • black mustard (*Brassica nigra*)

Two-Parameter

A small two parameter area is adjacent to Area 2 due to a manipulated area that is lower than the surrounding areas (almost ditch-like). This lower area has predominance of FAC or wetter vegetation and hydric soils indicators area present, yet wetland hydrology was not observed during either of the wet-season site visits. This area is documented by test pit TP-2.

Palustrine Emergent Wetland (Three-Parameter)

A small wetland area is present at the toe of slope adjacent to and down slope from riparian **Area 3**. Although wetland hydrology was not observed during the wet-weather season, the presence of substantial bare soil coupled with algal mats at the surface indicate ponding likely occurs for greater than seven days during the growing season which would qualify this area as an Army Corp jurisdictional wetland on that basis alone. Ponding for greater than seven days during the growing season qualifies an area based on hydric soils parameter. This lower area has predominance of FAC or wetter vegetation, although is sparsely vegetated.

Ditch (Three-Parameter)

Three parameter palustrine emergent wetland roadside ditch (**Wetland 4**) is present at the northern portion of the project area within CalTrans right-of-way along the south side of Highway 101. The ditch terminates in culverts at both eastern and western ends. The ditch has steep banks that slope down from maintained upland lawn area. The banks of the ditch have obvious upland vegetation and the wetland delineation mapped the wetland boundary where presence of FAC and wetter vegetation was present below the top of bank. The wetland ditch has wetland soils beginning at 8 inches bgs, with matrix of 10YR 5/6 and redoximorphic concentrations of 2.5 YR 4/2 and 4/1. Hydrology was present in the form of standing water at the time of delineation (did not appear to be tidally influenced, and saltmarsh vegetation was not observed present). Adjacent upland areas have upland loam soils with matrix of 10YR 3/2 and no redoximorphic features present within 18 inches of the surface. Typical vegetation within this area consists of:

Wetland

- soft rush (*Juncus effuses*)
- salt rush (*Juncus lesueurii*)
- slough sedge (*Carex obnupta*)
- lady fern (*Athyerium felix-femina*)

Upland

- sweet vernal grass (*Anthoxanthum odoratum*)
- strawberry (*Fragaria* sp.)
- hairy cat's-ear *(Hypochaeris radiata)*

Other Waters of the U.S. (Tidal)

For the purposes of this discussion, the project survey datum (NAVD88) will be used, and to convert to MLLW datum (i.e., the tidal datum used by NOAA and commonly by the COE for permitting purposes) one would add 0.38 to the NAVD88 elevation to get elevation in MLLW.

Under Section 10 of the Rivers and Harbors Act of 1899, for activities in navigable waters the limits of COE jurisdiction is defined at Mean High Water (MHW). In the project vicinity, Mean High Water (MHW) is on average 5.85 feet NAVD88 (survey datum) based on NOAA tidal information and the area was mapped according to the site-specific topographic survey (total station).

Under Section 404 of the Clean Water Act, the limits of COE jurisdiction is defined at the High Tide Line (HTL), which is a site-specific elevation related to the observed level of high tide and extent of saltmarsh habitat (pers. com., April 14, 2010, Mr. Kelley Reid, COE). Per COE guidance, mapping of "Other Waters of the U.S. (Tidal)" can vary from the estimated HTL elevation based on site-specific observations in order to capture limits of unvegetated mud within tidal portions of creeks/sloughs, saltmarsh vegetation, and other site-specific conditions that might extend to higher elevation than the estimated HTL. The HTL should also be adjusted so that vegetated areas (i.e. saltmarsh wetlands, or eel grass beds) are mapped separately as either wetlands or special habitat areas, and are not lumped within definition of "Other Waters" since saltmarsh and eelgrass beds warrant special consideration compared to unvegetated areas within the HTL. In regards to the Crescent City Harbor site, according to Laurie Monarres of the Army Corp of Engineers (pers. com., Ward Stover, July 19, 2011), the Mean Higher High Water (MHHW) although lower than the HTL, may serve as a surrogate for the HTL (although, again, if saltmarsh vegetation, drift marks, or other indication of inundation are present inland of the MHHW and/or HTL, then the mapping of COE jurisdiction should take the more conservative

approach and include these areas as “Other Waters of the U.S. (Tidal).” The project site MHHW is approximately 6.49 feet NAVD88 and the area was mapped according to the site-specific topographic survey (total station). Within the Project Study Boundary (PSB), presence of vegetated saltmarsh (both below and above the MHHW mark of 6.49 feet NAVD88) were considered during the wetland delineation and no such saltmarsh wetlands were observed. Thus, the MHHW is determined to be accurate based on site specific observations for determining limits of Section 404 jurisdiction. Areas below MHHW are COE jurisdictional, whether classified as “Other Waters of the U.S.” (Tidal) or when wetland (if vegetated).

VII. CONCLUSIONS

A wetland delineation was performed within the PSB on May 5, 2011. The wetland delineation determined the extent of wetland-type vegetation, hydric soils, and wetland hydrology based on one and three parameters approaches. Areas 1, 2, and 3 are mapped as one-parameter (Riparian / Vegetation) and vegetation is not growing as hydrophytes thus the area is mapped as riparian. One small two parameter area is mapped adjacent to Area 2. A single three-parameter palustrine emergent wetland roadside ditch (Wetland 4) is present at the northern portion of the project area within CalTrans right-of-way along the south side of Highway 101.

Under Section 10 of the Rivers and Harbors Act of 1899, for activities in navigable waters the limits of COE jurisdiction is defined at Mean High Water (MHW). In the project vicinity, Mean High Water (MHW) is on average 5.85 feet NAVD88 (survey datum) based on NOAA tidal information and the area was mapped according to the site-specific topographic survey (total station). Under Section 404 of the Clean Water Act, the limits of COE jurisdiction is defined at the High Tide Line (HTL), which is a site-specific elevation related to the observed level of high tide and extent of saltmarsh habitat (pers. com., April 14, 2010, Mr. Kelley Reid, COE). According to Laurie Monarres of the Army Corp of Engineers (pers. com., Ward Stover, July 19, 2011), the Mean Higher High Water (MHHW) although lower than the HTL, may serve as a surrogate for the HTL. The project site MHHW is approximately 6.49 feet NAVD88 and the area was mapped according to the site-specific topographic survey (total station). Within the Project Study Boundary (PSB), presence of vegetated saltmarsh (both below and above the MHHW mark of 6.49 feett NAVD88) were considered during the wetland delineation and no such saltmarsh wetlands were observed. Thus, the MHHW is determined to be accurate based on site specific observations for determining limits of Section 404 jurisdiction. Areas below MHHW are COE jurisdictional, whether classified as “Other Waters of the U.S.” (Tidal) or when wetland (if vegetated).

It is recommended that the Applicant request in writing the limits of COE jurisdiction based on the site specific mapping presented herein, and the MHHW elevation line 6.49 feet NAVD88, that has been discussed with agency staff. Due to potential for staff changes over time, variation in agency interpretation of limits of jurisdiction, and the uncertain timeline of considered project elements, it would be highly valuable for planning purposes to have this agreed upon elevation line confirmed in writing.

VIII. REPORT PREPARE(S)

This report was prepared and reviewed by the following individual(s):

Prepared by:
WINZLER & KELLY

Lia Webb
Certified Professional Soil Scientist #327914
Professional Wetlands Scientist #1993

IX. SPECIAL TERMS AND CONDITIONS

To achieve the wetland delineation objectives stated in this report, conclusions of the delineation were based on the information available during the period of the investigation, May 2011. Land use practices and regulations can change thereby affecting current conditions and delineation results; therefore, this delineation is given a 5-year expiration period. This report was prepared for the exclusive use of the Crescent City Harbor. Winzler & Kelly is not liable for action(s) arising out of the reliance of any third party on the information contained within this report.

This report does not authorize any individuals to develop, fill or alter the wetlands delineated, or special or sensitive habitat(s) identified. **Verification of the delineation by jurisdictional agencies is necessary prior to the use of this report for planning and development purposes. An agency stamped delineation map and jurisdictional approval letter is required to signify confirmation of delineation results.** The client/property owner is responsible to maintain all delineation flagging placed at the site by Winzler & Kelly, for ease of jurisdictional agency(s) site review. The client may elect to place semi-permanent markers and/or point labels to avoid loss of data points prior to jurisdictional approval(s). In situations where a field investigation determines that no jurisdictional wetlands occur, jurisdictional concurrence with these findings is recommended. It is recommended that a survey be conducted at the site to record exact location of each data point(s).

If filling is used under permitted authority (after agency review and written verification of said activities) care should be given to maintain sufficient quantity of fill to prevent a reestablishment of wetlands.

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Attachment 1
Field Data Sheets

ONE PARAMETER (VEGE) 5/5/11

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Crescent City Harbor City/County: Crescent City/Del Norte Sampling Date: WITI-U
Applicant/Owner: Harbor District State: _____ Sampling Point: WITI-U
Investigator(s): LLW/KK Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Coastal terrace Local relief (concave, convex, none): linear/flat Slope (%): 1
Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: _____ NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? N Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	Ø = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Rubus ursinus	5	Y	FACW
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Rigid Bromus SP.	30	Y	FACU
2. Anthoxanthum odoratum	40		FACU
3. Equisetum SP.	10		FACW
4. Plantago lanceolata	10		FAC
5. Vicea SP.	5		NL
6. Brassica nigra	5		NL
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	Ø = Total Cover		

% Bare Ground in Herb Stratum Ø

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

5/5/11

SOIL KK Crescent City Harbor Sampling Point: WIT1-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-18	10YR 3/2	100	—	—	—	—	SL	mod sbrnd frm

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Pit ≥ 2 ft from boundary

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Crescent City Harbor / City/County: Crescent City/Del Norte Sampling Date: WITI-W

Applicant/Owner: Harbor District State: _____ Sampling Point: _____

Investigator(s): CW/KK Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Coastal terrace Local relief (concave, convex, none): linear/flat Slope (%): 1

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? N Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X* No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: * = 1 parameter vegetation not supported by wetland soils

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix sitchensis	50		FACW
2. Rubus ursinus	5		
3.			
4.			
5.			
	55 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Holcus lanatus	50		FAC
2. Equisetum sp.	30		FACW
3. Anthoxanthum odoratum	20		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

5/5/11

SOIL

KK Crescent City Harbor Sampling Point: WITI - W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
1-18	10YR 2/2	100	—	—	—	—	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

pit 20 ft from boundary

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland Veg - 1 parameter

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Crescent City Harbor City/County: Crescent City/Del Norte Sampling Date: 6/29/11

Applicant/Owner: Harbor District State: _____ Sampling Point: TP-1 (at W2)

Investigator(s): LLW Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? N Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks: W2 – this test pit further confirms one-parameter nature of this area (vegetation)

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix	10		FACW
2. Rosa sp.	5		FAC
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Holcus lanatus	50		FAC
2. Anthoxanthum od.	20		FACU
3. Vora an.	10		FACW
4. Dactylis gl.	10		FACU
5. Equisetum sp.	2		FACW
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: TP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR3/2	100	—	—	—	—	Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

Adjacent soils 2.5Y4/2 w/ 10YR3/3 5% (within riparian) = ~~Sandy~~ loamy sandy 2 parameter wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

None observed (hydro) on 5/5/11 during wetland delineation

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Crescent City Harbor City/County: Crescent City / Del Norte Sampling Date: 6/29/11

Applicant/Owner: Harbor District State: _____ Sampling Point: TP-2

Investigator(s): LLW Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? N Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No _____
Hydric Soil Present?	Yes X	No _____	2 parameter
Wetland Hydrology Present?	Yes _____	No X	

Remarks: at W2 2 parameter area

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Holcus lanatus	50		FAC
2. Anthoxanthum od.	15		FACU
3. Poa an.	5		FACU
4. Bactylis gl.	10		FACU
5. Equisetum sp.	10		FACW
6. Juncus ef.	10		FACW
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		
% Bare Ground in Herb Stratum 0			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: TP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR3/2	100					Sandy loam	
8-10	10YR3/3	100					SL	
10-18	10YR3/2	98	10YR4/6	2	C	M	SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No hydrology observed on 5/5/11 during wetland delineation

WETLAND DITCH

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Crescent City Harbor City/County: Del Norte Sampling Date: 4/15-11
Applicant/Owner: Harbor District State: CA Sampling Point: 5/5/11
Investigator(s): CLW/KK Section, Township, Range:
Landform (hillslope, terrace, etc.): coastal terrace Local relief (concave, convex, none): linear Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? N Are "Normal Circumstances" present? Yes X No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? N (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus	10		
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Anthoxanthum odoratum	50	Y	FACU
2. Hypochaeris ra.	10		NL
3. Fragaria sp.	20		FACU
4. Festuca arundinarea	10		FAC
5. Poa annua	5		FAC
6. Bellis perennis	5		NL
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ____

Remarks: Abrupt change in vege along ditch bank

5/5/11

SOIL KK Crescent City Harbor Sampling Point W45-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) •Dirt Surface HWY 101 •Delineating South side of Ditch

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-18	10YR 3/2	100	—	—	—	—	L 21%	some soil mixing in upper 2-3in edge of main main ditch
								vfs + fs present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Pit ≈ 2 ft westofboundary

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Crescent City Harbor City/County: Del Norte Sampling Date: 5/5/11
Applicant/Owner: Harbor District State: CA Sampling Point: W4TS-W
Investigator(s): CCW/KK Section, Township, Range:
Landform (hillslope, terrace, etc.): coastal terrace Local relief (concave, convex, none): linear Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? N Are "Normal Circumstances" present? Yes X No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? N (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X No	
Wetland Hydrology Present?	Yes X No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Salix scouleriana	10	Y	FACW
2. Alnus rubra	5	↓	FAC
3.			
4.			
5.			
	15 = Total Cover		
Herb Stratum (Plot size:)			
1. Juncus effusus	20	Y	OBL
2. J. lesueurii	20	↓	FACW
3. Athyrium-felix-femina	20	↓	FAC
4. Carex obnupta	20	↓	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:
Wetland plant species clumped together, overall estimate per species ~20%

SOIL

KK Cresent City Harbor Sampling Point: W4T5-W 5/5/11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Delineating South side of Ditch South of HWY 101

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	100	—	—	—	—	L 20%	
9-12	10YR 5/6	80	2.5YR 4/2 + 4/1 2.5YR 3/1	15 5	D D	M PL/M	L/SIL 23%	feels buttery like silt loam but vfs likely making texture seem silty + overest. clay content, slightly sticky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

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Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ______

Depth (inches): ______

Hydric Soil Present? Yes ✓ No ______

Remarks:
pit ~ 4-6 in. east of boundary

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
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- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✓ No ______ Depth (inches): ______ Adjacent to north side of pit

Water Table Present? Yes ✓ No ______ Depth (inches): 2 in North side (downhill) 10 in South side (uphill)

Saturation Present? (includes capillary fringe) Yes ✓ No ______ Depth (inches): ______

Wetland Hydrology Present? Yes ✓ No ______

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: