CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
1385 EIGHTH STREET • SUITE 130
ARCATA, CA 95521
VOICE (707) 826-8950
FAX (707) 826-8960

Th9c

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STAFF REPORT: REGULAR CALENDAR

Application No.:	**1-13-010**
Applicant:	**Allen and Cheryl Nylander**
Agent:	Prairie Moore, NRM Corp.
Location:	Confluence of Ryan and Freshwater Sloughs, 3800 Park Street, approximately two miles east of Eureka (Humboldt County) [APN 017-141-002]
Project Description:	Repair a 300-foot-long section of existing agricultural levee by placing 640 cu.yds. of rock armoring along the levee.
Staff Recommendation:	Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends approval of coastal development permit application 1-13-010 subject to the attached recommended special conditions.

This project is a follow-up permit to an emergency permit (G-1-13-0211) granted by the Executive Director on August 20, 2013. The Executive Director issued the emergency permit to address an imminent flooding threat to property from a potential levee breach, taking into

account the condition of the eroded levee, the high potential for a levee breach during the on-coming rainy season, and the limited availability of low tide periods low enough to construct the necessary repairs during the permissible work window recommended by NOAA-Fisheries. The applicant is seeking permanent authorization for the development partially completed and temporarily authorized by the emergency permit. The applicant proposes to repair the levee by placing a total of 910 cubic yards of rock revetment material on the slough side of the levee. Staff has evaluated the proposed method of repair and maintenance pursuant to Coastal Act Section 30610(d) and CCR Section 13252 and recommends Special Condition Nos. 1 through 7. Special Condition No. 1 requires that the repairs to the shoreline protective device be performed consistent with the submitted plans to assure that the repairs conform to the engineered plans and minimize risk of geologic hazard,. Special Conditions No. 2 through 4 require implementation of various water quality and marine resource protection best management practices proposed by the applicant and adherence to a number of additional construction standards and responsibilities to protect water quality and the adjacent sub- and intertidal habitat.

Staff has evaluated the proposed method of repair and maintenance pursuant to Coastal Act Section 30610(d) and CCR Section 13252 and recommends Special Condition Nos. 1 through 6. Special Condition No. 1 requires that the repairs to the shoreline protective device be performed consistent with the submitted plans to assure that the repairs conform to the engineered plans and minimize risk of geologic hazard. Special Conditions No. 2 through 4 require implementation of various water quality and marine resource protection best management practices proposed by the applicant and adherence to a number of additional construction standards and responsibilities to protect water quality and the adjacent sub- and intertidal habitat.

Staff believes that the project, if conditioned as recommended below, is consistent with Sections 30230, 30231, 30232, 30233, and 30253 of the Coastal Act requiring the protection of marine resources, water quality, and minimization of hazards risks.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve coastal development permit 1-13-010 pursuant to the staff recommendation.

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

Resolution:

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

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

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

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

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

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

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

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Future Levee Repair and Maintenance.** The repairs to the levee, authorized by this permit, shall be performed consistent with the submitted plans titled "Improvement Plan, Ryan Slough: Levee Improvements APN 017-141-02, Eureka, CA," dated July 2012 and revised June 14, 2013, and prepared by Manhard Consulting, Ltd. To protect the integrity of the levee over time, the Permittee must maintain the levee in its approved state. No changes to the plans or additional maintenance may occur without a Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required. .

2. **Timing of Construction**

A. In-water construction activities authorized by this permit, shall be conducted during the period of August 1 through October 15, or for such additional time that the Executive Director may permit for good cause and in consultation with all relevant resource protection agencies, to minimize conflicts with commercial and recreational fisheries and to protect sensitive fish species; and

B. All construction activities involving the removal and/or placement of rip rap within coastal waters authorized under this coastal development permit shall be conducted during periods of low-tides only and from above the water surface to the maximum extent feasible to minimize the generation of suspended sediment and potential water quality impacts.

3. **Construction Responsibilities** The permittee shall comply with the following construction-related requirements:

A. 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. Construction materials shall be stored only in approved designated staging and stockpiling areas;

B. Any and all debris resulting from construction activities shall be removed from the levee project site on a daily basis and disposed of at an appropriate location(s);

C. Any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or. Mobile fueling of construction equipment and vehicles at the construction site shall be prohibited. Mechanized heavy equipment and other vehicles used during the construction process shall not be stored or re-fueled within 50 feet of drainage courses and other coastal waters;

D. Temporary staging and storage of construction machinery, equipment, debris, and other materials during the construction period shall occur on land at property owned

by the applicant and may not occur within slough waters or on adjacent freshwater wetlands on the landward side of the levee;

E. Machinery and construction materials not essential for project improvements are prohibited at all times in the subtidal or intertidal zones;

F. Construction vehicles shall be maintained and washed in confined areas specifically designed to control runoff and located more than 100 feet away from the mean high tide line;

G. Floating booms shall be used to contain debris discharged into coastal waters, and any debris discharged shall be removed as soon as possible but no later than the end of the each day;

H. During construction, all trash shall be properly contained, removed from the work site, and disposed of on a regular basis to avoid contamination of habitat during inner boat basin rehabilitation activities. Following construction, all trash and construction debris shall be removed from work areas and disposed of properly;

I. Fuels, lubricants, and solvents shall not be allowed to enter the coastal waters. Hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call; and

J. Best Management Practices (BMPs) shall be used to prevent the entry of polluted stormwater runoff into coastal waters during the construction of the authorized structures, including, but not limited to, the use of relevant best management practices (BMPs) as detailed in the "California Storm Water Best Management Practice Handbooks (Construction and Industrial/ Commercial), developed by Camp, Dresser, & McKee et al. for the Storm Water Quality Task Force (e.g., BMP Nos. EC-1–Scheduling, SE-1–Silt Fence &/or SE-9–Straw Bale Barrier, NS-9–Vehicle & Equipment Fueling, NS-10–Vehicle & Equipment Maintenance & Repair; NS-14–Material Over Water, NS-15–Demolition Adjacent to Water, WM-1–Material Delivery & Storage, WM-3–Stockpile Management, WM–Spill Prevention & Control, WM-6–Hazardous Waste Management, WM-9–Concrete Waste Management, SC-11–Spill Prevention, Control, & Cleanup, and others, as appropriate; and

K. At the end of the construction period, the permittee shall inspect the project area and ensure that no debris, trash, or construction materials remain on land or in the water, and that the project has not created any hazard to navigation.

4. **Debris Disposal Plan.** PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-13-010, the applicant shall submit, for the review and approval of the Executive Director, a plan detailing the methods by which, and locations at which excavated material and other project debris will be legally disposed. The plan shall demonstrate at a minimum that:

A. No construction materials, debris, or waste shall be placed or stored where it may be subject to entering waters of Ryan Slough or the freshwater wetland on the landward side of the subject levee; and

B. All construction debris, including general wastes from the excavation of existing damaged levee materials, which cannot be re-sued in the repair of the levee, shall be

removed and disposed of in an upland location outside of the coastal zone or at an approved disposal facility.

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

5. **Assumption of Risk, Waiver of Liability, and Indemnity Agreement.** By acceptance of this permit, the applicant acknowledges and agrees: (i) that the site may be subject to hazards from waves, tidal inundation, and other hazards; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

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

7. **State Lands Commission Review.** PRIOR TO ISSUANCE OF THE PERMIT, the applicant shall submit to the Executive Director, a written determination from the State Lands Commission that:

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

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

A. ENVIRONMENTAL SETTING AND BACKGROUND

The project site is located on Nylander Ranch, two miles east of Eureka (Humboldt County). The project area is just downstream from the confluence of Freshwater Creek and Ryan Slough. The levee sits between the slough on one side and a fresh water ditch wetland on the other. The levee protects agricultural land currently used for grazing cattle from high tides, flooding and saltwater intrusion. Flows from Freshwater Creek are putting pressure on the levee wall as it curves around into Ryan Slough. The eroding section is approximately 320 linear feet in length; the current width of the levee in the eroded section is 30 feet at its base, compared to its original width of 50 feet. The rest of the levees on the property are in good condition. The Nylander Property is surrounded by agricultural land. The slough side of the levee supports mainly intertidal and subtidal mud with a thin (1 to 2 feet wide) strip of patchy salt marsh vegetation in places. The area does not support significant salt marsh habitat because of the constant sloughing off of the levee face. There is salt marsh habitat upstream and downstream from the project footprint as well as on the opposite side of the slough. The top and upper portion of the landward side of the levee is vegetated with non-natives and coastal prairie species. At the bottom of the landward side of the levee there is a low lying coastal wetland in the ditch between the levee and the pasture. The property is currently zoned for agriculture.

B. PROPOSED PROJECT DESCRIPTION

On August 20, 2013, the Executive Director issued Emergency CDP G-1-13-0211 for levee repairs at the subject site. Based on the condition of the eroded levee, the high potential for a levee breach during the on-coming rainy season, and the limited availability of low tide periods low enough to construct the necessary repairs to minimize water quality impacts during the permissible work window recommended by NOAA-Fisheries for salmonid protection purposes, there was an imminent flooding threat to property from a potential levee breach. Therefore, the Executive Director determined the situation required immediate corrective action to prevent damage to private property.

This application is a follow-up permit application to the emergency permit. The applicant proposes to repair the levee by placing rock on the slough side of the levee. The Applicant identified fragments of the original redwood wall used to create the levee and used these fragments to determine the original levee footprint. The project would utilize approximately 670 cubic yards (cu. yds.) of rock revetment material and 240 cu. yds. of 3-6" course river rock. A key way would be excavated on the slough side of the levee to place a base course of rock. The slough side front slope would then be benched to provide a 1.5:1 slope face on which to place rock. All excavated material (estimated at 75 cu. yds.) would be stockpiled for onsite use. Geotextile fabric would be placed over the benching, which in turn would be covered by river run base material and then armor rock material. The landward side of the levee would be back filled with 3 to 12" of native stockpiles material to create a 1.5:1 slope. Stockpiled material would then be placed on top of the levee up to 12" thick to make the levee top six feet wide.

During construction, access would be provided via an existing road within the agricultural lands, which leads on to the levee. Materials, such as rock, would be stockpiled in the cow pasture adjacent to the levee. Equipment would be staged in the pasture as well but at a greater distance from the wetland on the landward side of the levee. No materials or equipment would be staged or stockpiled in wetland areas. A silt fence would be placed between staged materials and the fresh water wetland ditch on the landward side of the levee. All excavated material would be stockpiled in the same location as the rock and then reincorporated back into the levee during the repair process.

As part of the application, the applicant proposes a revegetation plan to offset the placement of revetment along the earthen levee. The stated goal of the proposed plan is to establish a coastal prairie/scrub community along the top of the levee and riparian vegetation along the side of the levee within the project area. Current non-native and invasive vegetation along the top of the levee would be replaced with native species. The goal is to establish riparian species along the freshwater wetland on the landside of the levee to increase habitat values. The plan is proposed to be implemented in the fall/winter period following the proposed levee repair. The enhancement area is approximately .08 acres in size.

Following construction of the levee repair, the disturbed area would be seeded with native coastal prairie species. Possible species used in this seed mix could be *Clarkia amoena, Deschampsia cespitosa, Gilia capitata, Lupinus sp, Danthonia californica,* and *Hordeum brachyantherum*. Shrubs would be transplanted onto the top and landside of the levee in the project area. Willow stakes would be installed at five foot intervals along the edge of the freshwater wetland. Along the side and top of the levee shrubs would be installed on 10 to 15 foot centers. Possible species to be planted include *Baccharis pilularis, Ceanothus thrysiflorus, Garrya elliptica, Mimulus aurantiacu*s, *Morella californica, Spiraea douglasii* and *Lonicera involucrate*.

Project plans are attached as **Exhibit 4**.

C. OTHER AGENCY APPROVALS

The Humboldt Bay Harbor, Recreation and Conservation District approved a permit for the project in July, 2013. The proposed project has also received a permit from Army Corps of Engineers along with the informal Section 7 consultation with the National Oceanic and Atmospheric Administration. Additionally, the applicant has received water quality certification from the State Regional Water Quality Control Board and a Streambed Alteration Agreement from the California Department of Fish and Wildlife.

D. STANDARD OF REVIEW

The proposed project is located in the Commission's retained jurisdiction. Therefore, the standard of review that the Commission must apply to the project is the Chapter 3 policies of the Coastal Act.

E. PERMIT AUTHORITY, EXTRAORDINARY METHODS OF REPAIR & MAINTENANCE

Coastal Act Section 30610(d) generally exempts from Coastal Act permitting requirements the repair or maintenance of structures that does not result in an addition to, or enlargement or expansion of, the structure being repaired or maintained. However, the Commission retains authority to review certain extraordinary methods of repair and maintenance of existing structures that involve a risk of substantial adverse environmental impact as enumerated in Section 13252 of the Commission regulations.

Section 30610 of the Coastal Act provides, in relevant part (emphasis added):

> *Notwithstanding any other provision of this division, no coastal development permit shall be required pursuant to this chapter for the following types of development and in the following areas: . . .*
>
> *(d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities; provided, however, that if the commission determines that certain extraordinary methods of repair and maintenance involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained pursuant to this chapter.*

Section 13252 of the Commission administrative regulations (14 CCR 13000 *et seq*.) provides, in relevant part (emphasis added):

> *For purposes of Public Resources Code section 30610(d), the following extraordinary methods of repair and maintenance shall require a coastal development permit because they involve a risk of substantial adverse environmental impact:…*
>
> *(3) Any repair or maintenance to facilities or structures or work located in an environmentally sensitive habitat area, any sand area, within 50 feet of the edge of a coastal bluff or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams that include:*
>
> *(A) The placement or removal, whether temporary or permanent, of rip-rap, rocks, sand or other beach materials or any other forms of solid materials;*
>
> *(B) The presence, whether temporary or permanent, of mechanized equipment or construction materials.*
>
> *All repair and maintenance activities governed by the above provisions shall be subject to the permit regulations promulgated pursuant to the Coastal Act, including but not limited to the regulations governing administrative and emergency permits. The provisions of this section shall not be applicable to methods of repair and maintenance undertaken by the ports listed in Public Resources Code section 30700 unless so provided elsewhere in these regulations. The provisions of this section shall not be applicable to those activities specifically described in the document entitled Repair, Maintenance and Utility Hookups, adopted by the Commission on September 5, 1978 unless a proposed activity will have a risk of substantial adverse impact on public access, environmentally sensitive habitat area, wetlands, or public views to the ocean.…*

The proposed project is a repair project because it does not involve an addition to or enlargement of the subject levee. The proposed project is designed to re-establish the original footprint of the

levee, which has been reduced from its original 50-foot base width to 30 feet. This earthen levee was originally constructed in the late 1800's. Although certain types of repair projects are exempt from CDP requirements, Section 13252 of the regulations requires a coastal development permit for extraordinary methods of repair and maintenance enumerated in the regulation. The proposed repair work involves the placement of construction materials and placement of base and riprap materials in coastal waters and along the landward and seaward sides of the levees. The proposed repair project therefore requires a coastal development permit under CCR Section 13252(a)(1).

In considering a permit application for a repair or maintenance project pursuant to the above-cited authority, the Commission reviews whether the proposed method of repair or maintenance is consistent with the Chapter 3 policies of the Coastal Act. The Commission's evaluation of such repair and maintenance projects does not extend to an evaluation of the conformity with the Coastal Act of the underlying existing development.

The repair and maintenance of shoreline protective devices, such as that proposed under the subject CDP application, can have adverse impacts on coastal resources, in this case primarily tidal wetlands and coastal waters adjacent to the project area, if not properly undertaken with appropriate mitigation. As described above, the applicant proposes to repair and maintain the existing rock slope shoreline protective device by placing approximately 670 cubic yards (cu. yds.) of rock revetment material and 240 cu. yds. of 3-6" course river rock (total of 910 cu. yds of rock material). The applicant has included mitigation measures as part of its proposal, as discussed above, such as creating .08 acres of coastal prairie/scrub habitat within the project area, limiting work to periods of low tide, positioning heavy equipment needed to perform the repairs on the adjoining upland bank rather than in the intertidal area, and using standard appropriate Best Management Practices (BMPs) to avoid sediment discharges to the slough. Although these and other measures proposed by the applicant are necessary to achieve conformity with the Chapter 3 policies of the Coastal Act, additional measures are needed to avoid or minimize potential project impacts on water quality and adjacent wetland habitats. The conditions required to meet these standards are discussed in the following findings relevant to water quality and marine resources. Therefore, as conditioned, the Commission finds that the proposed project is consistent with all applicable Chapter 3 policies of the Coastal Act.

F. PROTECTION OF COASTAL WATERS AND WATER QUALITY

Section 30230 of the Coastal Act states as follows:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states as follows:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of*

> *ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30232 of the Coastal Act states as follows:

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

Section 30233 of the Coastal Act, states in applicable part:

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

As discussed above, the project site is located adjacent to and within Ryan Slough in Eureka. Most of the rock proposed to be placed to repair the existing rock slope protection will be placed in areas that are covered at least periodically with shallow tidal water and are considered wetlands pursuant to Section 30121 of the Coastal Act and Section 13577(b) of the Commission's regulations. The existing earthen levee provides some intertidal and marsh habitat. Patches of salt marsh vegetation occurs within a narrow one-to-two-foot wide strip along the length of the 320-foot project area within eroded voids at the base of the levee. The salt marsh vegetation is dominated by dense flowered cord grass (Spartina densiflora) and arrowgrass (Triglochin maritima). The area currently does not provide significant salt marsh habitat because of burial by the constant sloughing off of the levee face and the continued erosion of the levee. To enhance habitat values, the applicant proposes to plant the top and inboard side of the restored. The disturbed area will be seeded with native coastal prairie species. Possible species used in this seed mix could be *Clarkia amoena*, *Deschampsia cespitosa*, *Gilia capitata*, *Lupinus sp*, *Danthonia californica*, and *Hordeum brachyantherum*. Shrubs will be transplanted onto the top and landside of the levee in the project area. Willow stakes will be installed at five foot intervals along the edge of the freshwater wetland. Along the side and top of the levee shrubs will be installed on 10 to 15 foot centers. Possible species to be planted include *Baccharis pilularis*, *Ceanothus thrysiflorus*, *Garrya elliptica*, *Mimulus aurantiacus*, *Morella californica*, *Spiraea douglasii* and *Lonicera involucrate*.

There is habitat within the project site for Lyngbye's sedge, a designated list 2 plant. No individuals were found during surveys for this project, but Lyngbye's sedge was located just downstream (~10 meters) from the site. Similarly, there is habitat within the project site (in the strip of coastal marsh on the levee's face) for Humboldt Bay Owl's Clover, a designated list 1B.2 plant. However, no individuals were found during surveys for the project site. The nearest population is at the confluence of Freshwater Creek and Ryan Slough. In addition, there is habitat within the project site (in the strip of coastal marsh on the levee's face) for Point Reyes Bird's Beak, a designated list 1B.2 plant. No individuals were found during surveys for this project and the nearest known population is 1.7 miles downstream of the project site at the mouth of Eureka slough. Furthermore, there is habitat within the project site (in the strip of coastal marsh on the levee's face) for Western Sand-Spurry, a designated

list 2 plant. No individuals were found during surveys for this project and the nearest known population is .5 miles from the project site.

As set forth above, Coastal Act Section 30233 states that wetland fill may only be approved when there is no feasible less environmentally damaging alternative.

Alternatives

As noted above, in considering a permit application for a repair or maintenance project pursuant to the above-cited authority, the Commission reviews whether the proposed method of repair or maintenance is consistent with the Chapter 3 policies of the Coastal Act. The Commission's evaluation of such repair and maintenance projects does not extend to an evaluation of the conformity with the Coastal Act of the underlying existing development. However, the proposed placement of rock revetment, which repairs the levee back to its original form, must be scrutinized to determine whether another material or configuration would be a less environmentally damaging feasible alternative.

Alternatives to the methods of the project are limited. Two alternatives to the proposed project exist, including (a) the no project alternative, and (b) a natural stacked log wall.

The no project alternative would allow continued erosion of the earthen levee from high-energy slough currents, which may eventually cause a breach of the subject segment of the levee. A breach would result in the inundation and damage of the applicant's agricultural lands. In addition, further collapse of the levee would cause more extensive erosion, which in turn would cause sedimentation and burial of sub-, intertidal and freshwater wetland habitats. Therefore, the Commission finds that the no project alternative is not a feasible less environmentally damaging alternative.

As a second alternative, the applicant considered a more natural bioengineering alternative wherein large logs and boulders would be stacked and vegetation planted along the eroded levee. According to the applicant, such a bioengineered design, while it might provide visual resource and habitat benefits, would not be sufficiently stable to withstand the consistent high-energy currents affecting this portion of the levee and would likely fail. The failure of a log pile wall would likely result in downstream impacts and site erosion exacerbation, in addition to inundation of agricultural lands and loss of adjacent habitat values. Therefore, the Commission finds that the log pile wall alternative is not a feasible, less environmentally damaging alternative.

Therefore, for the reasons described above, the Commission finds that the proposed project is the alternative that best protects intertidal habitat and water quality from adverse effects of sedimentation erosion. In addition, as described below, the applicant proposes and the special conditions require a range of protective measures to limit adverse project impacts on sensitive coastal resources that might otherwise arise. Therefore, the Commission finds that there is no less environmentally damaging feasible alternative to the proposed project as conditioned, consistent with the requirements of Section 30233(a) of the Coastal Act.

Mitigation Measures

Sections 30230 and 30231 of the Coastal Act require in part the maintenance of the biological productivity and quality of marine resources, coastal waters, streams, wetlands, and estuaries necessary to maintain optimum populations of all species of marine organisms and for the protection of human health. Section 30232 of the Coastal Act requires that permitted development provide for the protection against the spillage of crude oil, gas, petroleum products, or other hazardous substances and that effective containment and cleanup facilities and procedures be provided for accidental spills that may occur. Section 30233 of the Coastal Act requires in part that wetland fill may only be approved when feasible mitigation measures have been provided to minimize adverse environmental effects.

The proposed repair of the existing earthen levee will result in the placement of 670 cu. yds. of riprap material and 240 cu. yds. of 3 to 6" course river run rock in and adjacent to the Ryan Slough waters. Because the proposed work area is within and adjacent to intertidal wetlands, there is a potential for project activities to adversely impact the water quality and habitat function of these adjacent habitat areas. Unless appropriate protocols are followed, the proposed project could result in the discharge or release of sediment, loose rock, construction materials and debris, coolants and petroleum products leaked from construction equipment, trash, or other pollutants into coastal waters and wetland habitat causing adverse impacts on water quality and marine resources within and adjacent to the project site. Of particular concern is the potential for deflected channel flow and/or energy across the channel causing erosion in a new location.

As discussed above, the applicant has proposed a number of measures to protect water quality and sensitive habitats. These measures include limiting work to August 1 to October 15 and periods of low tide, positioning heavy equipment needed to perform the repairs on the adjoining upland area above the bank rather than in the intertidal area, and using standard appropriate Best Management Practices (BMPs) to avoid sediment discharges to the slough and eventually Humboldt Bay. The proposed BMPs include silt fencing around all staged/stockpiled material, silt fencing at the foot of the landward side of the levee between construction activities and the freshwater wetland, silt curtain on the slough side of the levee, silt fencing between the levee top and the slough following placement of riprap, use of clean rock, use of equipment outside of slough channel and freshwater wetland, and all materials, debris and waste will be removed from the site upon completion of the project.

In general, the use of erosion and sedimentation control measures as proposed by the Applicant are necessary to protect water quality and sensitive habitats consistent with the requirements of the Coastal Act. However, the particular best management practices proposed to be used as specified by the applicant do not go far enough in minimizing the potential for project related impacts to the channel and nearby habitat. To ensure that appropriate erosion and sedimentation control measures needed to protect water quality and sensitive habitat from construction-related impacts are implemented, the Commission attaches Special Conditions No. 2, 3, and 4. These special conditions outline general construction standards and responsibilities that must be adhered to, along with timing provisions and BMPs designed to maintain water quality and the marine environment. These standards and responsibilities include (a) conducting the authorized work only during the dry season period of August 1 through October 15 to minimize entrainment of sediment from construction in stormwater runoff; (b) limiting construction to periods of low tide to avoid entrainment of sediment in rising tidal waters; (c) operating heavy equipment only

from the top of bank on upland areas to avoid direct disturbance to the mudflat and releasing mudflat sediment into the water column; (d) placing or storing construction materials, debris, and waste be placed or stored in a manner that will prevent these materials from entering Bay waters; (e) recovering any debris discharged into coastal waters immediately and disposing of it properly; (f) managing trash collection and disposal to keep trash from polluting intertidal habitats, (g) removing and disposing of all construction debris, waste, or trash within 10 days of project completion, (h) limiting fueling and maintenance of construction equipment to upland areas outside of coastal waters and wetlands, (i) maintaining a spill prevention and clean-up kit available on-site for immediate use in case of an accidental spill; (j) covering and containing all on-site stockpiles of construction debris to prevent polluted water runoff; and (k) recovering any rock placed as part of the repair project that that becomes dislodged during construction and rolls beyond the footprint of the original shoreline where it may enter and cover mudflat or salt marsh habitat.

Conclusion

The Commission finds that as conditioned, all feasible mitigation measures have been provided to minimize adverse environmental effects and the development is consistent with Sections 30230, 30231, 30232, and 30233 of the Coastal Act. The Commission also finds that the proposed project is the alternative that best protects intertidal habitat and water quality from adverse effects of sedimentation erosion. There are no alternatives or mitigation measures that would further reduce the project's potential significant adverse impacts. Therefore the Commission finds that the proposed project, as conditioned, is consistent with Sections 30230, 30231, and 30233 of the Coastal Act.

G. GEOLOGIC HAZARDS

Coastal Act Section 30253 states in applicable part:

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

The existing levee is located just downstream of the confluence of Ryan and Freshwater Sloughs. The levee banks are steep and undercut by bank erosion on the slough side from currents that carry water directed at the affected portion of the levee. Portions of the bank are susceptible to failure. Prior to initiation of the emergency repairs, the slough side bank had mostly failed to a vertical cut and was overhanging in several places with cracks located about 6-8 inches back from the vertical edge. The proposed riprap-based repair work is necessary to repair previous damage from these hazards and strengthen the levee against further damage from such hazards. Levee failure would result in significant impacts to the Applicant's agricultural property.

To assure the structural integrity and stability of the repaired levee, the repairs have been engineered. The quarry rock to be used in the repairs and the design meet appropriate engineering specifications. An engineering report submitted with the application concludes that

erosion along the ends is not expected because the current velocities are not expected to exceed the scouring velocities. In addition, the ends of the revetment incorporate a tapered design consistent with FHWA bank stabilization engineering standards to further minimize the potential for continued erosion of the levee at those locations. The engineering report also evaluates the potential for the proposed rock revetment to deflect channel flow or energy across the channel and cause erosion of other levees flanking the slough. The report concludes that such effects are unlikely because the proposed revetment project will not change the alignment of the slough channel and thus will not change the flow path of slough waters.

To ensure that the repairs conform to the plans that have been determined to be acceptable, the Commission attaches Special Condition No. 1. This condition requires that the repairs to the levee be performed consistent with the submitted plans and that no changes to the plan shall occur without a Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

Due to the uncertain nature and inherent risk associated with the construction of improvements in high energy coastal environments, the Commission attaches Special Condition No. 8. Special Condition No. 5 requires the applicant to assume the risks of extraordinary erosion and flood hazards along the slough area and waive any claim of liability on the part of the Commission. Given that the applicant has chosen to implement the project despite these risks, the applicant must assume the risks. In this way, the applicant is notified that the Commission is not liable for damage as a result of approving the permit for the development. The condition also requires the applicant to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand hazards. To ensure that all future owners of the property are aware of the flood hazard present at the site, the Commission's immunity from liability, and the indemnity afforded the Commission, Special Condition No. 6 requires recordation of a deed restriction that imposes the special conditions of the permit as covenants, conditions, and restrictions on the use of the property.

The Commission finds that as conditioned, the project will minimize risks to life and property from geologic and flood hazards, will assure stability and structural integrity, and will neither create nor contribute significantly to erosion, geologic instability, or erosion of the site or surrounding area consistent with the requirements of Section 30253 of the Coastal Act.

H. PUBLIC ACCESS

Section 30210 of the Coastal Act requires that maximum public access shall be provided consistent with public safety needs and the need to protect natural resource areas from overuse. Section 30212 of the Coastal Act requires that access from the nearest public roadway to the shoreline be provided in new development projects, except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or where adequate access exists nearby. Section 30211 of the Coastal Act requires that development not interfere with the public's right to access gained by use or legislative authorization. Section 30214 of the Coastal Act provides that the public access policies of the Coastal Act shall be implemented in a manner that takes into account the capacity of the site and the fragility of natural resources in the area. In applying Sections 30210, 30211, 30212, and 30214, the Commission is also limited by the need

to show that any denial of a permit application based on these sections or any decision to grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential access.

The project will not adversely affect public access to the shoreline. The project site is approximately 2 miles from Arcata Bay and Humboldt Bay. The site is surrounded by private lands and any access to the site via water is limited to small kayak (or other small personal watercraft). Nearby bays and the open coastal shoreline beyond these bays provides numerous opportunities for coastal access and recreation for the public.

For all of these reasons, the Commission finds that the proposed project, which does not include provision of public access, is consistent with the public access policies of the Coastal Act.

I. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The Humboldt Bay Harbor, Recreation and Conservation District served as the lead agency for the original project for CEQA purposes. The District prepared a mitigated negative declaration for the project, pursuant to Section 21080(c) of the CEQA Guidelines (14 CCR §§15000), finding that while an initial study identified potentially significant effects on the environment, revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study were released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur.

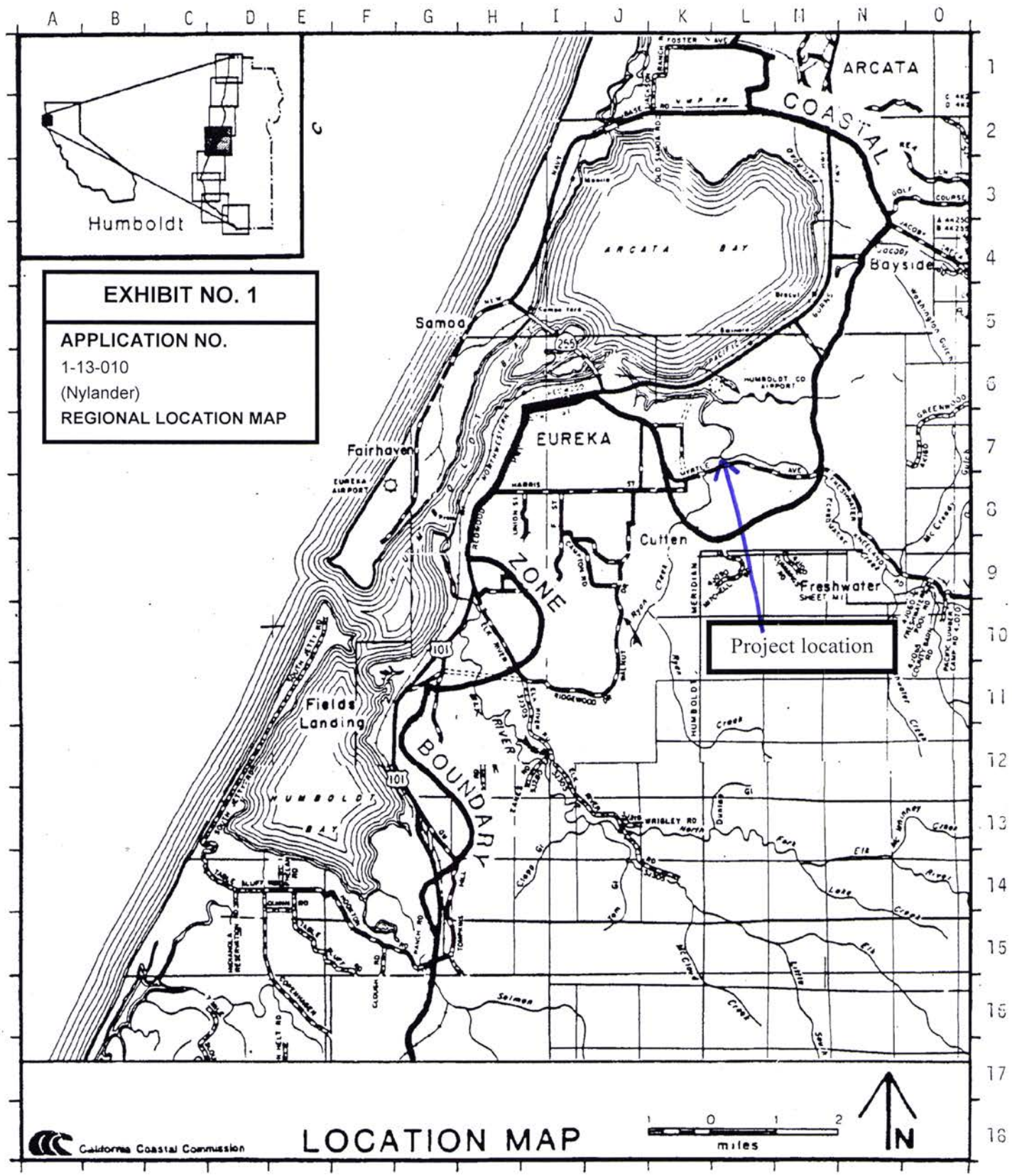
Section 13906 of the California Code of Regulation requires Coastal Commission approval of a coastal development permit application to be supported by findings showing that the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Public Resources Code Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would significantly lessen any significant effect that the activity may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. As discussed above, the proposed development has been conditioned to be consistent with the policies of Chapter 3 of the Coastal Act. The findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As specifically discussed in these above findings, which are hereby incorporated by reference, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed development, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A
SUBSTANTIVE FILE DOCUMENTS

Application File for Coastal Development Permit No. 1-13-010

Humboldt County Local Coastal Program



County of Humboldt

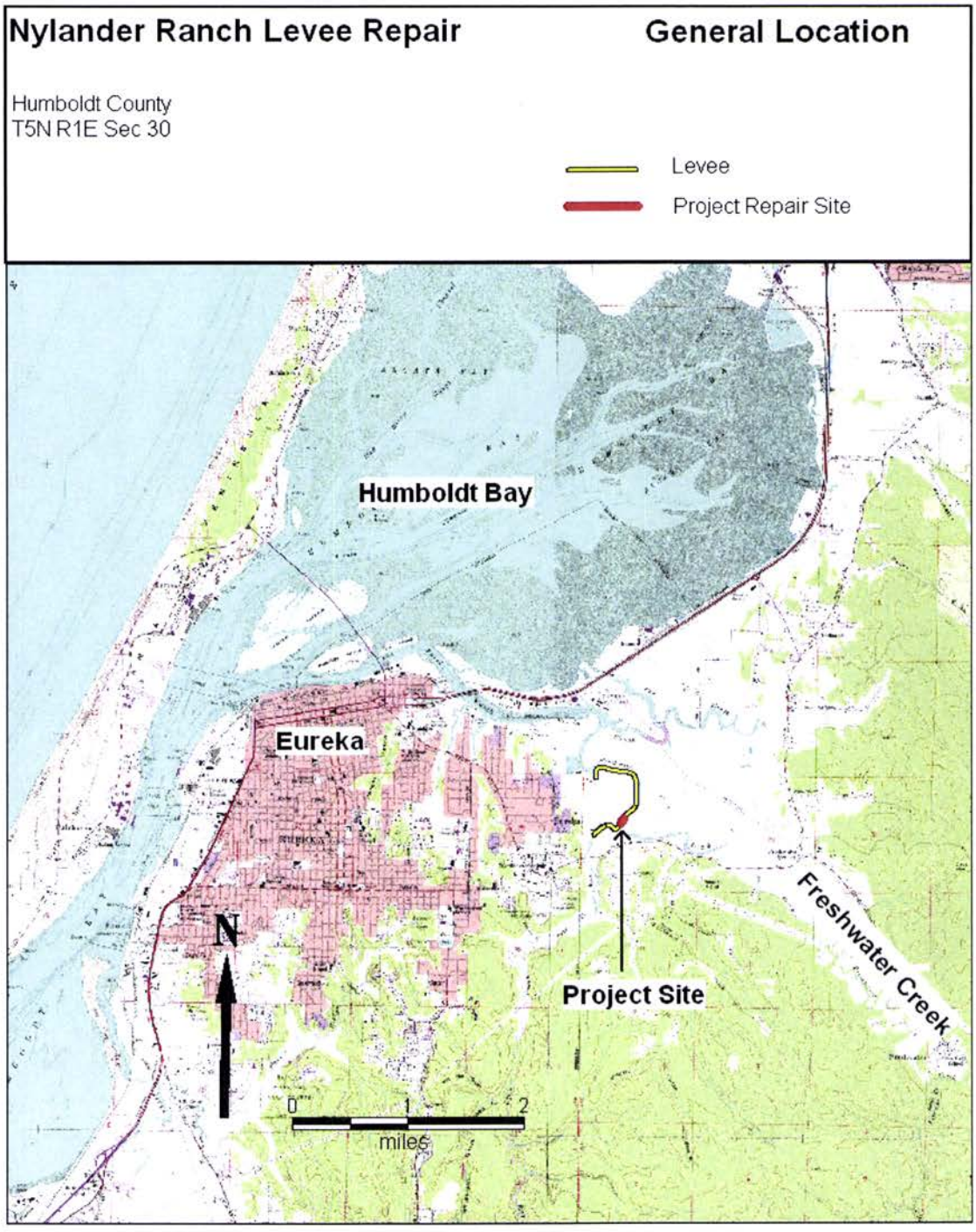


Figure 1. General location of Nylander Levee Repair project area in Humboldt County California.

EXHIBIT NO. 2
APPLICATION NO.
1-13-010
NYLANDER
VICINITY MAP

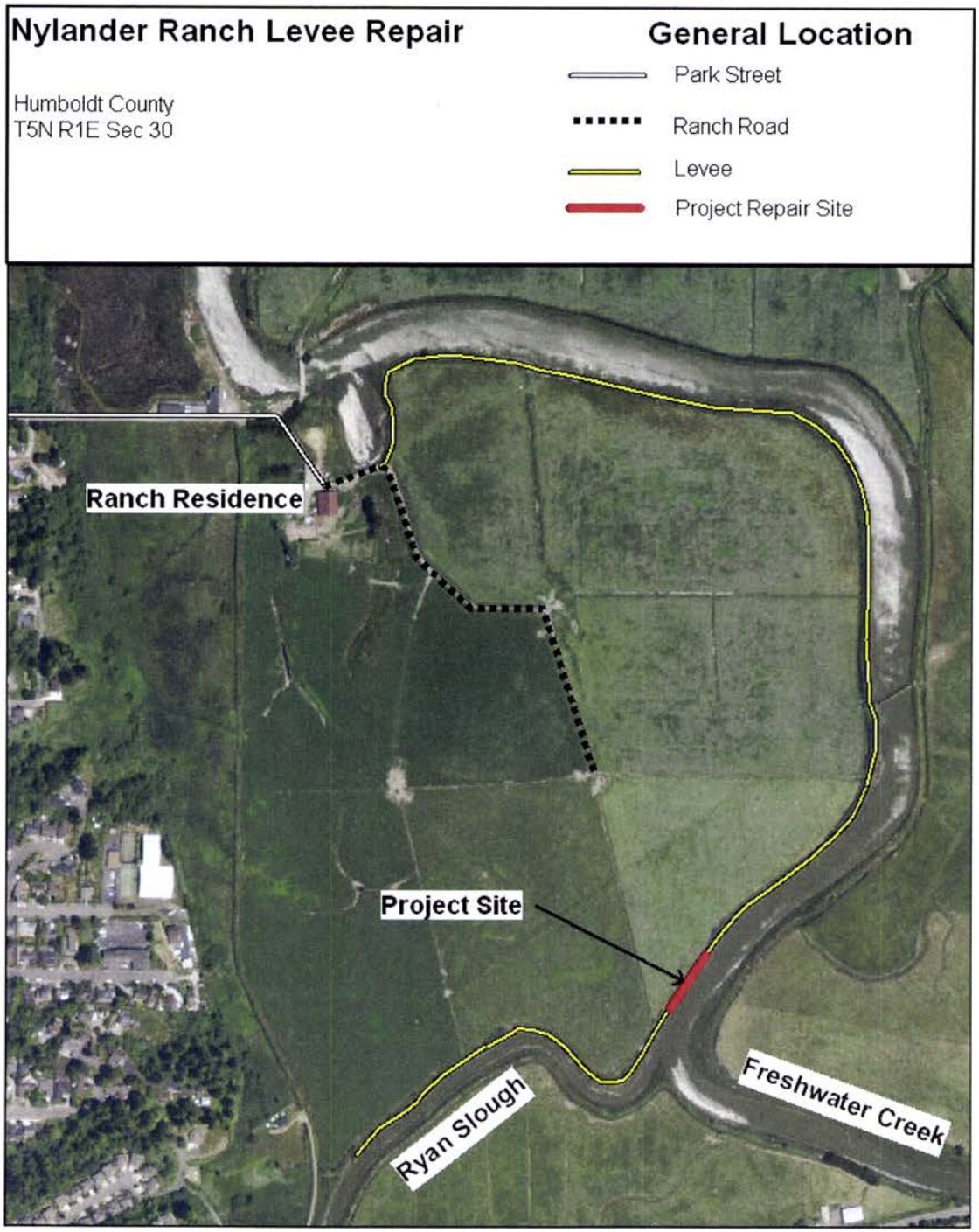


Figure 2. Aerial imagery of project area and adjacent waterways.

EXHIBIT NO. 3
APPLICATION NO.
1-13-010
NYLANDER
SITE PLAN

RYAN SLOUGH
LEVEE IMPROVEMENT PLAN

VICINITY MAP
NOT TO SCALE

CONCEPTUAL PLAN

UNAUTHORIZED CHANGES & USES:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL AND THE CITY OF EUREKA HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONALS.

ESTIMATED QUANTITIES:

±75	CY	NATIVE SOIL CAP (FROM EXISTING SITE EXCAVATION)
±240	CY	3"-6" COARSE RIVER RUN (IMPORT)
±1,340	TONNES	1/4" MIN., RIP-RAP MATERIAL (IMPORT)

** ALL SPOILS TO BE USED ONSITE

DRAWING INDEX:

EXHIBIT NO. 4
APPLICATION NO.
1-13-010
NYLANDER
REPAIR PLANS & BMPs
(1 of 4)

Manhard CONSULTING LTD

GENERAL NOTES & VICINITY MAP
RYAN SLOUGH: LEVEE IMPROVEMENTS
APN 017-141-02 EUREKA, CA

DESIGN BY: PDW
DRAWN BY: AD
CHECKED BY: DFG
DATE: 07/25/12
SCALE: AS SHOWN
SHEET: C0
OSWEUCA

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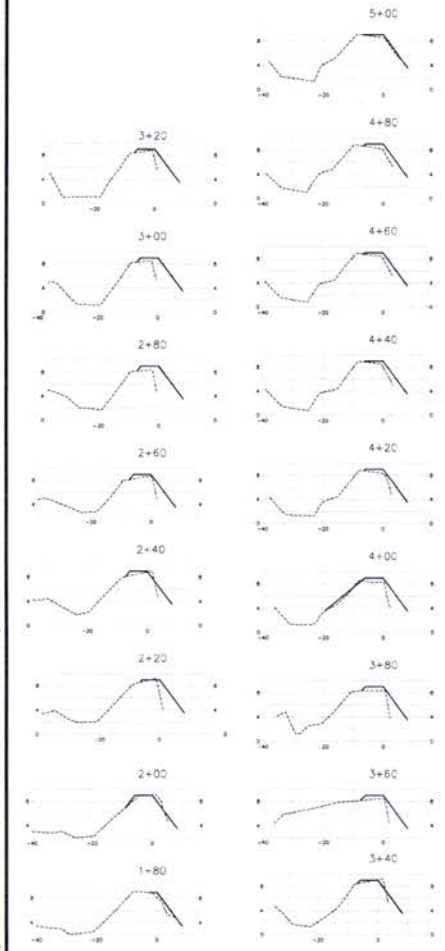
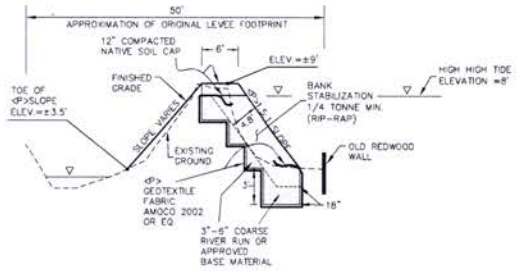


CROSS SECTIONS

SCALE:
HORIZONTAL 1"=20'
VERTICAL 1"=10'



TYPICAL SECTION A-A

NOT TO SCALE

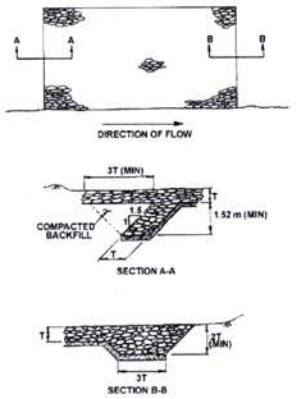


Figure 20. Typical Riprap Installation: Plan and Flank Detail

FIGURE 20

NOT TO SCALE

Manhard CONSULTING LTD

IMPROVEMENT PLAN
RYAN SLOUGH: LEVEE IMPROVEMENTS
APN 017-141-02 EUREKA, CA

SHEET C1

OSWEUCA

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Soil Disturbance and BMP's

Humboldt County
T5N R1E Sec 30

Direct area on impact is between the

———— Silt Fence

Figure A

Figure 1: Planting areas for mitigation

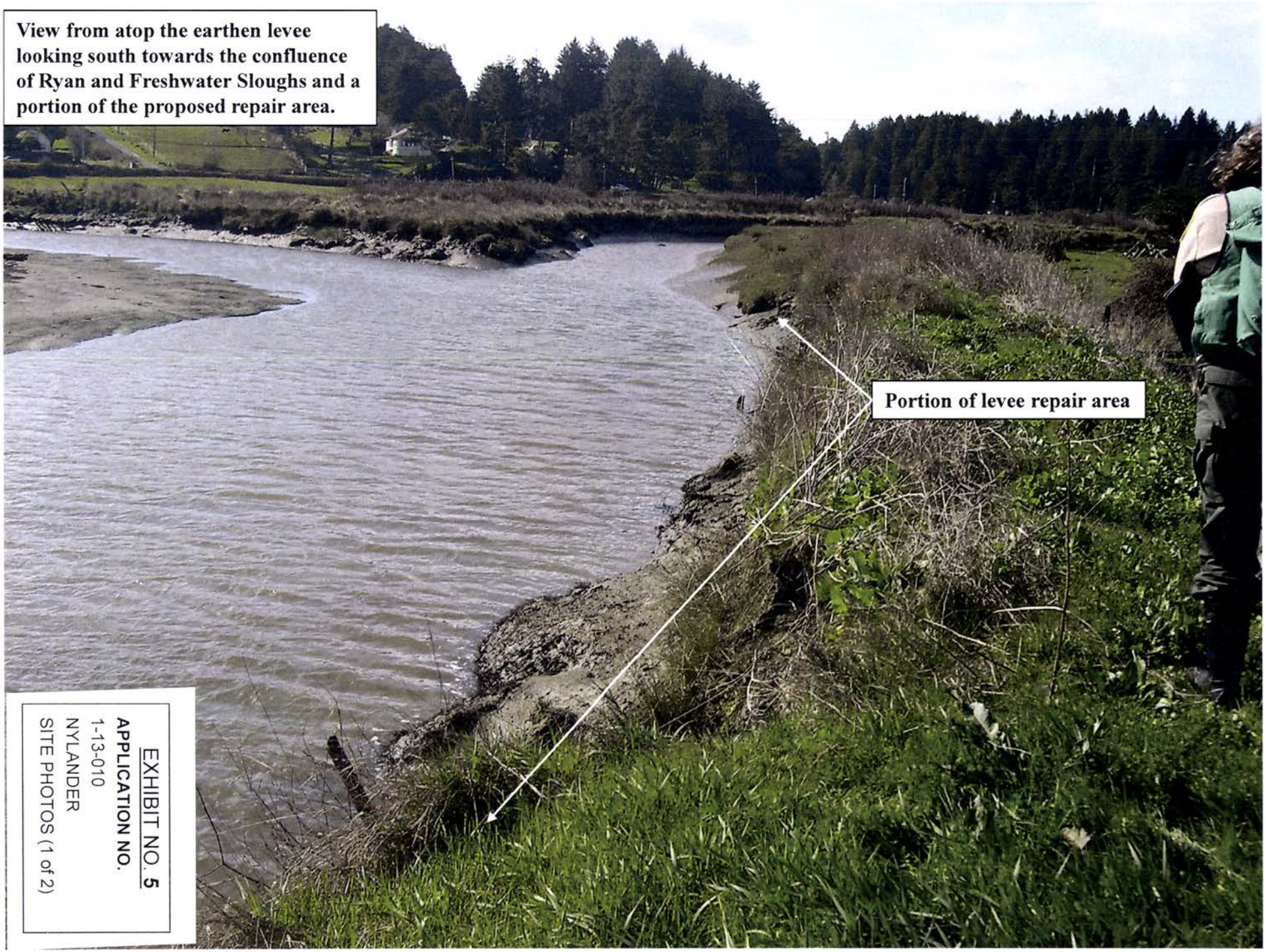

EXHIBIT NO. **5**

APPLICATION NO.

1-13-010

NYLANDER

SITE PHOTOS (1 of 2)

View from atop the earthen levee looking south along the length of the proposed repair area on the slough-side of the existing levee.

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

In response refer to:
SWR-2012-712

FEB 2 7 2013

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

Dear Ms. Hicks:

On February 4, 2013, NOAA's National Marine Fisheries Service (NMFS) received the U.S. Army Corps of Engineers (Corps) January 30, 2013, letter requesting initiation of informal consultation, pursuant to section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531 *et seq.*), and its implementing regulations (50 CFR Part 402). The Corps proposes to issue a permit to authorize Allen and Cheryl Nylander to repair 320 linear feet (ft) of an eroding section of an existing agricultural levee located adjacent to the west side Freshwater Slough, Humboldt County, California (Project). This levee, constructed in the late 1800's, currently protects agricultural land and a residence from flooding by tides and high water.

The Corps also requested consultation on essential fish habitat (EFH) for species managed under Pacific Coast Salmon, Pacific Coast Groundfish, and Coastal Pelagics Fishery Management Plans, pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C § 1855(b). The Corps determined that the proposed project would not have an adverse effect on EFH; therefore no consultation is necessary.

This letter constitutes informal consultation on the following threatened species and designated critical habitat: (1) Southern Oregon/Northern California Coast (SONCC) coho salmon (*Oncorhynchus kisutch*) Evolutionarily Significant Unit (ESU), listed on May 6, 1997 (62 FR 24588); (2) California Coastal (CC) Chinook salmon (*O. tshawytscha*) ESU, listed on September 16, 1999 (64 FR 50394); (3) Northern California (NC) steelhead (*O. mykiss*) Distinct Population Segment (DPS), listed on June 7, 2000 (65 FR 36074); (4) North American green sturgeon (*Acipenser medirostris*), Southern DPS, listed on April 7, 2009 (71 FR 17757); and critical habitat for SONCC coho salmon (64 FR 24049, May 5, 1999); CC Chinook salmon (70 FR 52488, September 2, 2005); NC steelhead (70 FR 52488, September 2, 2005); and Southern DPS North American green sturgeon (74 FR 52300, October 9, 2009).

EXHIBIT NO. 6
APPLICATION NO.
1-13-010
NYLANDER
NOAA FISHERIES LETTER
(1 of 7)

DESCRIPTION OF THE PROPOSED ACTION

The Corps proposes to authorize the reconstruction of approximately 320 ft of an existing agricultural levee to its original footprint by reinforcing the slough-side of the levee with rock. The base of the original levee was stabilized by a wall of wooden redwood pilings, however most of these posts have deteriorated and erosion has reduced the current width of the levee. Approximately 670 cubic yards of rock riprap and 240 cubic yards of coarse river run rock (3 to 6 inch) will be used to repair and stabilize the eroding section of the levee. An excavator working on the levee will remove sediment at the base of the levee at low tide to create a "key way" trench approximately 4 ft wide by 3 ft deep, where a base course of rock will be placed. Following placement of rock in the key way, the slough side of the levee will be reshaped or benched to provide a stable 1.5:1 (H:V) ratio slope face (figure 1). All excavated material will be stockpiled on the levee for onsite use. Geotextile fabric will be placed over the benching; coarse river run base rock will be placed over the fabric, followed by placement of the larger rip-rap rock. The slough-side and top of the levee will be back filled with 3 to 12 inches of the native stockpiled material, and native riparian vegetation will be planted along the top of the levee.

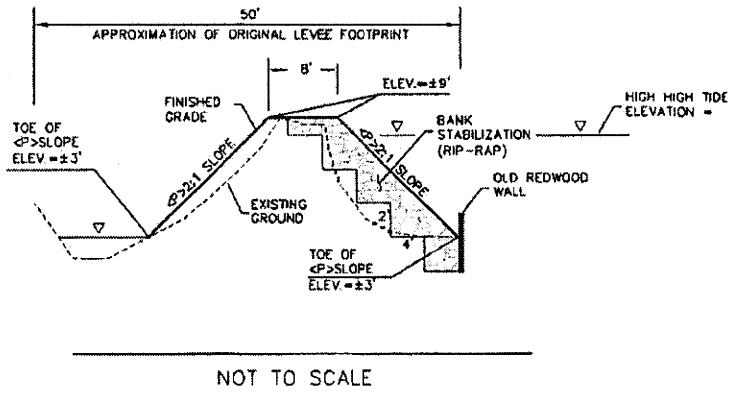

Figure 1. Proposed bank stabilization for the Nylander levee.

Reconstruction of the levee will take place between August 1 and October 15, and is expected to take two to three weeks to complete. Each low tide will provide an estimated 2-hour work window for placing rock in the lowest portion on the levee, and approximately seven work windows will be required to complete the lower section. The contactor will employ the following Best Management Practices (BMPs): (1) Silt fencing will be placed around all staged/ stockpiled material, and a silt curtain will be installed on the slough side of the levee to prevent excavated sediment from entering the slough; (2) Fueling and maintenance of all vehicles and equipment will occur in adjacent upland areas, to ensure that there is no leakage of fuels, lubricants or other similar material into Freshwater Slough; and (3) Spill response materials will be onsite to absorb any fluid leaks from the excavator while operating on the levee.

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ACTION AREA

Freshwater Creek, a fourth order stream with a drainage area of approximately 31 square miles, drains into Humboldt Bay via Eureka Slough (Wallace 2006). Estuarine reaches of tributaries to Humboldt Bay are conventionally named sloughs; hence, Freshwater Creek becomes Freshwater Slough, which then drains into Eureka Slough. Freshwater Slough extends approximately 23,000 ft upstream of Humboldt Bay (McCoy 2008). The action area includes approximately 320 ft of Freshwater Slough, located approximately 16,000 ft upstream of Humboldt Bay and just downstream of the confluence with Ryan Slough. Both sides of Freshwater Slough and Eureka Slough are leveed, and the benthic substrate is primarily fine sediment (silty to clayey mud). The width of Freshwater Slough at the Nylander levee is approximately 120 ft (Moore 2013), with an estimated area of 38,000 square feet of benthic habitat within reach of Freshwater Slough where the levee will be reconstructed.

ESA CONSULTATION

North American Green Sturgeon

North American Southern DPS green sturgeon (green sturgeon) adults and sub-adults are temporary residents in Humboldt Bay from June through October, utilizing Arcata Bay as summer-fall holding or feeding habitat, and the deeper waters of the North Bay Channel as a migratory corridor between the Pacific Ocean and Arcata Bay (Moser and Lindley 2007, Pinnix 2008). Although green sturgeon presence in Arcata Bay is well documented, there have been no historic or current observations of green sturgeon in Freshwater Slough. Because green sturgeon can enter the estuarine portions of tributaries, presence of individuals in the action area is possible, but unlikely. In addition, there will be no equipment operating in the water of Freshwater Slough, all activities will take place at low tide, and potential release of materials and fluids will be minimized by operational and structural BMPs. Therefore, because the exposure of individuals to potential effects of the project is unlikely, the potential adverse effects of the project on growth and survival of individual green sturgeon are discountable.

North American Green Sturgeon Critical Habitat

The estuarine primary constituent elements (PCEs) of green sturgeon critical habitat in Humboldt Bay and its tributaries that are essential to their conservation include: food resources, water flow, water quality, water depth, sediment quality, and migratory corridors to support feeding, migration, and holding by green sturgeon adults and subadults. In estuaries, green sturgeon feed on epibenthic and benthic invertebrates in intertidal mudflats and subtidal channels. Freshwater Slough may serve as a migratory corridor connecting the potential rearing and holding habitat in the slough to the rearing and holding habitat in Humboldt Bay. The potential adverse effects on migratory corridor function of Freshwater Slough for green sturgeon are unlikely because there will be no equipment in the water, all activities will take place at low tide, and release of sediments and harmful fluids is minimized by BMPs. There will be unobstructed passage at high and low tides in the action area; therefore, NMFS expects that potential adverse effects on the migratory corridor function of the critical habitat are likely insignificant. Within the

320-ft section of Freshwater Slough, approximately three percent of the mud substrate of benthic habitat at the base of the levee will be replaced with rocky substrate. However, because (1) the majority (97 percent) of the benthic soft substrate in this 320-ft reach of Freshwater Slough, as well as the rest of Freshwater Slough and Eureka Slough, will be available for green sturgeon foraging at high tide; and (2) the habitat in Arcata Bay is likely the primary foraging area in the Humboldt Bay watershed, the replacement of three percent of the fine benthic substrate by hard substrate in the action area is not expected to reduce the rearing function of the green sturgeon critical habitat in Humboldt Bay. Therefore, NMFS expects the potential effects of the proposed action on the substrate, the amount of benthic invertebrates, and the rearing habitat function for green sturgeon in the action area are likely insignificant.

Salmon and Steelhead

Adult SONCC coho salmon, CC Chinook salmon, and NC steelhead may occur in the action area in the fall during migration to spawning areas upstream in Freshwater Creek and its tributaries, typically after the first rains in late October and early November. Recently, few adult Chinook salmon have been observed in Freshwater Creek (Ricker and Anderson 2011). In 2009, adult steelhead and coho salmon were first observed in Freshwater Creek in December (Ricker and Anderson 2011).

Outmigrating and rearing SONCC coho salmon, CC Chinook salmon, and NC steelhead juveniles and smolts are likely to be present in the action area from March through July (Ricker and Anderson 2011; Wallace 2008, 2009, 2010). In general, juvenile coho salmon and juvenile Chinook salmon in Pacific Northwest estuaries appear to be opportunistic feeders, utilizing seasonally abundant epibenthic, pelagic, and neustonic prey (Healey 1991, MacFarlane and Norton 2002).

Potential effects of the proposed action that may reduce the growth or survival of exposed juvenile salmon and steelhead individuals include: reduction of foraging area as a result of reduced visibility from increased turbidity from suspended sediments and reduction in prey availability). Because of the Project duration and timing (two to three weeks; August through mid-October) and scientific observations in the action area, NMFS expects few if any juvenile or adult salmonids to be present in Freshwater Slough during Project implementation. In addition, there will be no equipment operating in the water, all activities will take place at low tide, and release of materials and fluids will be minimized by operational and structural BMPs. Because exposure of individuals to potential adverse effects of the project is unlikely, NMFS expects the effects of the Project on the spawning migration of adults or on rearing and migration of juvenile salmonids to be discountable.

Salmon and Steelhead Critical Habitat

The essential habitat features of SONCC coho salmon critical habitat in the action area include adequate: (1) substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions. The action area serves as a migratory corridor for adults and juveniles, as well as habitat for feeding for outmigrating SONCC coho salmon smolts prior to ocean entry. For CC

Chinook salmon and NC steelhead, the essential primary constituent elements (PCE) of estuarine critical habitat (as further described in 50 C.F.R. 226.211(4)) support rearing and migratory corridor functions, namely areas free of obstruction and excessive predation; with water quality, water quantity and salinity conditions supporting juvenile and adult physiological transitions between freshwater and saltwater; aquatic vegetation, and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation. The PCEs in the action area support (1) timely entry into spawning tributaries for adult CC Chinook salmon and NC steelhead; (2) timely return to the ocean by NC steelhead adults; and (3) timely ocean entry of CC Chinook salmon and NC steelhead smolts.

The potential effects of the Project include a reduction of rearing and migratory corridor function of the water column and benthic habitats, as a result of changes in the physical (substrate, space, water quality) and biological (*e.g.*, availability and abundance of food; unobstructed swimming or passage) attributes of the critical habitat in the action area. Because there will be no equipment operating in the water and implementation of the BMPs is expected to minimize delivery of sediment and toxic fluids to Freshwater Slough, NMFS does not expect an increase in turbidity of the water column as a result of an increase in suspended sediments. Therefore, NMFS does not expect the Project to reduce the rearing (prey visibility) function or migratory corridor (passage) function of the water column in the action area. Although three percent of the benthic mud substrate and associated epibenthic invertebrates in the action area will be removed, NMFS expects the hard substrate to be colonized by invertebrates within several months. Because the majority (97 percent) of benthic habitat and associated epibenthic invertebrates in the 320-ft reach of the action area are available, along with benthic prey in the remainder of the Freshwater Slough and Eureka Slough, NMFS expects the potential effects of the Project on the rearing function of the salmonid and steelhead critical habitat to be insignificant. Therefore, NMFS does not expect adverse effects to critical habitat, or changes in its value for rearing or migration.

ESA Conclusion

Based on (1) our review of the documents provided by the Corps and Natural Resources Management Corporation (NRM;2012, 2013); (2) electronic-mail clarification of specific Project details and effects determination by the Corps on February 6, 2013, and by NRM on February 14, 2013; and (3) a site visit on February 14, 2013, NMFS concurs with the Corps' determination that the Project is not likely to adversely affect threatened North American Southern DPS green sturgeon, SONCC coho salmon, CC Chinook salmon, NC steelhead or their designated critical habitats.

This concludes informal section 7 consultation in accordance with 50 CFR § 402.14(b)(1) for the proposed project. However, re-initiation of consultation may be required where discretionary Federal involvement or control over the action has been retained or is authorized by law, and if: (1) the project is modified in a manner that causes an effect to the listed species or critical habitat that was not previously considered, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, or (3) a new species is listed or critical habitat designated that may be affected by the project.

FWCA CONSULTATION

The purpose of the FWCA is to ensure that wildlife conservation receives equal consideration, and is coordinated with other aspects of water resources development (16 U.S.C. § 661). The FWCA establishes a consultation requirement for Federal departments and agencies that undertake any action that proposes to modify any stream or other body of water for any purpose, including navigation and drainage [16 U.S.C § 662(a)]. Consistent with this consultation requirement, NMFS may provide recommendations and comments to Federal action agencies for the purpose of conserving fish and wildlife resources. NMFS has no recommendations for this project.

Please contact Ms. Diane Ashton at (707) 825-5185 or via e-mail at diane.ashton@noaa.gov if you have any questions concerning this consultation.

Sincerely,

for Rodney R. McInnis
Regional Administrator

cc: To file ARN 151422SWR2012AR00264

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