ADDENDUM TO THE MITIGATED NEGATIVE DECLARATION

NORTHCOAST REGIONAL LAND TRUST RESTORATION AND ACCESS PROJECT

SCH NO. 2008082028

APNs 402-241-09, 402-291-015, Freshwater area, Humboldt County

DRAFT

Prepared By
Humboldt County Planning and Building Department
3015 H Street, Eureka, CA 95501

November 2014

Background

Modified Project Description and Project History - The project involves implementation of Phase 2 of the Wood Creek Aquatic Habitat Enhancement Plan as well as the development of a trail system. Phase I was approved on September 4, 2008 and included restoration activities on the 54-acre "Freshwater Farms Reserve" owned and managed by the Northcoast Regional Land Trust (NRLT). Wood Creek, a perennial stream, crosses through the property before entering Freshwater Slough. To enhance salmonid and tidewater goby access, the project restored tidal hydrology to diked-former tidelands through the expansion of brackish marsh habitat and the removal of the primary barrier to fish migration on Wood Creek. Phase 1 included the removal of the existing tidegate on Wood Creek, removal of a defunct waterman tidegate and culvert south of Wood Creek, relocation of cattle fencing to the future borders of the restoration area, installation of a salinity sill, improving an existing stream crossing by replacement of a failed culvert with a flat car bridge, excavating slough channels and redistribution of spoils to create desired surface elevations, and the planting of salt marsh and riparian vegetation.

Phase 2 includes restoration activities on 28 acres of coastal wetlands in the lower reaches of Wood Creek in the Freshwater Creek watershed including the excavation of channels and ponds; the removal (partial or complete) of a berm to provide better hydraulic connectivity between Wood Creek and its upper basin; the development of planting hummocks to support riparian forest trees and associated species; the removal of invasive species, including canary reedgrass, the revegetation of the site with native plants to support use by wildlife and greater stand heterogeneity; the placement of large woody debris to increase the structural complexity of the habitat; and the construction of sills at the bottom of some previously restored channels to support pool retention during low tides. Also included in Phase 2 is the construction of an interpretive and recreational trail, parking area, trail signage, a launch ramp for non-motorized watercraft access to Freshwater Slough, a raised boardwalk as well as fencing and signage.

Purpose - Section 15164 of the California Environmental Quality Act (CEQA) provides that the lead agency shall prepare an addendum to a previously adopted Mitigated Negative Declaration (MND) if some changes or additions are necessary but none of the conditions described in Section 15162 calling for a subsequent MND have occurred. Section 15162 states that when an MND has been adopted for a project, no subsequent MND shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project which require major revisions of the previous MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous Mitigated Negative Declaration (MND) was certified as complete, shows any of the following: A) the project will have one or more significant effects not discussed in the previous MND; B) significant effect previously examined will be substantially more severe than shown in the previous MND; C) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but

the project proponents decline to adopt the mitigation measure or alternative; or D) mitigation measures or alternatives which are considerably different from those analyzed in the previous MND would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Summary of Significant Project Effects and Mitigation Recommended

No changes are proposed for the original project's recommended mitigations.

Other CEQA Considerations

Staff suggests no changes for the revised project.

EXPLANATION OF DECISION NOT TO PREPARE A SUPPLEMENTAL MITIGATED NEGATIVE DECLARATION

See **Purpose** statement above.

In every impact category analyzed in this review, the projected consequences of the current project proposal are either the same or less than significantly increased than the initial project for which the MND was adopted. Based upon this review, the following findings are supported:

FINDINGS

1. The proposed project increases the restoration area and provides for minor trail improvements. These changes are minor in nature and do not require additional mitigation measures not included in the original MND.

2. The circumstances under which the project was approved have not changed substantially. There are no new significant environmental effects and no substantial increases in the severity of previously identified effects.

3. For the second phase of the project there has been no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous MND was adopted as complete. Furthermore, it is concluded that: the current project will not have one or more significant effects not discussed in the previous MND. Also, significant effects previously examined will not be substantially more severe than shown in the previous MND. There are no mitigation measures or alternatives previously found not to be feasible that would in fact be feasible and would substantially reduce one or more significant effects of the project. Finally, there are no mitigation measures or alternatives identified in this analysis which are considerably different from those analyzed in the previous MND, and which would substantially reduce one or more significant effects on the environment.

CONCLUSION

Based on these findings it is concluded that an Addendum to the adopted MND is appropriate to address the requirements under CEQA for the current project proposal. All of the findings, mitigation requirements, and mitigation and monitoring program of the MND are applicable to the current project proposal.

APPENDICES

NORTHCOAST REGIONAL LAND TRUST PROJECT

Appendix A. Humboldt County Planning Commission Resolution Adopting the Mitigated Negative Declaration

Appendix B. Initial Study and Mitigated Negative Declaration

APPENDIX A

Humboldt County Planning Commission Resolution Adopting the Mitigated Negative Declaration

RESOLUTION OF THE PLANNING COMMISSION
OF THE COUNTY OF HUMBOLDT
Resolution Number 08-93

MAKING THE REQUIRED FINDINGS FOR CERTIFYING COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT AND CONDITIONALLY APPROVING THE RCAA CONDITIONAL USE PERMIT APPLICATION:
CASE NUMBER: CUP-07-22; ASSESSOR PARCEL NUMBER: 402-291-15

WHEREAS, Aldaron Laird, on behalf of the Natural Resources Division of Redwood Community Action Agency submitted an application and evidence in support of approving a Conditional Use Permit for wetland enhancement and restoration; and

WHEREAS, the County Planning Division has reviewed the submitted application and evidence and has referred the application and evidence to involved reviewing agencies for site inspections, comments and recommendations; and

WHEREAS, the project is subject to environmental review pursuant to of the California Environmental Quality Act (CEQA); and

WHEREAS, the County Planning Division prepared a Mitigated Negative Declaration for the Planning Commission's adoption; and

WHEREAS, Attachment 2 in the Planning Division staff report includes evidence in support of making all of the required findings for approving the Conditional Use Permit for the proposed project;

NOW, THEREFORE, be it resolved, determined, and ordered by the Planning Commission that:

1. The Planning Commission approves the proposed Mitigated Negative Declaration in Attachment 5 as required by Section 15074(b) of the CEQA Guidelines, and finds that there is no substantial evidence that the proposed project will have a significant effect on the environment.
2. The Planning Commission further makes the findings in Attachment 2 of the Planning Division staff report for Case Number CUP-07-22 based on the submitted evidence.
3. The Planning Commission approves the Conditional Use Permit as recommended and conditioned in Attachment 1 for Case Number CUP-07-22.

Adopted after review and consideration of all the evidence on September 4, 2008.

The motion was made by COMMISSIONER HANSIS and seconded by COMMISSIONER GEARHEART.

AYES: Commissioners: GEARHEART, HANSIS, HERMAN, MURGUIA & SMITH
NOES: Commissioners: NONE
ABSTAIN: Commissioners: NONE
ABSENT: Commissioners: EMAD & KELLY

I, Kirk Girard, Secretary to the Planning Commission of the County of Humboldt, do hereby certify the foregoing to be a true and correct record of the action taken on the above-entitled matter by said Commission at a meeting held on the date noted above.

Kirk Girard, Director of Community Development Services By: _____
Betty Webb, Clerk

THIS PROJECT IS NOT EFFECTIVE UNTIL ALL APPEAL PERIODS HAVE ENDED.

APPENDIX B

Initial Study and Mitigated Negative Declaration

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

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California Environmental Quality Act

Administrative Draft
Initial Study
Mitigated Negative Declaration

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

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

Agent:
Aldaron Laird
980 7th Street, Suite K
Arcata, California
95521

July 2008

Purpose

The purpose of this Initial Study is to provide sufficient information to local and State agency decision-makers to support making findings required pursuant to the California Environmental Quality Act (CEQA) on the proposed project's potential to adversely affect the environment. This document will also serve to disclose the effects of the proposed project to the environment, and what mitigation measures are being proposed. This document can also be utilized by responsible agencies when authorizing project activities within their jurisdiction according to other statutes.

This project proposes to restore tidal hydrology, expand brackish marsh habitat, and remove the primary barrier to fish migration into Wood Creek to enhance salmonid and tidewater goby access. The proposed project has three interdependent purposes and needs.

1. Enhance and enlarge estuarine habitat and functions on Wood Creek. Lower Wood Creek was re-located from its historic location, channelized, and tidewater exchange was nearly eliminated with the placement of a tidegate at its mouth. With the diking of most of tributaries to Humboldt Bay estuary areas have been greatly reduced in extent. Estuaries are valuable nursery habitat for many important protected fish species such as salmonids and tidewater goby.
2. Enhance and enlarge salt marsh habitat-functions on Wood Creek. The historic salt marsh habitat along lower Wood Creek was converted over a century ago when dikes were constructed along Freshwater Slough, a tidegate was installed and the marshes were drained. Humboldt Bay has lost over 90 percent of its historic salt marsh habitat, resulting in a significant degradation of the Bay's ecosystem.
3. lmprove fish access in Wood Creek. Fish access to Wood Creek was greatly reduced with the installation of the tidegate, and with the collapse of a stream crossing.

The project's establishment of a muted tide cycle on Wood Creek would satisfy all three project needs.

Project Description

1. Project title:

Wood Creek Estuary, Tidal Marsh, and Fish Access Enhancement Project.

2. Lead agency name and address:

Humboldt County Community Development Department,
3015 H Street, Eureka, CA 95501-4484;
Phone: (707) 445-7541; Fax (707) 445-7446

3. Contact person and phone number:

Steven Lazar, Planner I, 707-268-3741, slazar@co.humboldt.ca.us

4. Project location:

The Project is located on Assessor Parcel Number 402-291-15 which is a 54 acre seasonal wetland, used as pasture, on its northern boundary is a dike along the south bank of Freshwater Slough, on its southern boundary is Myrtle Avenue, and on the eastern boundary is private property. The project can be located on the U.S.G.S. 7.5' quadrangle "Arcata South" in Township 5 North, Range 1East in Sections 29 and 30, or Latitude, Longitude (in decimal degrees): 40.782 N; 124.089 W. Wood Creek which flows west parallel to Myrtle Avenue is perennial, but there is no blue-line section on the USGS quadrangle map (see Figure 1 Location Map).

5. Project sponsor's name and address:

Applicant:
Don Allan, Redwood Community Action Agency
Natural Resources Services Division
904 G Street
Eureka, CA 95525
707-269-2063, don@nrsrcaa.org

Property Owners:
Northcoast Regional Land Trust
PO Box 398
Bayside, CA 95524

Agent:
Aldaron Laird,
Environmental Planner
980 7th Street, Suite K
Arcata, Ca 95521
707-825-8770, aldaronlaird@riverplanner.com

6. General plan designation:

On Assessor Parcel 402-291-15, the channel and associated riparian corridor of Wood Creek is designated Natural Resources (NR) while the remaining portions of the property are designated Agricultural Exclusive (AE).

7. Zoning:

The property contains two distinct separately zoned areas. The channel and riparian corridor of Wood Creek are zoned Natural Resources with the Coastal Wetlands Combining Zone (NR/W) while the remaining portions of the property are zoned Agriculture Exclusive with a 60-acre

minimum parcel size along with the Flood Hazard and Transitional Agricultural Lands Combining Zones (AE-60/F,T).

The property affected by the project is in the Coastal Zone in an area that the California Coastal Commission retains jurisdiction pursuant to the 1976 California Coastal Act (Public Resources Code (PRC) Section 30000 et al.).

8. Description of project:

This project proposes to restore tidal hydrology to approximately 23 to 29 acres of diked-former tidelands, expanding brackish marsh habitat, and removing the primary barrier to fish migration on Wood Creek to enhance salmonid and tidewater goby access. In 2005, McBain & Trush Inc. developed the *Freshwater Slough Estuary Rehabilitation Project* for California Department of Fish and Game. Based on McBain & Trush's work, the NRLT and the Redwood Community Action Agency's Natural Resources Services (RCAA) subsequently applied for and received public funding to implement the *Wood Creek Estuary, Tidal Marsh, and Fish Access Enhancement Project* (the project).

Project actions include:

1. selecting an appropriate timing and schedule for activities,
2. providing access for equipment and materials,
3. dewatering instream work areas,
4. blocking fish from entering work areas,
5. relocating fish and amphibians in work areas,
6. installing silt fencing to reduce sediment delivery and turbidity to downstream reaches,
7. excavation of slough channels and other features,
8. placing spoils from slough channel excavation and grading to create desired surface elevations,
9. replace an existing stream crossing with a flat car bridge or rocked cattle crossing
10. install a salinity sill,
11. remove a defunct waterman tidegate and culvert south of Wood Creek,
12. fill void created during removal of waterman tidegate and armor outfall with cobble,
13. remove the tidegate on Wood Creek,
14. conduct post-construction site clean-up,
15. relocate exclusionary fencing,
16. plant salt marsh and riparian vegetation.

These actions will be discussed in greater detail below. The Biological Assessment, Cultural Resources, and Project design documents prepared for this project are incorporated by reference.

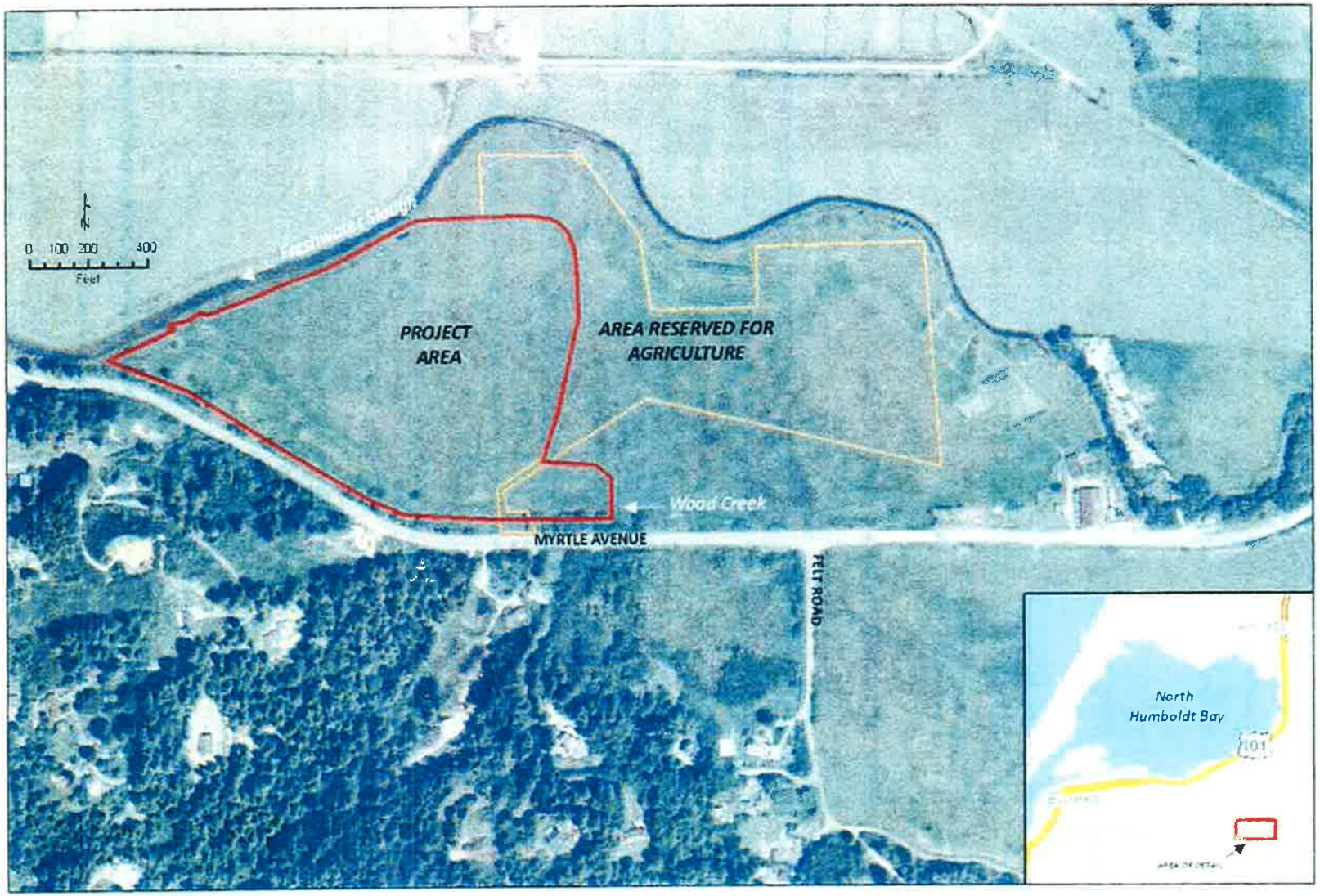
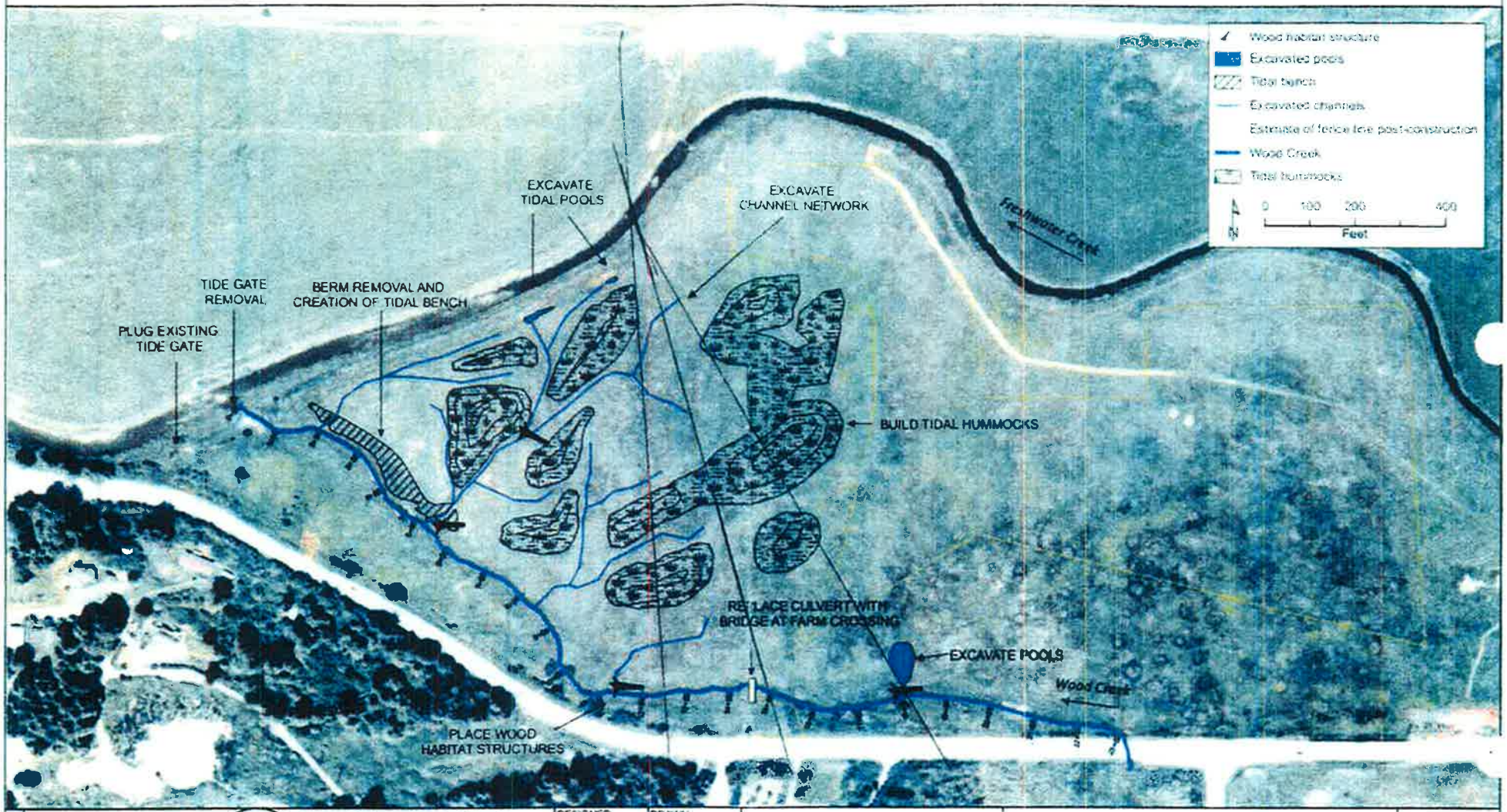


Figure 1-1. Site map for Wood Creek Tidal Marsh Enhancement Project.

DESIGN ELEMENTS



REVISION	PREPARED UNDER THE SUPERVISION OF	DESIGNED	DRAWN		SHEET
	Jeffrey R. Anderson RCE C30713	CHECKED	DATE	Jeff Anderson and Associates Engineering – Hydrology – Restoration	1
	DATE	PROJECT NUMBER			

WOOD CREEK
TIDAL MARSH ENHANCEMENT PROJECT
HUMBOLDT COUNTY, CALIFORNIA

Timing/Schedule

Construction is planned for the summer and fall of 2008. The proposed project will require excavation of approximately 3,335 cubic yards (yds^3) of material, and the placement of approximately 3,235 yds^3as fill in a 5.6 acre disturbance area. It is estimated that the project's excavation and grading can be completed in 4-6 weeks. Equipment activities on "farmed" seasonal wetlands in this area are naturally constrained by the rainy season, to a four month period from July 1st through October 31st.

Access/Equipment

The project area is adjacent to Myrtle Avenue and is predominately a pasture that is typically dry in the summertime. Heavy equipment and vehicles will utilize existing access from Myrtle Avenue to bring an excavator, backhoe, dump trucks, and possibly a bulldozer onto the property. A cattle stream crossing over Wood Creek will be used to gain access to approximately 2,800 feet of the northern perimeter of the project area and the dike along Freshwater Slough will be used for temporary equipment access to the tidegates at Wood Creek and south of Wood Creek. The access is proposed to the south tidegate by walking a small exactor across the dike and cross the concrete structure of the main tidegate to access the south gate using steel plates (supported by wooden beams placed next to the concrete walls to support the weight of the mini-excavator so it does not rest on the concrete to avoid potential damage to the concrete) to span the concrete structure and Wood Creek. A backhoe or excavator will transport cobble/ gravel-size (up to 6-inch) rock and native soil to the eastern side of the wooden tide gate structure and deposit the rock and soil on the west side of the main tide gate by swinging the bucket over the concrete structure to deposit the soil and gravel/ cobble. The tidegate structure is approximately six feet wide (outside of concrete wall to outside concrete wall) so the backhoe or full size excavator will not have to cross the concrete structure. The mini-excavator will transport the soil and rock to the south gate.

All equipment refueling will take place in the cattle loading area, which is an upland area located at the Myrtle Avenue access point. If equipment encounter wet areas then geotex mats and crushed rock will be placed in these areas to minimize compaction, and all material will be removed on completion of the project. No woody riparian vegetation is required to be cleared for this project.

Dewatering, Installing Fish Screen, and Silt Fences

Temporary fish screens will be installed in Wood Creek during an ebb tide, downstream of the tidegate and upstream of the proposed backwater pool excavation site, to prevent salmonids and other estuarine fish species from moving into the work areas.

The excavation of the tidal slough channel network and placement of excavated material (spoils) to create tidal hummocks-terraces will occur in the dry pasture; Wood creek will not need to be de-watered for these actions. Construction will occur during low-flow and portions of the right

bank of Wood Creek will be excavated to connect the newly-created slough channels to the stream just prior to removing the tidegate on Wood Creek.

However, a 100 foot segment of Wood Creek, centered on the stream crossing, will be temporarily dammed and isolated with coffer dams and dewatered, to permit the removal of existing collapsed culvert and concrete in the stream bed, as well as during construction of a new cattle crossing. The coffer dams will be constructed with sand bags filled with clean sand, installed along the channel bottom and to a height of one foot above the low flow water surface, and covered with plastic. Preceding de-watering of this reach fish screens will be installed upstream and downstream of the coffer dams, and an authorized fish biologist will remove juvenile salmonids using minnow traps and seine nets to trap and remove fish, and possibly using electro fishing if salinity and conductivity conditions allow this from the reach that will be affected by dewatering. These methods will not allow rescue of tidewater goby, if they're present.

The construction area will de-watered to minimize impacts to water quality (primarily turbidity). Dewatering will be accomplished by pumping stream flow around the construction site and discharging it back into the creek below the downstream coffer dam. Groundwater seeping into the construction site will be pumped into a temporary pond (30 feet diameter by 3 feet deep) excavated in the pasture a minimum of 100 feet away from the creek, and allowed to infiltrate into the ground to prevent the discharge of turbid water into the creek. The pump intake will be screened to prevent the accidental intake of any aquatic species not captured in the fish relocation effort (i.e., non-game fish such as stickleback and sculpins, or amphibians such as salamanders or frogs). Silt fences will be installed downstream of the in-channel work at the bridge and downstream of the excavation of the backwater pool. A silt fence will also be installed in Wood Creek below the confluences of the new tidal slough channels and appropriate erosion and sediment control Best Management Practices (BMP) will be implemented to prevent the discharge of construction-generated sediment to Wood Creek during and following construction activities.

There is a small pond inside of the dike below the inlet to the waterman tidegate that receives tidal flows from Wood Creek. A silt fence will be placed and secured along the edge of the pond to catch any soil that may accidentally spill during excavation of the dike to remove the waterman tidegate and culvert. There will be no need to enter or dewater the pond, as the water level will be below the inlet at the time of construction (late summer low-flow). Tidewater goby have been observed in this pond in the past and the silt fence will prevent accidental soil spills from entering the pond.

Excavation

Excavation of 0.82 ac. of pasture adjacent to Wood Creek is being proposed to (refer to sheet 4 of 4):

- create 3,900 ft of slough channels and several tidal pools (2,525 yds^3) that will re-store tide water inundation to approximately 23 to 29 acres of seasonal wetland-pasture, supporting salt marsh and providing brackish water estuarine habitat;

- remove fill material (300 yds^3) that was previously deposited on top of 300 feet of the north bank of Wood Creek, forming a defacto berm that would impede tidal inundation of the project area,
- construct a 3,879 ft^2 backwater pool (maximum dimensions are 50'wide x 90' long x 4' deep maximum) (380 yds^3) adjacent to Wood Creek, which will be connected by a small channel opening, to mimic and expand existing high quality juvenile salmonid rearing habitat present in the reach upstream of the cattle crossing.
- Remove approximately 100 yds^3 of fill at the stream (cattle access) crossing which is to be replaced by a bridge.
- Excavate a temporary sediment pond approximately 78.5 yds^3.
- Remove a 2 foot diameter culvert (creating a 2 cy trench that will be filled with native soil from the channel excavation in the dry pasture) and waterman tidegate in the dike south of Wood Creek
- Armor the scour hole and face of the levee at the culvert removal site

Within the proposed tidal slough channels four large woody debris habitat structures will be constructed by placing logs and root wads to provide aquatic habitat diversity (e.g., velocity breaks, scour holes, cover structure, etc.) primarily for juvenile coho salmon rearing and tidewater goby. Typically log structures are excavated into channel banks, backfilled, bolted and cabled together so they remain in place, a 1-2 ton boulder is used as an anchor. If large root wads are available to the project, they would be used instead of logs as they provide more desirable habitat diversity.

A salinity sill structure of cobble and gravel will be installed downstream of the new stream crossing to limit tidal influences upstream from a flooding tide's advancing saltwater wedge. The sill will be approximately 20 feet wide (perpendicular to flow), 20 feet long (400 ft^2) and 2 feet deep (30 yds^3). The sill will be composed of 1-2 layers of cobble capped with river-run gravel.

A population of plant species of concern, Lyngbye's sedge (*Carex lyngbyei*), located at the confluences of the proposed tidal slough channels will be excavated and transplanted to areas of suitable elevation along the newly excavated slough channels in the restoration site.

Placing Fill Material and Grading

All of the material excavated (3,235 $yds^{3)}$ from 1 acre of the project site will be placed as fill on 4.5 acres between the newly created tidal slough channels. The fill will be graded to create tidal terraces/benches that are designed to support higher elevation salt marsh plants. The total area being disturbed/graded (cut and fill) is 5.6 acres. The fill material will be either placed directly onto the pasture surface within reach of the excavator working in the slough channels or transported by truck and placed in areas farther away between the channels. The salt marsh surfaces elevations are based on botanical observations in other nearby marshes suitable for

colonization by Lyngbye's sedge as well as to support Tufted hairgrass (*Deschampsia caespitosa*). Establishing these two plant species is desirable in general to increase wetland plant species diversity.

Within each proposed tidal slough channel, several pools and habitat structures will be constructed by placing logs and root wads to provide aquatic habitat diversity (e.g., velocity breaks, scour holes, cover structure, etc.) primarily for juvenile coho salmon rearing and tidewater goby. Typically, log structures are excavated into channel banks and backfilled. A minimum of four these structures will be constructed, each using one or more logs or large root wads if they are available.

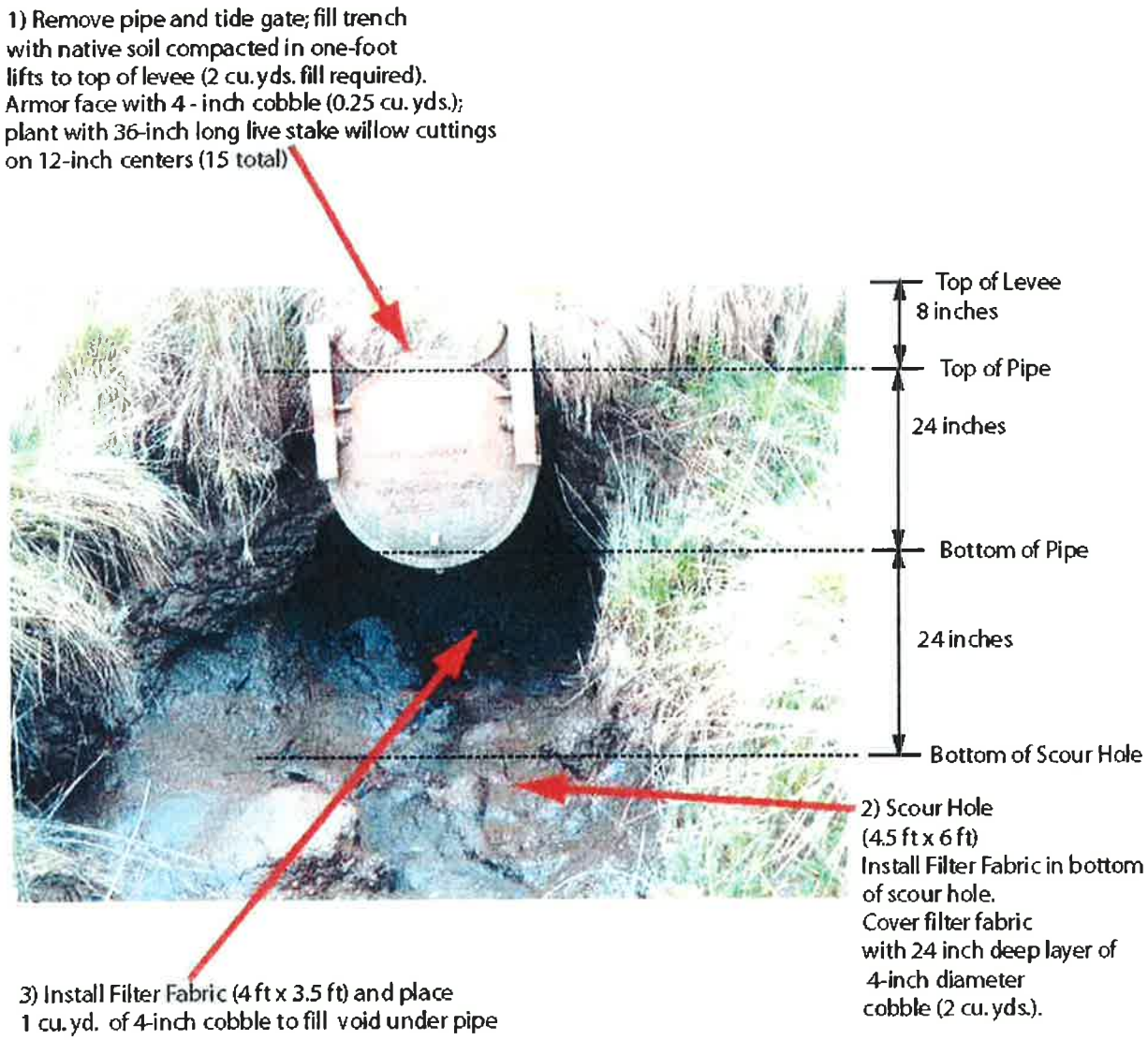
A salinity sill structure of cobble and gravel will be installed downstream of the new stream crossing to limit tidal influences upstream from a flood tide's advancing saltwater wedge. The sill will be approximately 20 feet wide (perpendicular to flow), 20 feet long (400 ft^2) and 2 feet deep (30 yds^3). The sill will be composed of 1-2 layers of cobble capped with river-run gravel.

Excavation of a temporary sediment pond will involve placing approximately 78.5 yds^3 on the adjacent pasture. When dewatering operations cease the excavated material will be placed back in the excavated pond.

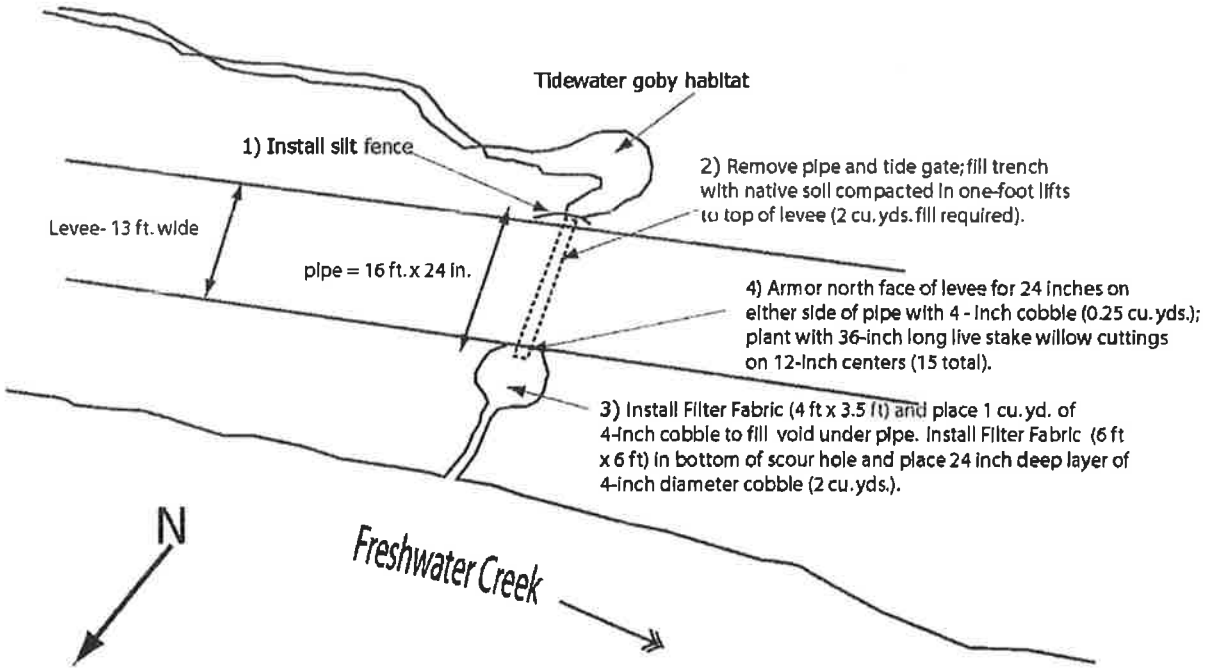
At the request of the California Department of Fish and Game, who is providing part of the funding for the project through the Fisheries Restoration Grants Program, and is also a referral agency for CEQA review, the proposed treatment of an auxiliary 24-inch "Waterman" (brand name of the cast-iron-top-hinge flap gate) tide gate with a deteriorated pipe has been modified. A scour hole in the dike has formed on the Freshwater side of the dike at the Waterman tide gate's outlet as a result of flood flows draining via this tidegate. The original plan was to hand dig to the top of the pipe, cut a hole into it, and plug the pipe with hand-mixed concrete to eliminate the outflow through the pipe. The modified plan is to remove the pipe.

The removal of the 2 foot diameter culvert and waterman tidegate will create a trench across the dike that will be filled with approximately 2.0 cubic yards of native soil and compacted with a gas powered compactor in one-foot lifts. This will be repeated until the void is filled. The scour hole will be treated by placing filter fabric in the bottom of the scour hole and placing and compacting 4-inch cobble to fill the scour hole (4.5ft wide by 6 ft. long by 2.-0 ft. deep) (see attached "Wood Creek South Tide Gate Modified Treatment" diagram and "Auxiliary Tide Gate (South Tide Gate) Treatment" plan view below). Live stake willow cuttings (app. 15 total), 36 inches long by 1 to 1.5 inch diameter, will be planted on one-foot centers on the outboard side of the levee from the top of the levee down to the bottom of the pipe trench. All work will occur during one low-tide cycle. With the filling of the old pipe trench, the source of water eroding the levee will be eliminated.

Wood Creek South Tide Gate Modified Treatment



Auxiliary Tide Gate (south tide gate) Treatment



Upgrade Stream Crossing

The existing stream (cattle) crossing, that provides access to the pasture, and concrete rubble used to armor the bed and banks are to be removed. The NRLT will install a "*flatcar*" bridge, to replace the existing structure. The 50 foot flat car bridge will be installed over a 20 foot wide stream reach perpendicular to flow. The bottom of the bridge will be approximately 1 foot higher elevation than surrounding pasture elevation. The bridge will be set on and anchored to concrete abutments (2 feet wide by 3 feet high and 12 feet long with 2 foot deep footings) located entirely out of and away from the channel. The left bridge abutment will be placed on an existing graveled road. Due to the length of the bridge, the right abutment may be able to daylight directly onto the pasture ground (i.e. no approaches). The stream crossing is to be installed before the tidegate is removed.

After the fish are relocated and the site is dewatered, the excavator will remove the existing structure, pull all the unwanted concrete debris out of the channel (approximately 100 yds^3), and place it into a dump truck to be hauled off-site for disposal. After the debris is removed from the channel, two bridge abutments will be installed on the pasture away from and above the stream banks, the new bridge will be placed on top of and anchored to the abutments, the 50 foot length of the bridge will allow it to daylight into the existing roadway without the need to construct approach ramps. As mentioned earlier, the design also includes a grade control/salinity sill structure installed perpendicular to the stream. Once bridge installation is complete the coffer dams will be removed, re-introducing flow to the channel, the fish screens will be removed, and lastly the silt fences will be removed. Appropriate streambank stabilization BMPs will be employed to mitigate channel disturbances and prevent any increases in sediment load to Wood Creek. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and a Notice of Intent will be filed with the North Coast Regional Water Quality Control Board prior to implementation. The SWPPP will describe in detail the BMPs to be used and the locations at which they apply.

Remove Waterman Tidegate

The auxiliary Waterman tidegate, attached to a 2 ft diameter culvert, is located south of the main Wood Creek tidegate in the Freshwater Slough dike. This tidegate is no longer functional; its bottom is rusted through and it leaks. If this tidegate were to collapse or erode it could compromise the Freshwater Slough dike. The tidegate culvert will be removed, replaced with compacted native soil fill, the scour hole at the outlet will be filled with cobble, and the top 3 feet of the rebuilt levee face will be planted with live stake willow cuttings. This task is planned to be performed during one low-tide interval. US Fish and Wildlife have performed a field review and concur with this approach to minimize impacts to adjacent wetlands.

Remove Wood Creek Tidegate

The final project construction tasks are to remove the remaining dirt "plugs" left in place at the confluence of the newly excavated tidal slough channels and backwater pool with the main channel, and then to remove the main Wood Creek tidegate from its concrete weir structure. Based on field observations and modeling this action will result in an increase in tidewater inundation):

- at Mean Higher High Water (MHHW) elevation (6.7 feet NAVD88) to 6.4 acres,
- of nearly 29 acres at the mean monthly maximum water (MMMW) elevation (7.6 feet),
- and, under extreme peak high tides as experienced in December 24th 2003 as much as 45.5 acres.

Within the MMMW 29 acre footprint tidewater inundation could affect 20.7 acres of vegetation; converting seasonal freshwater wetland/pasture to brackish water estuarine habitat and salt marsh. The remaining 8.3 acres of the MMMW footprint is made up of the existing 2-acre footprint of MHHW inundation and the 5.6 acres being disturbed (cut & fill) by the project as well as 0.7 acres of freshwater channel. The tidal prism is expected to increase from 2.6 acre ft. to 6.9 acre ft. An increased tidal prism is also expected to seasonally increase the salinity concentrations in the lower 1,400 ft of Wood Creek below the salinity sill structure, primarily during summer low stream flow.

Conduct Site Clean-up

Following completion of all project construction activities, heavy equipment will be removed and the project area will be stabilized through implementation of appropriate erosion control BMPs to protect soil from erosion by stormwater runoff and discharging it into Wood Creek following construction activities.

Exclusionary Fencing

An existing exclusionary fencing for cattle will be relocated to protect 23 to 29 acres of new tidal marsh wetland area.

Implement the Revegetation Plan

The formation of a tidal marsh on 23 to 29 acres with salinity-tolerant brackish marsh vegetation is a major goal of this project. To achieve this goal, a revegetation plan was developed by the project botanist in close coordination with the elevational design of tidal sloughs and salt marsh terraces or hummock. The objectives of the revegetation plan are to:

- promote the recovery of desirable plant species and marsh types, and minimize invasive species such as Spartina, by planting the preferred species assemblages at appropriate hydrologic and elevation zones,

- minimize surface erosion in areas disturbed by construction activities,
- evaluate different revegetation methods that are intended to achieve recovery of desirable marsh types.

Three primary revegetation methods will be applied: 1) planting nursery grown wetland plants, 2) hydro-seeding the preferred plant species, and 3) passive recolonization.

The goal of the tidal marsh project in general, and the revegetation plan specifically, is to promote the formation of dense monotypic stands of Lyngbye's sedge on wetland benches and Tufted hairgrass on tidal hummocks. This configuration of brackish marsh vegetation has been observed at other locations in Humboldt Bay, and is suitable for the muted tidal regime at the Wood Creek site. Lyngbye's sedge and Tufted hairgrass will be planted as plugs and seeded. Silverweed (*Potentilla anserina*), salt grass (*Distichlis spicata*), and salt rush (*Juncus lesueurii*) will also be planted from nursery stock on some constructed tidal hummocks. Revegetating a site with herbaceous species plugs of greenhouse grown material has shown a much higher establishment rate than with seeding or collection of wildlings (plugs collected from wild populations). The major drawbacks to nursery grown material are the availability of an adequate supply of marsh plants, and the higher material and labor costs. Seeding is less expensive to implement, but may not perform as well as planting nursery stock.

Areas within the tidal marsh footprint closest to external sources of seeds (i.e., near the mouth of Wood Creek) will not be planted, but will be allowed to recolonize passively. Several other patches across the proposed marsh area will be left unplanted for experimental purposes. In areas where passive recolonization will be allowed, the rates and species composition of natural recolonization will be closely monitored. Other areas that are not at appropriate elevations for the two dominant wetland species (sedge and hairgrass), but otherwise merit some level of surface erosion control, will be planted with creeping wild rye, meadow barley, and blue wild rye grass seed, mulched, and irrigated to induce immediate germination.

Of the 23 to 29 acres of tidally influenced area approximately 11.4 acres is proposed to be manually planted with plugs, installed on a maximum of 18 to 24 in centers. As much as 4.5 acres will be seeded with Lyngbye's sedge and hairgrass seed applied at a rate of 155 lbs/acres. The remaining 6.8 acres of wetland area will be allowed to recolonize passively. The revegetation will take place in the first fall after the project construction is complete.

9. Environmental Setting:

The project is located on a pasture used to graze cattle seasonally. The project on its northern boundary is bound by a dike along Freshwater Slough and Myrtle Avenue on its southern boundary. Wood Creek is a small stream that traverses the project area. Wood Creek's watershed is less than one square mile. While Wood Creek is perennial there is no blue-line indicating its location in the lower reach on the 7 ½' Freshwater quadrangle USGS topographic map and its upper reaches are shown on the map as being intermittent. The stream for most of its length has been channelized, flowing north along Felt Road and under Myrtle Avenue, then west parallel to Myrtle Avenue until it joins Freshwater Slough at the west end of the Project via a tidegate. When the area inland of the dikes flood, they also drain via two waterman tidegates on

either side of Wood Creek. Freshwater Slough adjacent to the project area is a zone of transition from tidal to freshwater.

In 1870, the US Coast and Geodetic Survey published topographic maps of the Project area depicting the area as being salt marsh. Today, much of the former salt marsh along Freshwater slough have been diked, drained, and converted to pasture for grazing livestock. These lands, like the Project are seasonal freshwater wetlands, grazing is usually suspended in the winter because the area is often under water or the ground saturated, but during summer and fall these lands are dry.

The Project area is isolated from Freshwater Slough by a dike starting at the Myrtle Avenue road prism then extending upstream approximately 1,915 ft along the perimeter of the pasture; as elevation is gained going upstream the dike daylights in the Slough's south bank. At the western end of the project area, Wood Creek passes into Freshwater Slough through a concrete box weir with a wooden top-hinged tidegate. At low tide the tidegate allows the creek and pasture to drain. But as is common the tidegate leaks and tide water from Freshwater Slough does enter Wood Creek. The lower 1,400 ft of Wood Creek (below the cattle crossing) transitions from freshwater environment upstream to a subtidal slough channel below. These reach of stream has well-developed vertical and undercut mud banks, and is bordered by a thin fringe of sedge and other marsh vegetation. At the cattle crossing there is an abrupt transition where concrete rubble armors the banks and creek bottom, which functions as a grade control and near total salinity barrier. The upper 900 ft of Wood Creek from the cattle crossing to the Myrtle Avenue culvert is moderately aggraded and has become colonized by cattail (*Typha latifolia*) and bulrush (*Scirpus acutus*), and bordered by Hooker's willow (*Salix hookeriana*). The Wood Creek Myrtle Avenue culvert is located 2,300 ft upstream from the Freshwater Slough tidegate. The pasture area to the south of Myrtle Avenue is often flooded, and stormwater runoff from this pasture does drain to Wood Creek via culverts under Felt Road. Also, east of Felt Road there is a causeway under Myrtle Avenue, but at this time there is a berm on the east-side of the road, in the County right-of-way, that blocks the causeway so it does not convey stormwater runoff from above to the pasture and project area below. If this berm were to be removed then stormwater runoff would flow through the causeway across the pasture to Wood Creek and the Project.

The publication entitled "Soils of Western Humboldt County" prepared in November 1965 by James McLaughlin, classified that the majority of the soils within the project site and vicinity as "Bayside silty clay loam (Ba3), imperfectly drained, occurring at elevations from sea level to above 50 feet within about a 10-mile perimeter of Humboldt Bay, on 0-3 percent slopes. Soils occurring along the northern boundary abutting Freshwater Creek are described as part of the Russ Series "Russ Silt Loam" (Ru2). Both soil series are considered to be prime, however the Bayside series is Class II while the Russ series is considered Class I and of the highest quality. However, recent mapping performed by NRCS as part of the comprehensive Soil Survey updates for Humboldt and Del Norte counties classifies the majority of project area soils (Unit 140) as not prime farmland, belonging in the Occidental soil class, 0 to 20 feet in elevation, with 0 to 2% slope. This is a hydric soil type, with ponding durations of 1 to 6 months, and a "very limited" Land Capability rating of 7s. The applicant estimates that the reintroduction of flooding (through removal of the tidegates) will result in a loss of approximately 23 to 29 acres of seasonal pasture. The majority of the project area is comprised of soils from the Occidental Class. This soil series naturally supports salt marshes and is not farmable under natural conditions (as evidenced by the

historic need for the tidegate). Existing wetlands and vegetation types were mapped in 2006 using an intensive site inventory. A riparian botanist walked the entire site and mapped each distinct cover type, using a vegetation classification system to assign cover attributes to vegetated polygons (Sawyer and Keeler-Wolf 1995). All salt, brackish, and freshwater wetlands, and adjacent upland plant stands within the construction boundary. Cover types include vegetated stand types and unvegetated areas. Cover types used during the inventory were related to other classification systems used by other local inventories (Eicher 1987, Shapiro 1980, Jones and Stokes 2001). The botanist mapped 23 cover types at the project area in June 2006. In descriptions of wetland types, the term "tidal marsh" is often used to describe areas that are expected to be dominated by brackish marsh vegetation such as Lyngbye's sedge and Tufted Hairgrass, as well as areas that are expected to have tidal hydrology but predominantly fresh (non-saline) water.

A thin band of vegetation along the south bank of Wood Creek and extending up the slope to Myrtle Avenue, where disturbance from grazing is absent, has the highest plant species diversity found across the site. The vegetation inventory identified 22 different patches along this band fringing Wood Creek. This band of marsh vegetation also hosts an invasive exotic species, Canary Reed Grass (*Phalaris arundinacea*). In the southeast portion of the project site, large stands of freshwater emergent wetlands were identified near the causeway and the Myrtle Avenue culvert for Wood Creek, dominated by cattail. The remainder of the site is mostly monotypic pasture grassland dominated by Velvet Grass (*Holcus lanatus*), Creeping Wildrye (*Leymus triticoides*), Creeping Bentgrass (*Agrostis stolonifera*), and Perennial Ryegrass (*Lolium perenne*).

There are six rare, threatened, or endangered, (RTE) amphibian or fish species reported to be present in Freshwater Slough-Creek. Three listed salmonid species – steelhead, coho, and Chinook – spawn in the upper watershed, and juveniles are known to rear in the lower creek and slough (Mike Wallace, unpublished CDFG "Field Notes"). Tidewater goby are also found within the project area, isolated to a small pond on the south bank just inside from the waterman tidegate south of Wood Creek. This pond is fed brackish and saltwater from Freshwater Slough through the leaky tidegate. Additionally, foothill yellow-legged frog (*Rana boylii*) and northern red-legged frog (*Rana aurora*) occupy aquatic habitats found within the Freshwater watershed.

Freshwater Creek still supports the largest population of coho salmon within Humboldt Bay, and is identified as a priority watershed in the Recovery Strategy for California Coho Salmon. Brown et al. (1994) noted that Freshwater Creek had one of the last populations of coho salmon numbering in the hundreds annually in all of northwestern California. Wood Creek provides summer rearing habitat juvenile for coho salmon, primarily in the reach upstream of the cattle crossing. Mike Wallace, DFG biologist, has consistently captured coho in the plunge pool downstream of the Myrtle Ave culvert, and in the 900 foot reach from the culvert to the cattle crossing. In the winter, freshwater aquatic habitat is more extensive and juvenile coho are more broadly distributed. Winter rearing habitat is considered to be more limiting in Freshwater Creek than summer rearing habitat (Ricker, personal communication).

10. Surrounding land uses:

The lands to the north of Freshwater Slough, which is the northern boundary of the Project, are primarily used to graze cattle, as are the lands to the east and south east. Immediately south of the Project is Myrtle Avenue a County road with two lanes. South of the avenue are rural residential lots and a large freshwater wetland in the corner of Myrtle Ave and Felt Road.

11. Other public agencies whose approval of the project is required.

- California Coastal Commission (CCC) retains jurisdiction for activities on diked former tidelands, such as the properties affected by the project. The applicant must secure a Coastal Development Permit (CDP) from the CCC.

- California Fish and Game (CDFG) will require the applicant to secure a Streambed Alteration Agreement before beginning any activity that could substantially adversely affect an existing fish and wildlife resource by diverting or obstructing the natural flow of, or substantially changing or using any material from the bed, channel, or banks of any river, stream, or lake, as well as secure a Concurrence Statement following the issuance of a Incidental Take Agreement with the National Marine Fisheries Service for Coho salmon.

- North Coast Regional Water Quality Control Board (NCRWQCB) requires that the applicant receive a Water Quality Certification, and coverage under their General Construction and/or Dredge and Fill Waste Discharge Requirements and National Pollution Discharge Elimination System (NPDES) General Permit for storm water discharges associated with construction activities.

- United States Army Corps of Engineers (USACE) requires that the applicant provide the District Engineer with a Pre-Construction Notification for Aquatic Habitat Restoration, Establishment, and Enhancement Activities covered under a Nation Wide Permit 27.

- Before the USACE can issue a permit for this project it must first consult with the National Marine Fisheries Service (NMFS) and United States Fish and Wildlife Service (USFWS) pursuant to Section 7 of the Endangered Species Act and Section 305 of the Magnuson-Stevens Fishery Management Act.

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

DETERMINATION:

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 project 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 although the proposed project COULD have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and

(b) have 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
Steve Lazar	Humboldt County

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 question. 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 off-site as well as on-site, 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 cited 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 explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance

1. AESTHETICS: Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

Threshold of Significance: Long-term intrusion or alteration of a scenic vista that is visible to the public.

Assessment: The project will have a less than significant adverse effect on a scenic vista.

- The project will be visible to the public as they travel on Myrtle Avenue.
- The project will have a short-term visual impact during construction.
- The project will permanently alter the scenic vista visible to travelers on Myrtle Avenue, but rather than being an adverse effect the project will improve the scenic vista-resources with the creation of slough channels and salt marsh habitats.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Permanent adverse change to scenic resources' physical, vegetative, or aesthetic elements visible to the public.

Assessment: The project will have no permanent adverse effect on scenic resources.

- Refer to assessment 1 a) above.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Long-term alteration or degradation of the existing visible character and quality of a site and its surroundings, which is visible to the public.

Assessment: The project will have no adverse effect on scenic resources

- Refer to assessment 1 a) above.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Long-term or permanent development that would create a new source of substantial light or glare.

Assessment: The project will have no adverse effect on day or nighttime views in the area.

- The proposed project does not involve the use of any lights or construction of any structures that would adversely affect day or nighttime views in the area.

2. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model *(1997)* prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Physical changes that prevent the use of prime, unique, or important statewide farmlands.

Assessment: The project will have no adverse effect on prime, unique, or important statewide farmlands.

- Currently, there are no state Farmland Mapping & Monitoring maps prepared for Humboldt county showing soils with prime, unique, or of statewide importance.
- Farmlands of statewide importance are lands that have been used for the production of irrigated crops; the project area is not irrigated and is used as pasture only.
- Unique farmlands are used for production of high economic value crops; raising grass for seasonal grazing is not considered a high economic value crop like raising an orchard, or vineyard, or cut flowers.
- The publication entitled "Soils of Western Humboldt County" prepared in November 1965 by James McLaughlin, shows that the majority of the soils within the project site and vicinity as "Bayside silty clay loam (Ba3), imperfectly drained, occurring at elevations from sea level to above 50 feet within about a 10-mile perimeter of Humboldt Bay, on 0-3 percent slopes. Soils occurring along the northern boundary abutting Freshwater Creek are described as part of the

Russ Series "Russ Silt Loam" (Ru2). Both soil series are considered to be prime, however the Bayside series is Class II while the Russ series is considered Class I and of the highest quality.

- The 'Ba3' soil has a Grade 3 Storie Index Rating of 49. The Humboldt County Local Coastal Program and the Coastal Act consider soils with Index rating of 80-100 as being prime agricultural land.
- In 2007, the NRCS prepared a custom soil resource report for the NRLT property that covers the project area.
- More recent mapping performed by NRCS (as part of the comprehensive Soil Survey update) classifies the project area soils (Unit 140) as not prime farmland, belonging in the Occidental soil class, 0 to 20 feet in elevation, 0 to 2% slope. This is a hydric soil type, with ponding durations of 1 to 6 months, and a "very limited" Land Capability rating of 7s. The applicant estimates that the reintroduction of flooding (through removal of the tidegates) will result in a loss of approximately 23 to 29 acres of seasonal pasture. Most of this area is comprised of soils from the Occidental Class. This soil series naturally supports salt marshes and is not farmable under natural conditions. The remaining 19-acres unaffected by the project will continue to be made available for seasonal grazing.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? ☐ ☐ ☒ ☐

Threshold of Significance for this Initial Study: Implement land uses that are not allowed in agricultural zone districts, or on lands under Williamson Act contract.

Assessment: The project will not conflict with existing zoning for agricultural use, or a Williamson Act contract.

- The County has zoned the proposed project area NR & AE-60 (60-acre minimum) with combining zone overlays for Coastal Wetlands , Flood Hazard, and Transitional Agriculture.
- The proposed restoration/enhancement actions are conditionally permitted uses in the AE zone and principally permitted in the NR Zone. The "T" combining zone allows for diking, dredging, and filling activities related to "wetlands, fishery, and wildlife enhancement projects". The project will not result in a conversion of prime Ag lands. While the McGlaughlin classifies the majority of the project site as Class II, the site-specific custom "Soil Resource Report" prepared for the project by NRCS has shown the property to be largely comprised of Class VII Soils which are considered to be non-prime. The remaining acreage will continue to be available for grazing. Therefore the conversion of approximately 29 acres of seasonal pasture to brackish marsh can be considered compatible with the Agricultural Zoning and agriculture uses.
- The property is located in the Coastal Zone and the Coastal Act encourages the restoration of marine resources such as salt marsh habitat when ever it is feasible (PRC Sections 30230, 30607.1).
- There is no Williamson Act contract on this property.

- A Condition of Approval requiring that the owners execute and file with the Planning Division the statement titled, "Notice and Acknowledgement regarding Agricultural Activities in Humboldt County," ("Right to Farm" ordinance). The purpose of this notice is to insure that the owners of the property recoginize that agricultural activities are a principally permitted use and should be expected to occur on adjacent lands.

2 (b) Mitigation Measures:

1. The applicant shall execute and file with the Planning Division the statement titled "Notice and Acknowledgment Regarding Agricultural Activities in Humboldt County" as required by Section 313-43.2 of the Humboldt County Code. This document is more commonly known as a "Right to Farm" statement.

c) Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☒	☐

Threshold of Significance for this Initial Study: Physical changes to a significant acreage of existing farmland that preclude the continued use of that property for agriculture uses and threaten agricultural viability of the parcel.

Assessment: The project will have a less than significant adverse effect on agriculture uses nor threaten the agricultural viability of the parcel.

- The project is located on diked former tidelands the state considers wetlands that are also used seasonally by cattle for grazing; thus providing dual functions that are temporally segregated' wetlands and grazing.

- The project is not really converting the lands to uses that are not suitable to agricultural uses, rather the project is enhancing one of two existing uses by restoring tidal functions to former tidelands.

- The project will expand the tidal prism in the project area, resulting in a conversion to salt tolerant vegetation, thus eliminating seasonal grazing on 23 to 29 acres of seasonal wetlands pasture in the 54-acre parcel.

- Seasonal grazing will continue on 13-19 acres (which will be fenced). The remaining 12 acres are currently perennial freshwater wetlands and will have no change in agricultural potential.

- NRLT, the property owner, has worked to preserve (prevent development on and ensure sustainable management of) over 11,000 acres of agricultural (ranch and forest) land throughout Humboldt County, and has plans to preserve at least an additional 18,000 acres over the next two years.

- The Coastal Act seeks to protect non-prime agricultural lands suitable for agricultural uses (PRC 30242). The diked former tideland soils in the project area naturally support salt marsh

not agricultural uses. It is only through the continued maintenance of dikes and tidegates that the project area can be used for grazing, and only seasonally. Additionally, potential future rises in sea level would make these marginal lands economically infeasible given the expense of maintaining miles of dikes and tidegates.

- The Coastal Commission has made findings several times in the past regarding the conflict between the Act's agricultural (PRC 30242) and wetland (PRC 30230) policies when addressing the conversion of agricultural lands around Humboldt Bay, which are former tidelands; it resolved that conflict in favor of wetland restoration and enhancement, because that activity is, on balance, more protective of coastal resources than agricultural protection (Consistency Determinations 007-88, 40-91, and 33-92). The same finding would hold true for the proposed Wood Creek project. the proposed project's restoration of tidal functions to the project area complies with its Humboldt Area Plan Local Coastal Program (LCP) and section 30230 of the Coastal Act which encourages the maintenance and restoration of marine resources where feasible.

- The property and restoration area are closely linked (and were formerly under the same ownership) to an adjacent parcel currently managed as a Native Plant Nursery. The Nursery plans to use parts of the restoration area as a seed source for cultivation of various hydrophytic vegetation to be harvested and sold for use in wetland restoration and similar types of projects within the County. While not a conventional form of agriculture, it remains in keeping with the definition of 'General Agriculture' listed in the Coastal Zoning regulations which includes *cultivation of food & fiber, tree farming, floriculture, and horticulture.* Therefore, the loss of some of the seasonal grazing will not result in a complete elimination of the agricultural potential of the site since it can be adapted to alternate forms of cultivation.

3. AIR QUALITY: Where available, the significant 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:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

Threshold of Significance for this Initial Study: Project generates pollutants that would prevent attainment of the North Coast Unified Air Quality Management District's long-term air quality objectives.

Assessment: The project will have a less than significant adverse effect on the implementation of the air quality plan.

- The project is of limited scope and duration and does not involve any stationary sources of pollutants.

- The project will only generate pollutants associated with the operation of vehicles and diesel powered construction equipment with state approved exhaust systems that will be maintained in good working order.

- The limited and short-term effects of the project will not prevent attainment of long-term air quality objectives.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

Threshold of Significance for this Initial Study: Release of pollutants that violate an air quality standard, or substantially contribute to an existing air quality violation.

Assessment: The project will have a less than significant adverse effect on air quality.

- The project will not violate an air quality standard or substantially contribute to an existing air quality violation.

- While the temporary operation of vehicles and diesel powered construction equipment does release particulate matter smaller than 10 micrometers (PM 10), this release is not considered to be substantial as all equipment will be equipped with state approved exhaust systems, maintained in good working order, and operated for a limited time.

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)?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Production of pollutants by the project that would result in a cumulatively considerable net increase in PM 10 pollutants for which the North Coast Air Basin's is in non-attainment.

Assessment: The project will have no adverse cumulative impact to any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard

- The project's effects will be limited in scope because of the small number of diesel powered equipment operating short-term with approved exhaust systems, therefore it will not result in a considerable net increase of PM 10 pollutants in the North Coast Air Basin.

d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: The project would result in a substantial increase of pollutants that are capable of reaching sensitive receptors.

Assessment: The project will have no adverse impact on sensitive receptors.

- There are no sensitive receptors such as schools or residences in the immediate vicinity of the project; the project is borders Myrtle Avenue on the south and Freshwater Slough on the north.
- The project will not increase exposure of sensitive receptors to pollutants if they were present because this is a short-term construction project that will only employ the use of diesel-powered equipment with approved exhaust systems.

e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Threshold of Significance for this Initial Study: The project would result in a substantial increase of objectionable odors that are capable of reaching substantial number of people.

Assessment: The project will have a less than significant adverse effect on a substantial number of people.

- There are not a large numbers of people in living in the vicinity to be affected by odors if any are produced.
- Wetlands can generate objectionable odors associated with decaying organic matter, but the reduction in area subject to cattle grazing may offset any increase or substitution of objectionable odors.
- The proposed temporary construction activities will not substantial increase objectionable odors such as diesel exhaust and there are not a substantial number of people in the vicinity of the project.

4. BIOLOGICAL RESOURCES: Would the project:	Potentially Significant	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐

Threshold of Significance for this Initial Study: Destruction of individuals of any protected species or species of concern or substantial adverse affect to habitat functions (physical, chemical and biological processes that characterize that habitat) or value.

Assessment: This project will have less than significant impacts on protected species or species of concern or their habitat with the successful implementation of mitigation measures; also refer to Biological Assessment that has been prepared for the project and the hydrology and water quality assessment (Section 8).

- There are possibly four protected fish species (pursuant to the federal or state Endangered Species Acts) in the project area: southern Oregon/northern California Coho salmon (*Oncorhynchus kisutch*), California coastal Chinook salmon (*O. tshawytscha*), northern California Steelhead trout (*O. mykiss*), and tidewater goby (*Eucyclogobius newberryi*).
- There are two designated critical habitats in the project area one for Coho salmon and the other for tidewater goby.
- There is one state candidate fish species known to occupy Wood Creek or adjacent Freshwater Slough: Coastal Cutthroat trout (*O. clarkia clarkia*).
- The federal Magnuson-Stevens Fishery Conservation Act (MSA) protects anadromous fish species and their Essential Fish Habitat under the following Fishery Management Plans (FMP) pursuant to the MSA: Pacific Salmon FMP, Pacific Groundfish FMP, and Coastal Pelagics FMP. It is assumed that Pacific Salmon, Pacific Groundfish, and Coastal Pelagics fish species are present in Freshwater Slough but Pacific Salmon are known to be present in Wood Creek.
- There are three California Native Plant Society plant species of concern in the project area: Lyngbye's sedge (*Carex lyngbyei*), Humboldt Bay owl's clover (*Castilleja ambigua* ssp. *humboldtiensis*), and Point Reyes bird's beak (*Cordylanthus maritimus* ssp. *palustris*).
- Existing biological habitats and vegetation were mapped in 2006 using an intensive site inventory. A riparian botanist walked the entire site and mapped each distinct cover type, using a vegetation classification system to assign cover attributes to vegetated polygons.
- The project will be expanding aquatic habitat areas (0.82 acres of secondary tidal channels and backwater pools) for protected fish species and plant species of concern (23 to 29 acres minus wetted channel acreage suitable for high elevation salt marsh species).
- There will be no loss of wetland area; the project proposes to remove 1,395 ft^2 of concrete debris in Wood Creek while the proposed bridge abutments will occupy a total of 48 ft^2. The 4.5 acre area receiving fill and 5.6 acres being graded will remain wetlands/waters of the state and U.S., they are just being converted from freshwater to tidewater wetlands.
- Because of the frequency of disturbances and noise levels, the riparian area between Myrtle Avenue and Wood Creek does not support nesting or roosting for any state fully protected species such as raptors, egrets, herons.
- If raptors, egrets, and herons prior to construction are utilizing pasture or wetland areas in the project area to forage they would likely be displaced during work days during the 4-6 weeks of heavy equipment operation between July 1st through October 31st.

- Temporary fish screens will be installed in Wood Creek during an ebb tide, downstream of the tidegate and upstream of the proposed backwater pool excavation site, to prevent salmonids and other estuarine fish species from moving into the work areas.
- A 100 foot segment of Wood Creek, upstream and downstream of the stream crossing, will be temporarily dammed with coffer dams or sand bags and dewatered, to permit the removal of existing collapsed culvert and concrete in the stream bed, as well as during construction of a new cattle crossing. Preceding de-watering of this reach fish screens will be installed upstream and downstream of the bridge site, and an authorized fish biologist will remove juvenile salmonids using minnow traps and seine nets to trap and remove fish, and possibly using electro fishing if salinity and conductivity conditions allow this from the reach that will be affected by dewatering. These methods will not allow rescue of tidewater goby, if they're present.
- A population of Lyngbye's sedge, a plant species of concern is located at the confluences of the proposed secondary tidal slough channels with Wood Creek. Portions of this population will need to be relocated to an area of suitable elevation and tidewater inundation.
- Removal of the tidegate at the confluence of Wood Creek with Freshwater Slough, construction of secondary slough channels and backwater pool habitats, and removal instream debris and collapsed culvert will increase the availability and extent of several aquatic habitats for numerous fish species including the protected species listed above.
- Refer to Section 8 Hydrology and Water Quality for an assessment of project impacts on hydrology and water quality and discussion of proposed mitigation measures and Best Management Practices (BMP).

4 (a) Mitigation Measures:

1. A qualified botanist will locate and flag all populations of plant species of concern in the project area prior to construction.

2. Heavy equipment will be confined, to the maximum extent practicable, to within the proposed secondary tidal slough channels and proposed salt marsh bench footprints.

3. If it is possible populations of plant species of concern will not be disturbed during excavation or grading. If populations of these plants cannot be avoided during excavation or grading they will be removed as "wafers" (top 12 inches of vegetation/topsoil) and either transplanted immediately or stored separately on pond liners. These soils will be kept moist until they are re-placed along the new secondary tidal channels at the appropriate finished grade and in the same orientation.

4. The in-channel excavation work will be performed at low tide and at the lowest seasonal stream flows when water levels in Wood Creek are as low as possible.

5. Install fish screens upstream of the project site near Station 18+50 and downstream at the concrete tidegate structure, as well as upstream and downstream of the stream crossing.

6. Before the in-channel work is begun, an authorized fishery biologist will sweep through the area

with dip-net to flush away or capture any fish that might be present. Fish rescue and relocation to suitable areas upstream will reduce the risk of adverse effects to fish species, particularly salmonid species. A survey of the de-watered area for stranded fish or amphibians shall be conducted by an authorized fishery biologist during, and immediately after de-watering.

7. Slough channels will be designs to provide habitat for fish species of concern such as tidewater goby and anadromous salmonids.

8. Fish habitat improvements structures will be designed and constructed in accordance with techniques described in CDFG's "California Salmonid Restoration Manual."

9. Installation of a salinity sill structure at the same elevation as the existing stream crossing and debris that functions as a salinity sill now to minimize any impacts to salmonid summer rearing habitat upstream of the new stream crossing that could be affected by increasing the tidal prism.

10. Exclusionary cattle fencing will be installed to protect vegetation in the project area.

Monitoring Method:

- A qualified botanist will conduct a floristic survey of the construction area before being disturbed, during the appropriate flowering periods for the plant species of concern to document their occurrence and location.

- A qualified botanist will monitor the plant species of concern throughout the construction season to ensure they are not being disturbed. Successful mitigation will be determined if plant species of concern are in a density and total area consistent with pre-impact conditions in 5 years.

- A survey of the de-watered area for stranded fish or amphibians shall be conducted by an authorized fishery biologist during and after channel de-watering. All fish collected will be identified, measured, and recorded by an authorized fishery biologist. Any mortality will be documented. Any fish or amphibians taken shall be preserved and provided to CDFG within 24 hours, unless CDFG is present at the time of de-watering.

- Several photographic points will be established to document all work performed. Photographs will be recorded in sufficient frequency to document each stage of work.

- During the excavation actions, as-built surveys will be conducted to verify that the proposed tidal slough channels are constructed as per the designs; within 120 days of the completion of the excavation tasks, as built surveys will be submitted to document successful implementation of the project, as approved.

- The property owner, the Northcoast Regional Land Trust, is committed to monitoring the specific biological responses to the implementation of this project and will be working with grant funding agencies to obtain additional project funds and/ or staff assistance in conducting the monitoring.

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 US Fish and Wildlife Service? ☐ ☐ ☒ ☐

Threshold of Significance for this Initial Study: A net reduction of functions or values in riparian habitat or other sensitive natural communities.

Assessment: The project will have a less than significant impact on riparian habitat or other sensitive natural communities such as tidal or freshwater wetlands: also refer to assessment on impacts to protected species habitat (4a), waters of the state and U.S. (4c), and hydrology and water quality (8).

- No riparian habitat resides in the project disturbance footprint, but there is 3.8 acres of riparian habitat along Myrtle Avenue.
- The project will increase the existing tidal prism at MHHW by 4.3 acres and increase MHHW elevation by 0.6 feet and the area of inundation of MMMW to 28.9 acres.
- Expansion of the tidal footprint could cause a minor area of riparian vegetation, at lower elevations that would be inundated by the 0.6 foot increase in MHHW elevation, to die off, resulting in a conversion of such habitat to tidal habitat.

c) Have a substantial adverse effect on state or federal protected wetlands or waters through direct removal, filling, hydrological interruption, or other means? ☐ ☐ ☒ ☐

Threshold of Significance for this Initial Study: A net reduction of functions or values in protected wetlands or waters. Failure to maintain, enhance or where feasible restore a marine resources such as salt marsh or tidelands pursuant to the California Coastal Act (Public Resource code Section 30230).

Assessment: The project will have a less than significant impact on protected wetlands and waters: also refer to assessment on impacts to protected species habitat (4a), riparian habitat (4b), and hydrology and water quality (8)..

- There will be no loss of wetland area; the project proposes to remove 1,395 ft^2 of concrete debris in Wood Creek while the proposed bridge abutments will occupy a total of 48 ft^2. The 4.5 acre area receiving fill and 5.6 acres being graded will remain wetlands/waters of the state and U.S., they are just being converted from freshwater to tidewater wetlands.

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?

Threshold of Significance for this Initial Study: Long-term disruption 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. Physical alterations to topography, hydrology or vegetation that fragment contiguous habitat areas in the project area.

Assessment: The project will have a less than significant impact on the movement of fish or wildlife, and will not impede the use of wildlife nursery sites.

- During construction the project will temporarily interfere with the movement of fish species attempting to ascend or descend the lower 1,400 feet of Wood Creek.
- The project will be beneficial in the long term when it removes the tidegate at the mouth of wood Creek and removes the concrete debris and collapsed culver at Station 14+00, thereby restoring reliable access for anadromous salmonids between Freshwater Slough and Wood Creek.
- Migratory waterfowl will not be present during the proposed construction period.
- There are no known wildlife nursery sites in the project area; it is currently actively used for grazing of cattle.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ☐ ☐ ☐ ☒

Threshold of Significance for this Initial Study: Failure to comply with local policies or ordinances with jurisdiction over the project that protects biological resources.

Assessment: This publically funded habitat restoration project will not conflict with any local policies or ordinances protecting biological resources.

- Humboldt County is the primary local land use authority with jurisdiction over the project pursuant to its certified Local Coastal Program (LCP). However, due to the projects location within an area of State-retained jurisdiction for Coastal Permitting, the County is working exclusively on the Conditional Use Permit application for the proposed restoration activities within the 'AE' Zone.
- The project will comply with all applicable County policies, ordinances, or regulations.
    - The controlling policies are found in the County LCP's: Humboldt Bay Area Plan (HBAP) (3.30 Natural Resources Protection Policies and Standards, B Development Policies). The HBAP contain several policies that are germane to the proposed project

pertaining to: In the project area there are several environmentally sensitive habitat areas (ESHA) (3.30 B.1.a. (1 and 3)): Freshwater Slough and coastal wetlands including transitional agricultural lands known as "farmed wetlands." Freshwater Slough may also support protected anadromous salmonids and/or tidewater goby (TWG) and would therefore be considered critical habitat which is also an ESHA. Proposed development in ESHA are subject to the conditions and requirements of Chapter 3 of the Zoning Regulations.

- Diking and filling for new development within Transitional agricultural lands shall be limited to the principal uses in the AE land use designation (single family residential, minor utilities, general agriculture, and timber production consistent with Section 3.27 of this plan and 30607.1 of the Coastal Act (3.30 B.2.b).
- Dredging in transitional agricultural lands shall be limited to maintenance and repair of existing tidegates, floodgates, dikes, levees, and other drainage works, including replacement of drainage works and for wetland restoration (3.30 B.2.c).
- Mitigation for these uses, diking, filling, and dredging by restoration of tidal action or removal of fill is not feasible and shall not be required (3.30 B.2.d).
- No land use or development shall be permitted in areas adjacent to coastal wetlands, called Wetland Buffer Areas, which degrade the wetland or detract from the natural resource value (3.30 B.6.a.), Transitional Agricultural lands designated AE shall be excluded from the wetland buffer (3.30 B.6.a.3).
- The County has identified several areas that qualify as potential wetlands restoration areas because there are opportunities for wetland restoration; Freshwater Creek area is included (3.30 B.5.a).
- No land use or development shall be permitted in areas adjacent to coastal wetlands, called Wetland Buffer Areas, which degrade the wetland or detract from the natural resource value (3.30 B.6.a.), Transitional Agricultural lands designated AE shall be excluded from the wetland buffer (3.30 B.6.a.3). [The entire project area except for the dike and roads are wetlands]
- A discussion of the following Coastal Act policies can be found in section 9b: Public Resource Code Sections 30230, 30231, 30235, and 30236 (3.30 B.8).
- The Freshwater Slough for purposes of compliance with the HBAP is considered a coastal stream (3.30 B. 8.b).
- New development within coastal streams shall be permitted when there is no less environmentally damaging feasible alternative, where best feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to: wetlands, fishery, and wildlife enhancement and restoration projects (3.30 B.8.c. (1)).
- Riparian corridors on all perennial and intermittent streams shall be, at a minimum, the larger of the following: 100 feet, measured as the horizontal distance from the stream transition line on both sides (3.30 B.8.d. (1)).
- New development within riparian corridors shall be permitted when there is no less environmentally damaging feasible alternative, where best feasible mitigation measures

have been provided to minimize adverse environmental effects, and shall be limited to the following uses: maintenance and replacement of flood controls and drainage structures, road and bridge replacement or construction, (3.30 B.8.e (3)).

- Natural drainage courses shall be retained and protected from development which would impede the natural drainage pattern or have a significant adverse affect on water quality or wildlife habitat (3.30 B. 8.g).
- Natural vegetation within and immediately adjacent to the bankfull channel shall be maintained except for removal consistent with the provisions of this section (3.30B.8.g).

- Pursuant to Zoning Regulations, Title III, Division 1, Chapter 3 "Regulations that apply in the Coastal Zone", the proposed dike rehabilitation and wetlands restoration/enhancement project are considered "*development.*" Further, the proposed restoration project is not a principally permitted use on project land that is designated Agricultural Exclusive (313-7.1). A Conditional Use Permit (CUP) will need to be secured for this project. The property involved with this project has several combing zone designations. A Combining Zone establishes regulations for land use and development in special areas that shall modify the regulations for the Principal Zones with which they are combined, and the most restrictive regulation shall apply (313-15).
  - The Flood Hazard Area Combining Zone designation allows habitat restoration (313-21.1), but any development must also conform to the County flood hazard regulations in Title III, Division 3, Chapter 5 of the Humboldt County Code (313-22).
    - A flood plain development permit shall be obtained before construction or development begins within any area designated special flood hazard within the County's jurisdiction (Section 335-4 (a)).
  - Transitional Agricultural Lands Combining Zone designation limits development so as to maintain long-term wetland habitat values and minimize short-term habitat degradation within this ESHA (313-35.1).
  - The Coastal Wetland Area Combining Zone designation establish regulations listed below to assure that any development on coastal wetlands will not degrade the wetland, and will maintain optimum populations of marine or freshwater organisms and where feasible will enhance wetland resources (313-38.1).
    - Coastal Wetland regulations shall apply in addition to regulations imposed by other Special Area Combining Zones.
    - County shall request the California Department of Fish and Game (CDFG) to review development plans proposed within wetlands.
    - Filling and dredging for wetland restoration developments is allowed.
    - If the project involves dredging, mitigation measures must include at least the following: dredging and spoils must be planned and carried out to avoid significant disruption to wetland habitats and to water circulation.

- If the project involves filling of a wetland, required minimum mitigation measures shall include either acquisition of equivalent areas of equal or greater biological productivity or opening up equivalent areas to tidal action; where no appropriate restoration sites are available, an in-lieu fee shall be required. A restoration plan shall be prepared, pursuant to the Wetland Restoration Plan Procedures (312-7.4) in Chapter 2 of the Zoning Ordinance. The land used for mitigation will be dedicated to a public agency capable of managing the resource or through open space easements or similar restrictions.

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?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Obstruct or prevent the recovery of any listed species covered in an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

Assessment: The project will have no impact to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

- There are no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan covering the project site.

5. CULTURAL RESOURCES: Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Result in physical changes in the significance of a historical resource.

Assessment: The project will have no impact on any historic resource.

- There are no buildings in the project area.
- The project will remove a tidegate not the supporting concrete structure, no dikes will be removed, and the collapsed stream crossing has no integrity or historic significance.
- The project involves excavation, placing fill, and grading in seasonal farmed wetlands that are used for grazing, located on wetlands that were diked, drained and cleared.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? ☐ ☐ ☐ ☒

Threshold of Significance for this Initial Study: Result in physical changes in the significance of an archaeological resource.

Assessment: The project will have no impact on the significance of an archaeological resource.

- According to Loud's Ethnogeography and Archaeology of the Wiyot Territory (1918), there were no Wiyot village or archeological sites within the scope of the project area.
- According to 1854 Township Plat survey and U.S. Coast and Geodetic Survey of 1870 the project area was tidelands.
- A consulting archaeologist and cultural resource expert performed a record search at the Northwest California Historical Resource Information Center, consulted with the Wiyot Tribe, Blue Lake Rancheria and Native American Heritage Commission, as well as conducted a field survey. No archaeological or cultural resources were identified within the project footprint.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ☐ ☐ ☐ ☒

Threshold of Significance for this Initial Study: Result in physical changes or destruction of a unique paleontological resource or site or unique geologic feature.

Assessment: The are no unique paleontological resource or site or unique geologic features at the project site.

d) Disturb any human remains, including those interred outside of formal cemeteries? ☐ ☐ ☐ ☒

Threshold of Significance for this Initial Study: Disturbance of human remains.

Assessment: The project will have a less than significant adverse effect on human remains interred outside of formal cemeteries.

- The project area was formerly tidelands which are unlikely areas for human burial.
- On the remote chance that human remains are uncovered work will cease and the County Coroner will be contacted to address the disposition of such remains.

6. GEOLOGY AND SOILS: Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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 known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒

Assessment: The project will not expose people or structures to substantial adverse effects, because the project will not create any structure for human habitation.

b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐

Threshold of Significance for this Initial Study: Substantial acceleration of the rate of soil erosion at the project site or the loss of top soil.

Assessment: The project could potentially have a significant adverse impact, soil erosion or loss of topsoil, without the successful implementation of mitigation measures.

- Excavation, placement of fill, and grading will disturb nearly 5.6 acres, left un-treated there is a potential that soil erosion and soil loss could occur.
- Approximately 23 to 29 acres of seasonal freshwater wetlands/pasture may be tidally inundated resulting in vegetative die-off.
- Active planting of salt tolerant species will occur on approximately 16 acres and the remaining 7 acres will be colonized with salt tolerant vegetation passively.

6 (b) Mitigation Measures:

1. Construction will only occur between July 1st and October 31st when the ground surface is dry and to reduce the chance of stormwater runoff occurring during construction.

2. Minimize the disturbance footprint.

3. During construction a silt fence will be deployed along the top of bank north of Wood Creek to trap suspended sediment that might leave the construction site if stormwater runoff were to occur. If the silt fence is not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. Turbid water shall be contained and prevented from being transported to the slough in amounts that could violate state pollution laws.

4. Areas identified by a consulting engineer as having "wet" or "soft" soils: (a) shall be covered with heavy synthetic mats or other acceptable non-toxic material and gravel that can be readily laid down and immediately removed following construction, and (b) shall be the minimum width and length necessary to allow movement of equipment to and from the project site.

5. Following completion of grading of the seasonal wetlands all disturbed ground will be mulched and planted with grass seed for immediate erosion control and appropriate salt marsh plants as per the planting discussion in Section 8.

6. Exclusionary cattle fencing will be installed around the entire project area to protect the salt marsh vegetation.

Monitoring Method:

- A consulting engineer shall be on site during final grading to assure that the area is re-contoured as per approved design specifications.

- Within 60 days of completion of the project "as built" plans will be submitted that document successful implementation of the project as approved.

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 on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? ☐ ☐ ☐ ☒

Assessment: The project will have no impact on stability of the underlying soil, nor have any potential to initiate landslides.

- The project is located in a low lying area, that historically was both tidal and riverine influenced, that has been diked, drained, and cleared.

- The project area is predominately Bayside loam which is a border soil between the deep alluvial soils of large rivers, represented by the Ferndale series, and the tidal marsh-land soils represented by the Coquille series. Surface drainage is usually sufficient to carry off surplus water, but subdrainge is deficient. The land is often overflowed for short periods during the

rainy season. .

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?	☐	☐	☐	☒

Assessment: The project is not located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994).

- The project will not create risks to life or property because the project does not involve the construction of any structures for human habitation.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Assessment: The project will have no impact on septic tanks or alternative waste water disposal systems.

- There are no habitable structures at the project site, hence there is no need for septic tanks or alternative waste water disposal systems

7. HAZARDS AND HAZARDOUS MATERIALS: Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

Threshold of Significance for this Initial Study: Storage or use of chemicals that could be hazardous if released into the environment.

Assessment: The project has the potential to cause adverse effects to the public or the environment if mitigating measures are not successfully implemented.

- The project's use of heavy equipment and vehicles contains a risk of an accidental release of fuel, oil and coolant.

7 (a) Mitigation Measures:

1. Heavy equipment that will be used in the project will be in good condition and will be inspected for leakage of coolant and petroleum products and repaired, if necessary, before work is started.

2. Equipment operators will be trained in the procedures to be taken should an accident occur.
3. Prior to the onset of work the contractor will prepare a plan for the prompt and effective response to any accidental spills.
4. Absorbent materials designed for spill containment and cleanup will be kept at that project site for use in case of an accidental spill.
5. Refueling of equipment will occur off-site.
6. If equipment must be washed, washing will occur off-site.
7. Stationary equipment will be positioned over drip pans.
8. All internal combustion engines shall be fitted with spark arrestors.
9. The contractor shall have an appropriate fire extinguishers and fire fighting tools present at all times when there is a risk of fire.
10. Vehicles shall not be parked in tall grass or any other location where heat from the exhaust system could ignite a fire.

Monitoring Method:

- The equipment operator will inspect the work site and equipment before, during and after completion of the project to ensure that all mitigation measures to avoid impacts are properly implemented.

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? ☐ ☐ ☒ ☐

Threshold of Significance for this Initial Study: Potential exists for accidental release of hazardous materials into the environment.

Assessment: The project has the potential to cause adverse effects if mitigating measures are not successfully implemented, refer to previous assessment, mitigation measures, monitoring methods discussed in 7(a).

- The project's use of heavy equipment and vehicles contains a risk of an accidental release of fuel, oil, or coolant.

c) Emit hazardous emissions or handle hazardous or acutely ☐ ☐ ☐ ☒

hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Assessment: The project will have no impact on an existing or proposed school from project related hazardous materials.

- The project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste.
- There are no schools within one-quarter mile.

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? ☐ ☐ ☐ ☒

Assessment: The project will have no impact.

- The project is not located on any site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

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? ☐ ☐ ☐ ☒

Assessment: The project will have no impact.

- The project work site is approximately one mile southeast of a public airport. However, the proposed project activities are temporary in nature and therefore would not result in a continuous hazard for people residing or working in the project area.
- The County has an Airport Safety Review Combining Zone (313-16.3) for areas designated clear zones, approach zones, transition zones, and beneath flight tracks of airports such as the Eureka Airport which is nearby, but the property in the project area are not encumbered with this combining zone designation.

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? ☐ ☐ ☐ ☒

Assessment: The project will have no impact.

- The project work site is not located within two miles of a *private* airstrip.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☐ ☒

Assessment: The project will have no impact.

- The proposed project will not affect any emergency response or evacuation plans.

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? ☐ ☐ ☒ ☐

Threshold of Significance for this Initial Study: Potential exists for a significant risk of loss, injury or death involving wildland fires.

Assessment: The project without the successful implementation of mitigation measures has the potential to cause adverse effects to people or structures if mitigation measures are not successfully implemented.

- The project area is an actively grazed seasonal wetland pasture, and when dry, which is when the project would be implemented vegetation is very short.
- There is a low probability that an accidental sparks from equipment or a vehicle could ignite a fire.

7 (h) Mitigation Measures:

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

8. HYDROLOGY AND WATER QUALITY: Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐

Threshold of Significance for this Initial Study: Exceed any state water quality standards or waste discharge requirements.

Assessment: The project potentially could exceed state water quality standards for sedimentation, suspended sediment or turbidity, resulting in significant water quality impacts if mitigation measures are not successfully implemented.

- Freshwater Creek is listed as an impaired water body for sedimentation/siltation pursuant to Section 303 (d) of the Clean Water Act.
- The baseline water quality of tidewater from Freshwater Slough, an impaired water body, which would inundate the project area generally, has elevated levels of suspended sediment or turbidity.
- The project will not violate any state water quality standards or waste discharge requirements, because the project will only proceed if a water quality certification is issued by the North Coast Regional Water Quality Control Board.
- Increases in turbidity in Wood Creek and Freshwater Slough could occur as a consequence of excavation of slough channels (1.1 acres) and grading of salt marsh benches (6.1 acres) if disturbed soils are left unprotected from rainfall and stormwater runoff occurs before these surfaces are mulched or vegetated.
- Short term increases in suspended sediment-turbidity in Wood Creek and Freshwater Slough during high tides will likely occur until the new slough channel banks and beds stabilize and before the salt marsh benches become colonized with vegetation.
- Removing the tidegate on Wood Creek may expose nearly 29 acres (MMMW footprint) of freshwater seasonal wetland/pasture to tidewater inundation, including 19.7 acres of non-saltwater tolerant plants, in response to tidewater inundation a die-off of vegetation could occur.
- Without mitigation measures the exposed soil on the project's 29 acres could be a source of sediment, suspended sediment or turbidity to Wood Creek and Freshwater Slough.
- Clearing debris from a 100 foot section of Wood Creek, the site of the stream crossing upgrade and construction of a salinity sill could in the short-term increase sediment load in Wood Creek.

8 (a) Mitigation Measures:

1. Excavated slough channels will not be connected to Wood Creek until the end of the project when the tidegate is to be removed.

2. If vehicular equipment encounter wet areas in the pasture then geotex mats and crushed rock will be placed in these areas to minimize compaction, and all material will be removed on completion of the project.

3. Appropriate Erosion and Sediment Control BMP shall be implemented to protect and stabilize soils and stream banks disturbed by project activities, prevent entry of storm water runoff into the excavation site, the entrainment of excavated contaminated materials leaving the site, and to prevent the entry of polluted storm water runoff into coastal waters during the transportation and storage of excavated contaminated materials.

   - Construction will only occur between July 1st and October 31st when the ground surface is dry and to reduce the chance of stormwater runoff occurring during construction.

   - During construction a combination of silt fence or fiber rolls will be deployed along the top of bank on the north side of Wood Creek to trap suspended sediment that might leave the construction site if stormwater runoff were to occur. If the silt fence or fiber rolls are not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below.

   - A silt fence will also installed in Wood Creek below the confluences of the new tidal slough channels.

   - Silt fences will be installed downstream of the in-channel work at the bridge and downstream of the excavation of the backwater pool.

   - A 100 foot segment of Wood Creek, upstream and downstream of the stream crossing, will be temporarily dammed with coffer dams or sand bags and dewatered, to permit the removal of existing collapsed culvert and concrete in the stream bed, as well as during construction of a new stream crossing.

   - No construction materials, debris, or waste, shall be placed or stored where it may be allowed to enter into or be placed where it may be washed by rainfall into waters of the U.S./State.

   - When the project surfaces have been recontoured all exposed surfaces will be straw mulched or hydro-mulched and seeded with appropriate grass seed.

   - The project will plant 11.4 acres of the 23 to 29 acre of the tidewater inundation zone is proposed to be manually planted with plugs, installed on a maximum of 18 to 24 in centers. As much as 4.5 acres will be seeded with Lyngbye's sedge and hairgrass seed applied at a rate of

155 lbs/acres. The remaining 6.8 acres of wetland area closest to the tidegate will be allowed to recolonize passively. The revegetation will take place in the first fall after the project construction is complete

- Exclusionary cattle fencing will be installed to protect vegetation planted in the project area.
- All temporary fill, synthetic mats and silt fences will be removed from wetlands and waters of the U.S./State immediately on cessation of construction.
- Following completion of work all disturbed grazed seasonal wetlands around the perimeter of the project area will be de-compacted and seeded as needed, with a commercially available seed mixture composed of the same grass species that dominate the area at the present time.

Monitoring Method:

- Before construction work commences the equipment operator will inspect the site and document that all appropriate Streambank Stabilization, Erosion and Sediment Control BMPs are in place.
- During construction, turbidity sampling in Wood Creek will be taken periodically.

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)? ☐ ☐ ☒ ☐

Assessment: The project may have a localized affect on groundwater composition and movement in lower Wood Creek.

- The existing ground water composition and movement in the project area is most likely dominated by the hydrology of Freshwater Slough.
- The project will increase the tidal prism in Wood Creek by 4.3 acre-ft. and the area inundated at MHHW by 4.6 acres.
- The area to be exposed to the increased tidal prism and inundation are not near any residences.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? ☐ ☒ ☐ ☐

Threshold of Significance for this Initial Study: Substantially alter existing drainage that results in an increase of erosion or siltation above baseline conditions.

Assessment: The project could potentially have a significant adverse impact, soil erosion or siltation, without the successful implementation of mitigation measures, refer to mitigation measures discussed under 8a..

- The project will alter the existing drainage pattern in 29 acres by removing the tidegate on Wood Creek, removing and filling a 2 foot diameter culvert and waterman tidegate south of Wood Creek, constructing 3,900 feet of secondary slough channels, and constructing 6.1 acres of elevated salt marsh benches.

- The project will increase the tidal prism in Wood Creek by 4.3 acre-ft. and the area inundated at MHHW by 4.6 acres and expand the area of inundation by MMMW elevations to 29 acres.

- While the Wood Creek tidegate will be removed the surrounding concrete structure will be left in place; therefore lowering of the streambed is not likely with this hydraulic control in place. The waterman tidegate was designed to function only when flooding occurs, but it has rusted and is no longer functioning as designed or intended and is creating an erosion hazard..

- The alteration of the existing drainage pattern will disturb 5.6 acres and expose up to 29 acres to tidewater inundation, if left un-treated there is a potential that soil erosion and soil loss could occur. Refer to mitigation measures discussed under 8a.

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 on- or off-site? ☐ ☐ ☐ ☒

Threshold of Significance for this Initial Study: Increase the potential for localized flooding.

Assessment: While portions the property is currently subject to flooding, no increase in flooding on or off-site should result from the project.

- Removing the main-wooden- tidegate on Wood Creek will increase the cross sectional area at the stream outlet and is expected to actually lower flood levels by allowing water to drain quicker from the project site as well as adjacent properties. Even at MHHW stage Wood Creek flows would still move downstream and out of the tidegate structure due to the elevation gradient.

- The 24-inch waterman tidegate was designed to function only when flooding occurs, but it has rusted and is no longer functioning as designed or intended and is creating an erosion hazard;, the removal of this tidegate and Wood Creek's tidegate will not increase flooding.

- The project area is now and will remain a wetland during winter when surface runoff occurs; there will be no increase in surface runoff as a result of the project.
- The project will remove 100 yds^3 of in-channel debris and a collapsed stream crossing.
- The project will replace the stream crossing with a 50 foot flat car bridge on footings and will decrease impounding of stream flow upstream of the crossing. The project will not impede drainage or increase flooding.
- Freshwater Slough can overtop the existing dikes, but the project will have no effect on flood elevations in the slough.
- Property upstream on Wood Creek and Freshwater Creek floods now, but the project will have no effect on flood elevations upstream as that is controlled by flood elevations in Freshwater Creek.

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? ☐ ☐ ☐ ☒

Threshold of Significance for this Initial Study: Runoff exceeds the capacity of existing or planned stormwater drainage systems or provides substantial additional sources of polluted runoff.

Assessment: The project will have no impact on existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

- There are no existing or planned stormwater drainage systems in the project area.
- The project will not change the sources of runoff.
- The project will not increase the rate or amount of surface runoff.

f) Otherwise substantially degrade water quality? ☐ ☐ ☐ ☒

Threshold of Significance for this Initial Study: Exceed water any state water quality standards not previously assessed in 8 (a).

Assessment: The project will not otherwise substantially degrade water quality not previously assessed in 8 (a).

- The project will not violate any state water quality standards or waste discharge requirements, The project can only proceed if a water quality certification is secured from the North Coast

Regional Water Quality Control Board (NCRWQCB) and pollution control measures will be implemented to protect water quality.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? ☐ ☐ ☐ ☒

Assessment: The project will have no impact; it does not involve housing.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? ☐ ☐ ☒ ☐

Threshold of Significance for this Initial Study: Construction of structures in the 100-year flood hazard area which would impede or redirect flood flows

Assessment: The project's proposed structures will have a less than significant adverse effect or no effect on flood flows, see discussion under 8d.

- The project is located in the County's flood hazard area combining zone.
- Overbank flows from Freshwater and Wood Creeks upstream ultimately drain to the project area and through the tidegate on Wood Creek back to Freshwater Creek.
- A 50 foot flat car bridge will be installed over a 20 foot wide stream reach perpendicular to flow to replace an existing partially collapsed/ damaged culvert. The bridge will be anchored to abutments located entirely out of the channel away from and above the stream banks. There will be no bridge approaches. During flood flows the project area is flooded by runoff from the Wood Creek watershed and Freshwater Creek's floodplain upstream drains via a causeway under Myrtle Avenue to the project which is bound by a dike on the south bank of Freshwater Slough, with the flow ultimately directed through the tide gate at the mouth of Wood Creek. The stream crossing under these circumstances would not impede or redirect flood flows, it will improve flood routing over existing conditions.
- Within each proposed tidal slough channel, several habitat structures will be constructed by placing logs and root wads "Large Woody Debris" (LWD) to provide aquatic habitat diversity (e.g., velocity breaks, scour holes, cover structure, etc.) primarily for juvenile coho salmon rearing and tidewater goby. Typically, LWD structures are excavated into channel banks and backfilled. A minimum of four of LWD structures will be constructed, each using one or more logs. If large root wads are available to the project, they would be used as they are more desirable. If a piece of a LWD structure did come loose and wedge into the tide gate, it would not completely block flow, because the tide gate is open at the top. There would be no danger of overtopping the levee (which it already does from the Freshwater side), and it would not flood Myrtle Avenue (which it already does from Wood Creek).

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?	☐	☐	☒	☒

Threshold of Significance for this Initial Study: Potential project-related structure failure exposing people or structures to risk of loss, injury or death involving flooding.

Assessment: The project will have no impact on the integrity of the dike along Freshwater Slough.

- The 2 foot diameter culvert and waterman tidegate in the dike along Freshwater Slough will be removed and replaced with mechanically compacted fill. A scour hole at the outfall of the tidegate will be treated with cobble and planted to restore the slough channel bank. The tidegate functions only when the area bound by the dike is flooded. It is being removed because it is corroded, leaks, and poses a future risk to the dike.

j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Assessment: The project will have no affect on the incidence of inundation by seiche, tsunami, or mudflow.

9. LAND USE AND PLANNING: Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒

Assessment: The project will have no impact on an established community as none exist at the site.

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?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Failure to comply with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.

Assessment: The property owner will comply with regulations and policies of state and federal agencies with jurisdiction over the project by securing necessary permits before implementing any project actions. Also refer to previous discussions (4 b, c, and e) for an assessment of compliance with regulations protecting environmentally sensitive habitat areas, waters of the state and U.S., and

biological resources.

- The project will comply with the following state regulations and policies: California Coastal Act of 1976 (CCA) PRC Section 30000 et seq., California Porter-Cologne Water Quality Control Act (WQCA) of 1969 (CWC Section 13000 et seq.), Streambed Alteration Program (SAP) (Fish and Game Code (FGC) Section 1600 et seq.), California Endangered Species Act (CESA) (FGC Section 2050, et seq.), and State Wetland Conservation Policy (WCP) State Executive Order W-59-93.

- Applicable state regulations and policies are described below:
    - The proposed project is located on former tidelands, which are public trust lands i.e. marine resources that have been diked and drained. Therefore, the CCC rather than the local land use authority retains jurisdiction pursuant to the California Coastal Act (CCA)to process a CDP for the project. The controlling policies for approval of any development on retained jurisdiction lands are Chapter 3 of the CCA. The coastal development policies for marine environments are described in PRC Sections 30230 through 30236. The governing policy (PRC Section 30230) states that marine resources, such as former tidelands shall be restored where feasible, which is one of the prime purposes of the project. Biological productivity of coastal waters, streams, wetlands and estuaries shall be maintained and if feasible restored (PRC Section 30231). Development of coastal waters, streams, wetlands and estuaries is limited to eight specific uses, one of which is for restoration purposes such as the proposed project. The project will have to, and does, demonstrate that: there is no less environmentally damaging alternative, feasible mitigation measures have been provided to minimize adverse environmental effects, dredging shall avoid significant disruption of marine and wildlife habitats and water circulation, and that the functional capacity of wetlands and estuary shall be maintained or enhanced (PRC Section 30233). Substantial alterations of waterways shall incorporate the best mitigation measures feasible and be limited to developments where the primary function is the improvement of fish and wildlife habitat (PRC Section 30236). Nearly the entire project area, with the exception of the dike along Freshwater Slough and the access road is a coastal wetland. The alternative analysis called for in 30233 will weigh changes in wetland acreage and *functional capacity*, which means the level and number of species, level of biological productivity, and relative size and number of habitats. In 1981, the Commission adopted *Statewide Interpretive Guidelines* to assist in applying various CCA policies. The Guidelines state that pursuant to Section 30233 if there is no feasible less environmentally damaging alternative, feasible mitigation measures must be provided to minimize adverse environmental effects. If the project involves dredging, mitigation measures must include at least the following: must be planned and carried out to avoid significant disruption to wetland habitats and to water circulation, and limitations may be imposed on the timing or type of operation. If the project involves diking or filling of a wetland, required minimum mitigation measures may, in some cases, be permitted to open equivalent areas to tidal action former intertidal wetlands capable of providing equal or greater biological productivity, or by improving tidal flushing by removing tide gates, digging tidal channels and clearing culverts if such actions would restore an area to equal or greater habitat value than the area lost (pg. 44, CCC 1981). The Guide-

lines' description of acceptable mitigation measures pursuant to Section 30233 is nearly identical to language in Section 30607.1 *"Where any dike and fill development is permitted in wetlands in conformity with Section 30233"... "mitigation measures shall include, at a minimum, either acquisition of equivalent areas of equal or greater biological productivity or opening up equivalent areas to tidal action"...*

- The WQCA established nine Regional Boards to preserve, enhance, and restore the quality of California's water resources. Activities which may affect the quality of these waters (any surface water or groundwater, including saline waters, as well as isolated wetlands, and coastal wetlands) of the state shall be regulated to attain the highest water quality. The WQCA regulates dredge or fill activities that may result in a discharge to "Waters of the State," by requiring that a report of discharge be filed with the appropriate regional board (CWC Section 13260). The NCRWQCB has issued General Construction Waste Discharge Requirements (WDR) or Waiver of Waste Discharge Requirements, which restoration projects are subject to upon reporting to the NCRWQCB of their proposed activity. If it is determined that either permanent or temporal impacts to a wetland will occur from the proposed action, mitigation will need to be done on at least a 1:1 ratio to preserve the area, function and values of the wetland and its associated beneficial uses. Project coverage under a General Construction WDR is not in effect until CEQA review has been completed.

- Under section 401 of the Clean Water Act, every applicant for a federal permit or license for any activity which may result in a discharge to U.S. surface waters and/or water of the State, must first obtain Water Quality Certification (WQC) and/or WDR (for dredge/fill projects) insuring that the proposed activity will comply with state water quality standards. CCR Section 3831(k) defines the State certification required under Section 401 as: *"Water Quality Certification means a certification that there is a reasonable assurance that an activity which may result in a discharge to navigable waters of the United States will not violate water quality standards, where the activity requires a federal license or permit."* Water quality standards include: water quality objectives (e.g., turbidity, temperature, or salinity), beneficial uses (e.g., fish migration, or wildlife habitat), and anti-degradation policy. WQC may be issued only if the activities to be certified individually or cumulatively will not have any of the following impacts, taking into account the probable effectiveness of any conditions or certification in avoiding or mitigating such impacts: Significant adverse impacts on water quality that could feasibly be avoided if individual certification, for proposed activities seeking individual federal licenses or permits, was issued. Violation of any water quality objectives adopted or approved under CWC Sections 13170 or 13245. The taking of any candidate, threatened, or endangered species or the violation of the ESA or the CESA. Exposure of people or structures to potential substantial adverse effects -- including the risk of loss, injury, or death -- from flooding, landslides, or soil erosion. Under the auspices of EPA, the State Water Resources Control Board (SWRCB) and nine Regional Boards such as the NCRWQCB have responsibility for granting WQC. Most WQC are issued in connection with USACE section 404 permits for dredge and fill discharges. In 2002, SWRCB certified several of the USACE's NWPs but chose to considered NWP 27 stream and wetland restoration projects on an individual basis. As the proposed project involves

discharges (placing fill, incidental fall-back during excavation, and potentially from construction site stormwater runoff) to surface waters of the U.S. and State, Section 401 would apply to these actions. A federal permit may not be issued until such time as the NCRWQCB has issued a WQC for the proposed actions.

- All non-federal entities must secure a Streambed Alteration Agreement (SAA) from the CDFG before beginning any activity that could substantially adversely affect an existing fish and wildlife resource by diverting or obstructing the natural flow of, or substantially changing or using any material from the bed, channel, or banks of any river, stream, or lake (F&GC Section 1600 et seq.). Recently, CDFG has extended its SAP jurisdiction to cover diverting, or obstructing the natural flow of, or substantially changing or using any material from the bed, channel, or bank of tidal waterways that receive freshwater in-flow.

- Section 2053 (F&GC) requires that CDFG not approve projects as proposed which would jeopardize the continued existence of any state listed endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat. Section 2080 (F&GC) prohibits the taking of any species that the Fish and Game Commission determines to be an endangered or threatened species. "*Take*" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, or kill" (F&GC 86). Section 2081 allows for take, pursuant to CDFG authorization, incidental to otherwise lawful development projects. If a federal ESA incidental take statement is secured for a proposed project, then no further authorization or approval is necessary pursuant to the CESA if CDFG is properly notified and issues a consistency determination (FGC Section 2080.1), which CDFG can only do if it finds that any take is "*fully mitigated.*" In addition to the CESA, the FGC also contains regulations for "*Fully Protected Species*" (FGC Sections 3503.5, 3505, 3511, 3513, 4700, 5050, and 5515). Fully protected species may not be taken, and incidental take of these species is not authorized.

- The project will comply with the following federal regulations and policies: Clean Water Act (CWA) of 1972 (33 U.S.C. 1341 et seq.), Endangered Species Act (ESA) of 1973 (16 U.S.C. 1536 et seq.), Magnuson-Stevens Act (MSA) of 1996 (16 U.S.C. 1801 et seq.), Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. 1451 et seq.), National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. 470 et seq.)), and Executive Order 11988 *Floodplain Management* and 11990 *Wetland Policy.*

- Applicable federal regulations and policies are described below:

  - Section 404 of the CWA authorizes the USACE to regulate the discharge of dredged and fill material into waters of the United States. The U.S. Environmental Protection Agency (EPA) has developed regulations with which the USACE must comply and is authorized to review, and if necessary veto, a USACE decision to issue a permit if that proposed action *"will have an unacceptable effect on municipal water supplies, shellfish beds and fishery areas, wildlife, or recreational areas."* The USACE can issue general

permits on a nationwide basis (NWP) for actions that will have minimum adverse affects. NWP 27, which covers "*Stream and Wetland Restoration Activities*" authorizes restoration or enhancement of existing or former waters of the U.S or the creation of new waters. However, NWP 27 would not apply if the proposed action causes a net loss in aquatic resource functions and values or results in the relocation of tidal waters or the conversion of tidal waters, including tidal wetlands, to other aquatic uses. Projects on private lands require that a Pre-Construction Notice be filed with the District Engineer. Normally, compensatory mitigation is required at a minimum of 1:1 ratio for all wetland impacts with a preference given to restoration of wetlands as compensatory mitigation. This NWP may not require compensatory mitigation if the authorized work results in a net increase in aquatic resource functions and values in the project area. Guidance on compensatory mitigation for impacts to aquatic resource pursuant to the USACE's authorities under Section 10 RHA and Section 404 CWA is provided in "*Regulatory Guidance : letter No. 02-2*" (RGL 02-2) (December 24, 2002).

- Federal Executive Order No. 11988 Floodplain Management, 1977 may also apply to the USACE's approval of the proposed project. This order seeks to avoid adverse impacts associated with modifications of floodplains where there is a practicable alternative.

- The ESA is administered by the Service and the National Marine Fisheries Service (NMFS). Section 9 of the ESA contains a prohibition on "*take*" (i.e. to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct) of any threatened or endangered species. *"Harm is further defined to include significant habitat modification or degradation which may result in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering."* There are two exemptions to this prohibition: when take is incidental to, and not the purpose of otherwise lawful activities for federal actions pursuant to Section 7, and for non-federal actions under Section 10. Section 7 directs Federal agencies to consult with the Services if any action they authorize, fund, or carry out "may affect" any species listed or proposed to be listed, or any critical habitat designated or proposed to be designated under the ESA. Consultation is required whether the effect is beneficial or adverse. The proposed actions while beneficial they could result in a take of coho, chinook, steelhead, or tidewater Goby. The USACE has been asked to initiate consultation with the Services ESA Section 7 Divisions. A biological assessment has been prepared, which describes the project action area, proposed actions, consultations, species of concern in the action area, and adverse effects likely to occur to these species or to protected habitats. The Services must render a biological opinion to the USACE on whether the proposed actions will jeopardize the continued existence, degrade critical habitat, or impair the recovery of protected species, before a permit is issued.

- Section 305 of the MSA requires federal agencies to consult with the NMFS on the effects of any proposed federal action, such as the issuance of permits under Section 10 of the RHA and Section 404 of the CWA, which may adversely affect any essential fish habitat (EFH). Section 3 of the MSA describes ESH as those waters and substrate necessary to commercial fish for spawning, breeding, feeding, or growth to maturity.

NMFS may provide conservation recommendations to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH that may result from the proposed actions. Freshwater Slough has been designated as ESH for the following fisheries managed under the following Fishery Management Plans (FMP) pursuant to the MSA: Pacific Salmon FMP, Pacific Groundfish FMP, and Coastal Pelagics FMP. While Wood Creek is behind a tidegate, Pacific salmonids have been observed upstream. It is not known if Pacific Groundfish or Coastal Pelagic species utilize stream reaches behind the tidegate. Generally, when applicable, the NMFS combines its consultation pursuant to ESA and MSA.

- Section 106 of the NHPA requires federal action agencies or federally funded projects to consider the effects of the proposed federal action on historic properties. A cultural resources report has been prepared for the project (see discussion under 5a and b) including consultation with three federally recognized Indian tribes (Wiyot) to determine if religious or culturally significant sites are present in the Area of Potential Effects (APE). A cultural resources survey of the project site has been conducted. A record search was conducted at the Northern California Historical Resources Information System office.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Obstruct or prevent the recovery of any listed species covered in an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

Assessment: The project will have no impact on an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

- There are no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan covering the project site.

10. MINERAL RESOURCES: Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

Threshold of Significance for this Initial Study: Development of land overlying a mineral resource that would physically preclude future access to that resource.

Assessment: The project will have no impact on future availability of a mineral resource that would be of value to the region and the residents of the state.

- This habitat and fish access enhancement project of existing wetlands does not involve the construction of permanent or habitable structures that would preclude access to aggregate beneath the surface.

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?	☐	☐	☐	☒

Assessment: Not applicable to the project as no such delineation exists for the project area.

11. NOISE: Would the project result in:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

Threshold of Significance for this Initial Study: Generating noise and exposing people to noise in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Assessment: The project will have a less than significant adverse effect on people exposed to noise levels in excess of established standards.

- The project may generate noise at the work site that exceeds 85 db for a short-term when using heavy equipment.
- Equipment operators who would be exposed to such noise levels normally wear hearing protection while operating equipment producing noise levels equal to or greater than 85 db, including excavators and back hoes.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Assessment: The project will have less than significant impact on people from excessive groundborne vibration or groundborne noise levels.

- Myrtle Avenue separates the project area from six rural residential properties south of the

roadway; the groundborne vibration or groundborne noise levels from equipment during construction of the project in the pasture to the north of the road should not exceed the level of noise generated by vehicular traffic on Myrtle Avenue.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ☐ ☐ ☐ ☒

Assessment: The project will have no permanent increase in ambient noise levels in the project vicinity above levels existing without the project, because the project will be of short-term duration.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? ☐ ☐ ☒ ☐

Assessment: The project will have a less than significant adverse effect on ambient noise levels in the project vicinity.

- The project will involve only one or two pieces of vehicular equipment operating at the same and only for short-term duration. The noise should be no louder than conventional farming machinery (eg. tractor).
- Back-up beepers on heavy equipment vehicles will cause temporary noise in excess of ambient levels during daylight hours, but the project is of short duration and this noise increase is not considered substantial.

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? ☐ ☐ ☐ ☒

Assessment: The project will not expose people in the project area to excessive noise levels, refer to discussion 11a&b.

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? ☐ ☐ ☐ ☒

Assessment: While the project work site is located approximately 1 mile of a public airport, exposure to excessive noise levels is not expected to occur.

12. POPULATION AND HOUSING: Would the project:	Potentially Significant	Potentially Significant Unless	Less Than Significant Impact	No Impact

		Mitigation Incorporated		
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement and does not involve construction of housing or growth inducing infrastructure.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

13. PUBLIC SERVICES: Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

14. RECREATION: Would the project:	Potentially Significant	Potentially Significant	Less Than Significant	No Impact

		Unless Mitigation Incorporated	Impact	
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?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

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?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

15. TRANSPORTATION/TRAFFIC. Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

e) Result in inadequate emergency access?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

f) Result in inadequate parking capacity? ☐ ☐ ☐ ☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? ☐ ☐ ☐ ☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

16. UTILITIES AND SERVICE SYSTEMS: Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

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? ☐ ☐ ☐ ☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? ☐ ☐ ☐ ☒

Assessment: While the project will result in an increase of on-site flooding, no expansion of drainage facilties is required.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? ☐ ☐ ☐ ☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement. No additional demand on water supplies is expected.

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?

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? ☐ ☐ ☐ ☒

Assessment: Not applicable, the project is limited to wetland and fish access enhancement.

g) Comply with federal, state, and local statutes and regulations related to solid waste? ☐ ☐ ☐ ☒

Assessment: No impact.

- The concrete debris/rubble removed from the existing stream crossing will be disposed of at an approved waste site, or recycled.

17. MANDATORY FINDINGS OF SIGNIFICANCE:	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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, "substantially" 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?	☐	☒	☐	☐

Threshold of Significance for this Initial Study: The project potentially could physically change i.e. degrade the quality of the environment, substantially reduces the habitat of a fish or wildlife species, causes a fish or wildlife population to drop below self-sustaining levels, threatens to eliminate a plant or animal community, "substantially" reduces the number or restrict the range of a rare or endangered plant or animal or eliminates important examples of the major periods of California history or prehistory.

Assessment: The project has the potential to degrade the quality of the environment without the successful implementation of mitigation measures, refer to previous assessments in sections 4 biological resources, 6 soil erosion, 7 hazards, and 8 hydrology and water quality.

- Overall this project will be beneficial to the environment as it will restore tidal hydrology, expand brackish marsh habitat, and remove the primary barrier to fish migration into Wood Creek to enhance salmonid and tidewater goby access. The proposed project has three interdependent purposes and needs.

1. Enhance and enlarge estuarine habitat and functions on Wood Creek. Lower Wood Creek was re-located from its historic location, channelized, and tidewater exchange was nearly eliminated with the placement of a tidegate at its mouth. With the diking of most of tributaries to Humboldt Bay estuary areas have been greatly reduced in extent. Estuaries are valuable nursery habitat for many important protected fish species such as salmonids and tide water Goby.
2. Enhance and enlarge salt marsh habitat-functions on Wood Creek. The historic salt marsh habitat along lower Wood Creek was converted over a century ago when dikes were constructed along Freshwater Slough, a tidegate was installed and the marshes drained. Humboldt Bay has lost over 90 percent of its historic salt marsh habitat resulting in a significant degradation of the Bay's ecosystem.
3. Improve fish access in Wood Creek. Fish access to Wood Creek was greatly reduced with the installation of the tidegate, and with the collapse of a stream crossing.

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)? ☐ ☐ ☒ ☐

Threshold of Significance for this Initial Study: The incremental effects of a project are cumulatively considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Assessment: The project does contribute at the regional level to the cumulative restoration of former tidelands and the reduction of acreage used for agricultural purposes.

- Agriculture in general and grazing cattle in particular are not coastal dependent uses.
- Restoring former tideland functions can only occur on former tideland such as the project site.
- The project's restoration/enhancement of wetlands at the site will reduce grazing on 23 to 29 acres but the planting of wetland species within the 23 to 29 acres will become a seed source for wetland plants to be grown for resale by Freshwater Farms (native plant nursery) under agreement between Freshwater Farms and the Northcoast Regional Land Trust .
- Agricultural uses will continue on the property and in the immediate vicinity across Freshwater Slough and east of Myrtle Avenue, therefore the project's reduction in available acreage for agricultural uses is very limited at a regional scale.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ☐ ☐ ☒ ☐

Threshold of Significance for this Initial Study: The project will cause substantial adverse environmental effects on human beings, either directly or indirectly.

Assessment: The project with the successful implementation of mitigation measures will have no substantial adverse environmental effects on human beings, either directly or indirectly, refer to sections 4(a) species of concern, (b) sensitive natural community, *5(c) paleontological resource*, 6(b) soil erosion, 7(a) hazardous materials, 7 (h) wildland fires, and 8(a) water quality.

Mitigation Measures

Agricultural Resources: 2 (b):

1. The applicant shall execute and file with the Planning Division the statement titled "Notice and Acknowledgment Regarding Agricultural Activities in Humboldt County" as required by Section 313-43.2 of the Humboldt County Code. This document is more commonly known as a "Right to Farm" statement.

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

1. A qualified botanist will locate and flag all populations of plant species of concern in the project area prior to construction.

2. Heavy equipment will be confined, to the maximum extent practicable, to within the proposed secondary tidal slough channels and proposed salt marsh bench footprints.

3. If it is possible populations of plant species of concern will not be disturbed during excavation or grading. If populations of these plants cannot be avoided during excavation or grading they will be removed as "wafers" (top 12 inches of vegetation/topsoil) and either transplanted immediately or stored separately on pond liners. These soils will be kept moist until they are re-placed along the new secondary tidal channels at the appropriate finished grade and in the same orientation.

4. The in-channel excavation work will be performed at low tide and at the lowest seasonal stream flows when water levels in Wood Creek are as low as possible.

5. Install fish screens upstream of the project site near Station 18+50 and downstream at the concrete tidegate structure, as well as upstream and downstream of the stream crossing.

6. Before the in-channel work is begun, an authorized fishery biologist will sweep through the area with dip-net to flush away or capture any fish that might be present. Fish rescue and relocation to suitable areas upstream will reduce the risk of adverse effects to fish species, particularly salmonid species. A survey of the de-watered area for stranded fish or amphibians shall be conducted by an authorized fishery biologist during, and immediately after de-watering.

7. Slough channels will be designs to provide habitat for fish species of concern such as tidewater goby and anadromous salmonids.

8. Fish habitat improvements structures will be designed and constructed in accordance with techniques described in CDFG's "California Salmonid Restoration Manual."

9. Installation of a salinity sill structure at the same elevation as the existing stream crossing and debris that functions as a salinity sill now to minimize any impacts to salmonid sum-

mer rearing habitat upstream of the new stream crossing that could be affected by increasing the tidal prism.

10. Exclusionary cattle fencing will be installed to protect vegetation in the project area.

Geology and Soils 6 (b):

1. Construction will only occur between July 1st and October 31st when the ground surface is dry and to reduce the chance of stormwater runoff occurring during construction.

2. Minimize the disturbance footprint.

3. During construction a silt fence will be deployed along the top of bank north of Wood Creek to trap suspended sediment that might leave the construction site if stormwater runoff were to occur. If the silt fence is not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. Turbid water shall be contained and prevented from being transported to the slough in amounts that could violate state pollution laws.

4. Areas identified by a consulting engineer as having "wet" or "soft" soils: (a) shall be covered with heavy synthetic mats or other acceptable non-toxic material and gravel that can be readily laid down and immediately removed following construction, and (b) shall be the minimum width and length necessary to allow movement of equipment to and from the project site.

5. Following completion of grading of the seasonal wetlands all disturbed ground will be mulched and planted with grass seed for immediate erosion control and appropriate salt marsh plants as per the planting discussion in Section 8.

6. Exclusionary cattle fencing will be installed around the entire project area to protect the salt marsh vegetation.

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

1. Heavy equipment that will be used in the project will be in good condition and will be inspected for leakage of coolant and petroleum products and repaired, if necessary, before work is started.

2. Equipment operators will be trained in the procedures to be taken should an accident occur.

3. Prior to the onset of work the contractor will prepare a plan for the prompt and effective response to any accidental spills.

4. Absorbent materials designed for spill containment and cleanup will be kept at that project site for use in case of an accidental spill.

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

Hydrology and Water Quality 8 (a):

1. Excavated slough channels will not be connected to Wood Creek until the end of the project when the tidegate is to be removed.
2. If vehicular equipment encounter wet areas in the pasture then geotex mats and crushed rock will be placed in these areas to minimize compaction, and all material will be removed on completion of the project.
3. Appropriate Erosion and Sediment Control BMP shall be implemented to protect and stabilize soils and stream banks disturbed by project activities, prevent entry of storm water runoff into the excavation site, the entrainment of excavated contaminated materials leaving the site, and to prevent the entry of polluted storm water runoff into coastal waters during the transportation and storage of excavated contaminated materials.

- Construction will only occur between July 1st and October 31st when the ground surface is dry and to reduce the chance of stormwater runoff occurring during construction.
- During construction a combination of silt fence or fiber rolls will be deployed along the top of bank on the north side of Wood Creek to trap suspended sediment that might leave the construction site if stormwater runoff were to occur. If the silt fence or fiber rolls are not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below.

- A silt fence will also installed in Wood Creek below the confluences of the new tidal slough channels.

- Silt fences will be installed downstream of the in-channel work at the bridge and downstream of the excavation of the backwater pool.

- A 100 foot segment of Wood Creek, upstream and downstream of the stream crossing, will be temporarily dammed with coffer dams or sand bags and dewatered, to permit the removal of existing collapsed culvert and concrete in the stream bed, as well as during construction of a new stream crossing.

- No construction materials, debris, or waste, shall be placed or stored where it may be allowed to enter into or be placed where it may be washed by rainfall into waters of the U.S./State.

- When the project surfaces have been recontoured all exposed surfaces will be straw mulched or hydro-mulched and seeded with appropriate grass seed.

- The project will plant 11.4 acres of the 23 to 29 acre of the tidewater inundation zone is proposed to be manually planted with plugs, installed on a maximum of 18 to 24 in centers. As much as 4.5 acres will be seeded with Lyngbye's sedge and hairgrass seed applied at a rate of 155 lbs/acres. The remaining 6.8 acres of wetland area closest to the tidegate will be allowed to recolonize passively. The revegetation will take place in the first fall after the project construction is complete

- Exclusionary cattle fencing will be installed to protect vegetation planted in the project area.

- All temporary fill, synthetic mats and silt fences will be removed from wetlands and waters of the U.S./State immediately on cessation of construction.

- Following completion of work all disturbed grazed seasonal wetlands around the perimeter of the project area will be de-compacted and seeded as needed, with a commercially available seed mixture composed of the same grass species that dominate the area at the present time.