



CEQA STATUTORY EXEMPTION FOR RESTORATION PROJECTS (SERP) CONCURRENCE REQUEST

Completion and submission of this form is voluntary. This form may be submitted to request concurrence from the Director of Fish and Wildlife pursuant to Public Resources Code section 21080.56.

Submit this form (pdf) and all attachments via the Department’s [Environmental Permit Information Management System \(EPIMS\) Document Repository](#).

1. LEAD AGENCY

Lead Agency Name:	Humboldt County Department of Public Works
Contact Person’s Name:	Andrew Bundschuh
Street Address:	1106 2 nd Street
City, State, Zip:	Eureka, CA 95501
Contact Person’s Telephone:	707-445-7741
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2. PROJECT PROPONENT

Check Box and Skip to Number 3 if Same as Lead Agency

Business/Agency/Organization:	Northcoast Regional Land Trust
Contact Person’s Name:	Dan Ehresman
Street Address:	P.O. Box 398
City, State, Zip:	Bayside, CA 95524
Contact Person’s Telephone:	707-822-2242
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3. PROJECT INFORMATION

A. Project Name:	Wood Creek Phase III – Felt Ranch Off-Channel Rearing Habitat Project
B. County or Counties:	Humboldt
C. Lat./Long. Coordinates:	40.782393/-124.090846
D. Estimated Project Start/End Dates:	TBD, pending implementation funding

E. Provide a brief description of the CEQA Lead Agency’s discretionary Project approval pursuant to Public Resources Code section 21065.

Humboldt County Department of Public Works will be the Lead Agency and have discretionary approval pursuant to CEQA. The Humboldt County Planning Department will be issuing the Use Permit for the Project. The County has ownership (land use authority) of Myrtle Avenue and Freshwater Creek Overflow Bridge in the northern Project Area. The County also has ownership of Felt Road up to the location of the culvert replacement (exclusively for environmental restoration purposes).



F. Provide a brief description of the Project location, size, and funding sources. Please cite and attach any supporting documents.

The Project is located on approximately 45 acres in Humboldt County, California, east of the City of Eureka (see Attachment 1 Figure 1 Project Location). The Project Area is bordered by Felt Road and Wood Creek to the west and agricultural lands and Freshwater Creek to the east and south. The northern end of the Project Area is bisected by Myrtle Avenue and the Freshwater Creek Overflow Bridge (40°47'1.05"N 124° 5'29.49"W). North of Myrtle Avenue is the Freshwater Farms Reserve. The Freshwater Farms Reserve is owned and operated by the Northcoast Regional Land Trust and includes the Wood Creek Phase I and II estuary restoration channels. The privately-owned portion of the Project Area east of Myrtle Avenue is subject to a Natural Resources Conservation Service (NRCS) Wetland Reserve Easement (Attachment 2 Figure 2 Existing Conditions).

Project planning is funded by a \$315,589 CDFW Fisheries Restoration Grant Program and a \$188,480 State Coastal Conservancy Prop 1 grant. Funding for construction implementation has not yet been secured.

See Attachment 1 - Project Location and Attachment 2 - Project Description.

G. Provide a brief Project description, including any post-restoration work, operation and maintenance, or other related activities. Summarize the Project's expected environmental benefits (e.g., acres or stream-miles restored/enhanced, species benefitted, etc.). Please cite and attach any supporting documents.

Historically, the Project Area was the upper ecotone of the Freshwater Creek estuary and consisted of multiple channels and expansive wetlands. Today, most of the Project Area consists of a mixture of cattle pasture and cattail marsh. The Project will restore the historical connectivity and function of the existing freshwater wetlands on the Felt Ranch property to the tidal channels of lower Wood Creek and Freshwater Slough, thus dramatically enlarging the existing stream-estuary ecotone of Freshwater Creek and Humboldt Bay.

Ongoing fisheries monitoring in the existing Wood Creek Phase I and Phase II continues to document special status species, including Coho Salmon and Tidewater Goby. Coho Salmon have also been documented upstream of Myrtle Avenue in the Wood Creek ditch along Felt Road and in the upper extent of the Project Area in an agricultural ditch as recently as December 2022. This Project will substantially expand suitable, high-quality anadromous habitat in the Wood Creek watershed. The Project will also increase the brackish ecotone, highly desirable for salmonids and also key to Tidewater Goby recovery.

Project objectives include:

- Restore hydrologic connectivity between Felt Ranch wetland habitats and the Wood Creek Phase I and II Projects using the existing Freshwater Creek Overflow Bridge under Myrtle Avenue;
- Establish juvenile salmonid migration access between Wood Creek and the Felt Ranch wetlands;
- Enlarge the tidal influence onto Felt Ranch to elongate the transition zone from brackish to fresh-water conditions;
- Enhance the existing freshwater wetlands on Felt Ranch to create a diversity of slow-water productive rearing habitats for juvenile coho while benefiting other native wetland dependent wildlife and vegetation; and
- Enhance drainage and reduce flooding inundation of agricultural areas within and adjacent to the Project Areas

The Project will realign Wood Creek to cross under Felt Road rather than Wood Gulch Road. This will reroute the stream out of the existing roadside ditch and into the new channel network to improve stream function, reduce stranding potential, and improve fish passage. Once rerouted, Wood Creek will function as a stream instead of a ditch, with appropriate width, depth and sinuosity, and a well-defined riparian corridor. The realigned channel will drain into the new Felt Slough, which will flow under the Freshwater Creek Overflow Bridge and into the head of the existing Wood Creek Phase II channel. Moving the channel addresses conflicts that arise with presence of ESA listed salmonids in the ditch and the frequent need for ditch maintenance due to sedimentation and resulting



flooding of the road and adjacent driveways. The restored Felt Slough, rerouted Wood Creek, and upstream Wood Creek are described in more detail below. All Project elements are shown in the attached figures.

Rerouted Wood Creek upstream of the Felt Road culvert crossing

The Wood Creek channel upstream of the Wood Gulch Road culvert will be realigned to move the crossing to Felt Road, west of the Wood Gulch Road intersection to better convey Wood Creek and stormwater runoff from the roadway. Rerouting the channel upstream of Felt Road will require filling approximately 30 feet of existing channel and constructing a new approximately 70-foot-long channel that connects to a new crossing at Felt Road. The existing Wood Gulch Road culvert will be plugged. The new Felt Road culvert crossing will contain a natural substrate bottom to support fish passage.

Rerouted Wood Creek downstream of the Felt Road culvert crossing

From the new Felt Road crossing, Wood Creek will extend approximately 300 linear feet to a new pond to provide slow freshwater habitat for rearing salmonids and other aquatic organisms. Large wood cover structures will be installed throughout the pond. Wood Creek will continue downstream from the pond to drain into a pool in the main Felt Slough channel.

Restored Felt Slough main and secondary channels

The proposed main Felt Slough channel is approximately 3,650 feet in length, beginning at the head of the Wood Creek Phase II channel network and continuing upstream under the Freshwater Creek Overflow Bridge on Myrtle Avenue onto the Felt Ranch property. Multiple alcoves will be constructed along Felt Road near existing culverts to collect perennial flows from seeps and route it to the Felt Slough channel, supporting perennial water quality in the new channel network via freshwater inflow.

Near the Freshwater Creek Overflow Bridge, three secondary channels to Felt Slough will be constructed on the north-eastern side of the Project Area. The downstream most secondary channel (S1) begins north of the Freshwater Creek Overflow Bridge and extends approximately 260 feet upstream. The next secondary channel (S2) will extend approximately 400 feet along the north side of the existing Felt Ranch ditch and contain a long tidal pool. The longest secondary channel (S3) will begin upstream of the Freshwater Creek Overflow Bridge and extend approximately 1,300 linear feet. The S3 secondary channel includes three pools. The S4 secondary channel branches from the main channel at the southern end of the Project Area. The S4 secondary channel is approximately 548 linear feet.

Planting hummocks are proposed to run along the edge of the Felt Slough main and secondary channels. These will create an elevated surface above the saturated soils to provide conditions suitable for planting riparian vegetation, including conifers (i.e., Sitka spruce) that can eventually provide canopy that shades the channel. Sitka spruce can be found in similar tidal swamp-like conditions in McKinleyville and Eureka.

Strategically placing mounds and hummocks along Felt Slough, and plugging select locations of the existing Felt Ditch will route waters more efficiently across the properties by help to guide Freshwater Creek overbank floodwaters into the Project's channels. These design elements will prevent fish from straying into the existing road ditches and culverts further to the west and avoid isolating waters ponding in wetlands and fields outside of the constructed channels.

Attached supporting documents include Attachment 2 - Project Description, Attachment 3 - Basis of Design Report and 65% Design, Attachment 4 – Wetland Delineation, and Attachment 5 – Biological Report.



H. CDFW recommends public outreach and coordination with interested parties. Please provide a summary of engagement with tribes, agencies, and other interested parties. Be careful not to include any sensitive or confidential information. Please cite and attach any supporting documents.

A planning effort completed in 2020 focused on identifying potential restoration sites that could provide high-quality habitat for non-natal rearing of juvenile salmonids in the Humboldt Bay watershed (Voight, 2020). The effort included technical advisory team (TAT) consisting of local expert scientists from state and federal resource agencies, academia, and restoration practitioners. The TAT guided the planning effort's processes to rank and prioritize potential restoration sites. The existing wetland complex on Felt Ranch was identified as the second highest ranked site for restoration to provide low-gradient, non-natal rearing habitat for salmonids.

Outreach has also occurred with landowners and stakeholders through the Project development and design, including the Northcoast Regional Land Trust, NRCS, and Humboldt County Public Works. Additionally, a Technical Advisory Committee (TAC) of Project partners including NRCS, Northcoast Regional Land Trust, CDFW, U.S. Fish and Wildlife Service, and NOAA Fisheries convene at regular intervals during the planning process for design review and technical discussions to inform the design process.

A cultural resource investigation was prepared for the Project and no California Register of Historical Resources eligible historic resources or cultural resources were identified. Requirements for inadvertent discovery protocols will be incorporated into construction documents prior to bidding and ground disturbance. Inadvertent discovery protocols will include tribal notification. The County outreached to the Blue Lake Rancheria, Bear River Band of the Rohnerville Rancheria, and Wiyot Tribe on January 9, 2023 via a formal letter delivered electronically via email. Tribal Historic Preservation Officer from the Blue Lake Rancheria responded noting satisfaction with the County's assurance of including inadvertent archaeological discovery protocols as a condition for any construction/ground disturbance and had no further concerns. Tribal Historic Preservation Officers (THPOs) from Bear River Band of the Rohnerville Rancheria and the Wiyot Tribe received the letters and did not respond. THPOs from Blue Lake Rancheria, Bear River Band of the Rohnerville Rancheria, and Wiyot Tribe were invited to an agency field visit in February 2023; however, did not attend. The THPOs were invited to another field visit in March 2023; THPOs from Blue Lake Rancheria and Wiyot Tribe declined. The Bear River Band of the Rohnerville Rancheria THPO requested a site tour which occurred on March 15, 2023. The THPO stated that salmonid habitat restoration projects are highly valued by the Rancheria. They were interested to collaborate on Tribal youth fisheries learning opportunities and to collect cattails for traditional weaving. The Project team remains in contact with the THPO regarding youth educational opportunities and cattail collection.

The Northcoast Regional Land Trust will apply to state and federal agencies for required permits. In late 2022, the Project team held virtual pre-permitting meetings with representatives from Humboldt County, NOAA Restoration Center, Region Water Board, U.S. Fish and Wildlife Service, USACE, and CDFW. A field tour for Project stakeholders and regulatory agency representatives was hosted on February 2, 2023. Fourteen people attend the tour and asked questions about the design plans, site fisheries data, implementation schedule, agricultural management, and monitoring plans.

A virtual public meeting was held on February 2nd, 2023 from 6-7pm. The meeting was publicized by the and Northcoast Regional Land Trust and Buckeye Conservancy via email and social media. A public meeting notice was sent to three local news outlets (attached). Four members of the public attended the meeting. No significant feedback was received, though the attendees thanked the Project team for the presentation.

See Attachment 6 – Outreach with the public meeting notice, social media post, and tour photos.

References:

- Voight, 2020. Non-natal habitat enhancement planning for endangered species act-listed salmonids in the Humboldt Bay watershed. Thomas Gast & Associates Environmental Consultants. Funded by CDFW Prop 1 Grant Agreement No. P1796005-01.



4. REQUIRED DETERMINATIONS

Provide a full description for each determination below:

A. The Project is exclusively one or both of the following: (1) a project to conserve, restore, protect, or enhance, and assist in the recovery of California native fish and wildlife, and the habitat upon which they depend, or (2) a project to restore or provide habitat for California native fish and wildlife. Please cite and attach any supporting documents.

The Humboldt County Department of Public Works has determined that the Project is exclusively to conserve, restore, protect, or enhance, and assist in the recovery of California native fish and wildlife, and the habitat upon which they depend and a Project to restore or provide habitat for California native fish and wildlife.

Freshwater Creek, to the northeast of Wood Creek, currently hosts the largest remaining Coho Salmon population in the Humboldt Bay watershed, and CDFW estimated that approximately 40% of Coho smolt production and 80 to 90% large of steelhead trout smolt production originates from the stream-estuary ecotone of Freshwater Creek (Ricker and Anderson 2011; Wallace et al. 2015). In addition, non-natal rearing in the stream-estuary ecotone, especially during winter months, appears to convey a competitive advantage (higher growth rates) versus juvenile fish that rear solely in upstream habitats (Wallace and Allen 2015). The stream-estuary ecotone provides important low-velocity high growth rate environment for salmonid rearing. Wood Creek Phases I and II, north of the Project Area, reopened valuable stream-estuary habitats in 2005 and 2016.

Felt Ranch was identified as a priority location in the Humboldt Bay watershed to enhance habitat for endangered species act-listed salmonids (Voight 2020). This Project will extend the stream-estuary ecotone and Coho habitat created by Wood Creek Phase II habitat restoration project upstream of Myrtle Ave as well as replace an aging and undersized culvert and improve riparian habitat along Wood Creek. The existing Wood Gulch Road culvert is undersized relative to the upstream channel width. Based on the 65% design (attached), the Project will result in:

-Approximately 6,700 feet of new stream/slough channels providing habitat accessibility. This includes 600 feet of slough channel, 300 feet of stream channel above tidal influence, and 5,800 feet of upper estuary ecotone.

-Approximately 4,500 square foot freshwater pond suitable for year-round Coho rearing.

-Two seasonally alcoves fed by spring water inflows creating approximately 2,400 square feet of over-wintering rearing habitat for salmonids.

Large wood features will be placed throughout the Project channels to serve as cover structures for fish, to help scour and maintain pools, and to create forcing features to help control the overall channel profile. Planting hummocks will provide suitable conditions for riparian vegetation to eventually provide riparian habitat for coastal birds as well as canopy that shades the channel. Hummock location and spacing will be placed to shade shallower sections of channel that would otherwise be more susceptible to colonization by cattails.

Attached supporting documents include Attachment 2 - Project Description, Attachment 3 - Basis of Design Report and 65% Design.

References:

- Ricker, S. J., and C. W. Anderson. 2011. Freshwater Creek salmonid life cycle monitoring station. Annual report. Anadromous Fisheries Resource Assessment and Monitoring Program, California Department of Fish and Game, Arcata, USA.



- Voight, 2020. Non-natal habitat enhancement planning for endangered species act-listed salmonids in the Humboldt Bay watershed. Thomas Gast & Associates Environmental Consultants. Funded by CDFW Prop 1 Grant Agreement No. P1796005-01.
- Wallace, M., and S. Allen. 2015. Juvenile salmonid use and restoration assessment of the tidal portions of selected tributaries to Humboldt Bay, California, 2011–2012. Fisheries Administrative Report 2015-02. California Department of Fish and Wildlife, Sacramento, USA.

B. An eligible project may have incidental public benefits, such as public access and recreation. Please cite and attach any supporting documents.

The NCRLT Freshwater Farms Reserve to the north of Myrtle Ave currently has public trails and interpretive signage. The Project will not conflict with or modify the existing trail system. Incidental public benefits include improved drainage on adjacent agricultural fields as well as reduced flooding along Felt Road, which would improve public safety and emergency access.

C. The Project does both of the following: (1) Results in long-term net benefits to climate resiliency, biodiversity, and sensitive species recovery; and (2) Includes procedures and ongoing management for the protection of the environment. Please cite and attach any supporting documents.

Overview:

The County has determined that the Project does both of the following: (1) results in long-term net benefits to climate resiliency, biodiversity, and sensitive species recovery; and (2) includes procedures and ongoing management for the protection of the environment.

Long-Term Net Benefits to Climate Resiliency:

The Project lies within tidal influence and will be affected by future sea level rise (SLR). The California Coastal Commission (2018) Sea Level Rise Policy Guidance recommends determining if critical infrastructure may be susceptible to SLR to establish the appropriate level of risk aversion during project planning. Based on the elevation of Myrtle Avenue roadway and the adjacent barn and outbuildings on the NRCT's Freshwater Farms Reserve (all are above elevation 12.0 feet NAVD), there appears to be no critical infrastructure at risk from SLR over the next 50 years in and around the Project Area. Due to the potential for loss of existing agricultural lands due to tidal inundation from SLR, the Project applies the upper end of the likely range of SLR associated with a "high emissions scenario." Considering 35 years for the minimum service life of the Project and the selected risk level, the 2060 SLR projection is 1.9 feet (based on the North Spit, Humboldt Bay tide gage).

This Project will greatly increase habitat connectivity and diversity along a salinity gradient extending from the mouth of Wood Creek upstream to the Felt Ranch freshwater marshlands. This provides a measure of resiliency against sea level rise/climate change for all animals and plants that depend on stream-estuary ecotone habitats for all or part of their life cycles. The restored conditions could thus allow tidal wetland species to migrate upstream ahead of rising sea levels.

Additionally, increasing the connectivity and extent of Wood Creek's wetland habitats will enhance the flood storage and conveyance functions of the creek during extreme rainfall events, addressing existing flooding issues that are predicted to worsen because of climate change. Felt slough will provide overwintering habitat. Water quality will also be enhanced by routing flows into the Project channels. Suitable water quality will be important for juvenile rearing salmonids.

References:

- California Coastal Commission. 2018. California Coastal Commission Sea Level Rise Policy Guidance: Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits" State & Federal Reports and Publications. 4. https://digitalcommons.humboldt.edu/hsuslrj_state/4



Long-Term Net Benefits to Biodiversity:

The Project will create both seasonal and year-round rearing habitat for salmonids, a key Project objective. The new Wood Creek channel will be fed year-round by streamflow. Based on water quality measurements, this streamflow has high dissolved oxygen (DO) concentrations and is generally below 15 degrees Celsius year-round. The streamflow will feed the new Wood Creek pond, which is designed above tidal influence. As such, this pond is anticipated to provide year-round rearing habitat for salmonids, replacing the year-round habitat currently provided in the Wood Creek culvert outlet pool downstream of Myrtle Avenue.

All of the Phase III Felt Slough channels will provide overwintering habitat for salmonids. The upper half of the new Felt Slough channel will maintain freshwater conditions and provide young-of-the-year (YOY) rearing habitat throughout the wet season. During extended periods of no precipitation, the channels in the lower portion of the Project Area may become too brackish for overwintering YOY salmonids but should remain suitable for smolts. During the dry season, the lower channel reaches of the Phase III Project will experience high salinity concentrations, similar to Phase II channels. However, the upstream portions of the main Felt Slough channel will remain fresh.

Overall, the Project is expected to benefit, Coho Salmon, Chinook Salmon, Coastal Cutthroat Trout, Steelhead Trout, as well as Tidewater Goby. In addition to fisheries habitat, this Project will accentuate existing wetlands and will not result in a net loss of wetlands. This Project Area has high value wetland for waterfowl and other non-fish species. Portions of the Felt Ranch Ditch will be filled, and shallow seasonal ponds constructed to create amphibian habitat. Additionally, avian perches and logs will be placed on the floodplain.

Multiple design features have been incorporated to reduce invasive species presence on site. These features are balanced with the objectives to create oversummering habitat for salmonids. To reduce bullfrog habitat the following design elements were included (1) filling in the upstream portions of the Felt Ranch Ditch where it would otherwise have remained a stagnant perennial freshwater waterbody; (2) downstream sections of the ditch will remain and will be tidal and fairly brackish during the summer, making it not suitable for bullfrog; (3) construction of shallow seasonal ponds in the footprint of the filled ditch to prevent bullfrog colonization, and (4) planting riparian trees (i.e. willow, spruce, etc.) around slow-water freshwater features to create shade along ponds, reducing the suitability for both bullfrogs and cattails. Post-construction, bullfrog monitoring will occur three times each year (summer months) and reported annually for up to three years.

Additional features to deter cattail growth include: (1) constructing pools with a depth of four feet to provide the desirable depth for rearing salmonids while also suppressing growth of cattails; and (2) constructing stream bank slopes relatively steep to avoid long shallow shelves that could promote growth of cattails.

Long-Term Net Benefits to Sensitive Species Recovery:

Estuarine environments, and especially the transition zones between freshwater and tidal habitats (stream-estuary ecotone), provide final foraging grounds for growth, and are essential for anadromous salmonids to undergo required physiological adaptations prior to entering the ocean (i.e., smoltification) (Healey 1982; Miller and Sadro 2003). The stream-estuary ecotone includes all tidal channels and fringing marsh habitats that are accessible to fish for at least some portion of the tidal cycle (Miller and Sadro 2003). Currently, however, only 10% of historically Humboldt Bay stream-estuary ecotone habitat remains accessible for fish due to levee construction and agricultural development of the Eureka Plain bottomlands over the past 165 years (HBWAC 2005). Non-natal rearing behavior of juvenile salmonids has been extensively documented in Humboldt Bay, and especially in Freshwater Creek by the California Department of Fish and Wildlife's (CDFW) Natural Stocks Assessment Project (NSA) (Wallace and Allen 2007, 2009, 2012, 2015; CDFG 2009, 2010; Wallace et al. 2015). Essentially, fish exhibit this behavior in the form of upstream/downstream migrations away from natal habitats to find suitable rearing conditions in other locations.

Long-term restoration efforts in Wood Creek have been implemented to improve stream-estuary habitats. Phase I, completed in 2009, focused on lower Wood Creek tide gate removal and tidal channel construction. Removing the tide gate returned tidal cycles to lower Wood Creek and restored 35 acres of tidal marsh, providing critical stream-estuary ecotone habitat for non-natal rearing ESA-listed salmonids in Humboldt Bay, as well as habitat for federally endangered Tidewater Goby. These efforts provided almost immediate



fisheries benefits upon Project completion, with juvenile Coho and steelhead documented utilizing the newly restored habitats in Wood Creek as soon as access was available (Wallace and Allen 2015).

Phase II was completed in 2016 on an additional 20 acres. The Phase II project enhanced hydrologic connectivity in Wood Creek by expanding and enhancing upstream tidal wetland habitats, increasing the amount of brackish backwater habitats available for non-natal rearing Coho Salmon, and steelhead and providing additional wetland ecosystem benefits. As with Phase I, fisheries biologists documented almost immediate utilization of the newly restored habitats by juvenile Coho in the Phase II sites (Wallace 2017). Approximately one month after the Phase II restoration was completed, CDFW documented more than 100 young of the year Coho utilizing the restored non-natal habitats (Wallace 2017).

Although Wood Creek may not provide salmonid spawning habitat, fish monitoring activities over the past 15 years have demonstrated the importance tidal wetlands of Wood Creek for non-natal rearing habitat for juvenile salmonids; primarily Coho Salmon (Barnhart 1992; HBWAC 2005; Laird 2013; NMFS 2014; Pickart 2006; Wallace and Allen 2015). This Project will greatly increase habitat connectivity and diversity along a salinity gradient extending from the mouth of Wood Creek upstream to the Felt Ranch freshwater marshlands. It will also provide a measure of resiliency against sea level rise/climate for all animals and plants that depend on stream-estuary ecotone habitats for all or part of their life cycles. The restored conditions will allow tidal wetland species to migrate upstream ahead of rising sea levels. The Project is a valuable next step to restoring what was once a thriving, interconnected stream-estuary ecotone while boosting the recovery trajectory of threatened Coho population in Humboldt Bay.

Additionally, the proposed Project is consistent with the following plans and policies related to federal, state-wide, and local species recovery:

- National Marine Fisheries Service 2014 Southern Oregon-Northern California Coast (SONCC) Coho Salmon Final Recovery Plan includes recovery strategies within the Humboldt Bay Tributaries which include restoring the natural watershed processes, improved quality and quantity of habitat, as well as increased accessibility of seasonally important rearing habitats.
- NOAA Fisheries' 2016 Coastal Multispecies Recovery Plan was developed for three salmon and steelhead species, two of which this Project would support: the California Coastal Chinook salmon Evolutionarily Significant Unit, and the Northern California steelhead Distinct Population Segment.
- Cal EPA 2014 California Water Action Plan, Priority 4 to conduct planning necessary to restore brackish stream corridor in an estuary that provides valuable fish and wildlife habitat.
- State Water Resources Control Board 2000 California Nonpoint Source Pollution Control Program, Management Measure 6B to recover of a range of wetland and riparian functions that existed previously by re-establishing hydrology, vegetation, and structure characteristics.
- California Department of Fish and Wildlife (CDFW) 2007 California Wildlife Action Plan, for Federal, state, and local agencies, nongovernmental conservation organizations, and private landowners to protect and restore under-protected and sensitive habitat types.
- CDFW 2004 Recovery Strategy for California Coho Salmon, Eureka Plain Task 2: Work with agencies and landowners to re-establish estuarine function; Eureka Plain Task 10: In cooperation with willing landowners, restore and maintain historical tidal areas, backwater channels, and salt marsh; and Rangewide-Estuarines Task 2: Restore estuarine and associated wetland ecosystems.
- Humboldt Bay Harbor, Conservation and Recreation District 2007 Humboldt Bay Management Plan (HBMP), Objective CAS-3 to restore habitat for Coho and Chinook salmon, steelhead trout, tidewater goby, and coastal cutthroat trout.
- Humboldt Bay Watershed Advisory Committee 2005 Humboldt Bay Watershed Salmon and Steelhead Conservation (HBSSC) Plan, goal to maintain and restore estuary processes that benefit salmonids.

References:

- Barnhart, R.A., M.J. Boyd and J.E. Pequegnat. 1992. The ecology of Humboldt Bay, California: an estuarine profile. Biological Report No. 1. U.S. Fish and Wildlife Service. Washington, D.C.
- California Department of Fish and Game (CDFG). 2009. Humboldt Bay juvenile salmonids investigations. Annual Performance Report. Federal Aid in Sport Fish Restoration Act. Grant Number F-122-R. Project No. 67.



- HBWAC (Humboldt Bay Watershed Advisory Committee). 2005. Humboldt Bay watershed salmon and steelhead conservation plan. Prepared for California Department of Fish and Game and the California Coastal Conservancy by the Humboldt Bay Watershed Advisory Committee and the Natural Resources Services Division of Redwood Community Action Agency.
- Laird, A. 2013. Humboldt Bay shoreline inventory, mapping, and sea level rise vulnerability assessment. Tech. rep., State Coastal Conservancy, Oakland, California.
- National Marine Fisheries Service (NMFS). 2014. Recovery Plan for Southern Oregon/Northern California Coast Coho Salmon (*Oncorhynchus kisutch*). National Marine Fisheries Service. Arcata, CA.
- Wallace, M., and S. Allen. 2007. Juvenile salmonid use of the tidal portions of selected tributaries to Humboldt Bay, California. Final Report for contract P0410504. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=17970>
- Wallace, M., and S. Allen. 2009. Juvenile salmonid use of the tidal portions of selected tributaries to Humboldt Bay, California. Final Report for contract P0610522. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=17971>
- Wallace, M., and S. Allen. 2012. Juvenile salmonid use of the tidal portions of selected tributaries to Humboldt Bay, California. Final Report for contract P0810517. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=106526>
- Wallace, M., and S. Allen. 2015. Juvenile salmonid use and restoration assessment of the tidal portions of selected tributaries to Humboldt Bay, California, 2011–2012. Fisheries Administrative Report 2015-02. California Department of Fish and Wildlife, Sacramento, USA.
- Wallace, M., S. Ricker, J. Garwood, A. Frimodig, and S. Allen. 2015. The importance of the stream-estuary ecotone to juvenile Coho Salmon (*Oncorhynchus kisutch*) in Humboldt Bay, California. California Fish and Game 101(4):241-266; 2015.
- Wallace, M. 2017. Wood Creek Habitat Restoration Phase 2, Pre/Post-Project Fish and Water Quality Sampling November 2016 to May 2017. California Department of Fish and Wildlife, Arcata, California. 35 p.
- Healey, M. C. 1982. Juvenile Pacific salmon in estuaries: the life support system. Pages 315-341 in V. Kennedy, editor. Estuarine comparisons. Academic Press, New York, USA.
- Miller, B. A., and S. Sadro. 2003. Residence time and seasonal movements of juvenile Coho Salmon in the ecotone and lower estuary of Winchester Creek, South Slough, Oregon. Transactions of the American Fisheries Society 132:546-559.

Procedures for the Protection of the Environment:

Avoidance measures have been included in all Project permit application and include:

-General Construction Season: The general construction season will be from June 15 through October 15 or October 31 pending approval from CDFW. Restoration, construction, fish relocation, and dewatering activities within any wetted and/or flowing creek channel shall only occur within this period. Extensions to this work season can be granted if there is less than a 50% chance of 1.5 inches of rain predicted over any 24-hour period during the granted time extension.

-All materials placed in or over streams, rivers or other waters shall be nontoxic; water containing mud or silt from construction activities shall be treated by filtration or retention in a settling pond to avoid draining sediment-laden water back to the stream channel; and screens shall be installed on all water pump intakes and other water withdrawal structures in compliance with NMFS, CDFW, and USFWS salmonid-screening specifications. Any consideration of treatment of reed canary grass with herbicides will be included in Clean Water Act permitting and used in a manner that avoids water quality impacts.

-Vegetation/Habitat Disturbance Protection Measures: Vegetation disturbance will be avoided and minimized to the extent practicable. Disturbed areas will be revegetated with plant species appropriate to the site. Disturbance to existing grades and native vegetation shall be limited to the actual site of the Project, necessary access routes, and staging areas.

In addition, pre-construction biological clearance surveys will occur for nesting birds if construction occurs during the nesting bird season (March 15 - Aug 15). Pre-construction biological clearance surveys will occur for special status amphibians (e.g., Northern Red-legged Frog). Dewatering and fish relocation will follow requirements established by NMFS, USFWS, and CDFW, as outlined in the NOAA Restoration Center and USFWS Programmatic Biological Opinions and Project-related CESA agreements.

The following permits are required and will be secured by the TBC, and the TBC will adhere to all permit conditions:



- U.S. Army Corps of Engineers (USACE) Nationwide Permit 27 for Clean Water Act 404 coverage
- Regional Water Board Clean Water Act 401 Water Quality Certification
- CDFW Lake and Streambed Alteration Agreement and CESA compliance
- NOAA Restoration Center Programmatic Biological Opinion coverage
- NOAA Restoration Center Consistency Determination for Coastal Act compliance
- U.S. Fish and Wildlife Service Programmatic Biological Opinion coverage
- Humboldt County Department of Public Works Use Permit
- The Humboldt County Department of Public Works will be the CEQA Lead Agency. The County will pursue a CEQA Statutory Exemption for Restoration Projects with the California Department of Fish and Wildlife.

See Attachment 7 - Avoidance and Minimization Measures.

Ongoing Management for the Protection of the Environment:

Long-term management of the Project will be consistent with existing state and federal management plans for special status species and the existing NRCS Wetland Reserve Easement on Felt Ranch. The existing NRCS easement and Land Trust management of the Project Area will remain in effect to ensure management of the property for natural resources in perpetuity. Long-term benefits to special status species are expected. Pre-construction fisheries monitoring has occurred and post-construction fisheries monitoring is planned. Following construction, the Habitat, Mitigation, and Monitoring Plan will be implemented to monitor invasive species removal, plant re-establishment, and wetland recovery.

The County Public Works Department will monitor, manage, and maintain the new culvert under Felt Road following existing maintenance and monitoring procedures. Obstructions or other hazards are not expected but will be removed as-needed should they occur.

Implementation of the County's General Plan will also support the long-term management and protection of the Wood Creek watershed. Policies in the Conservation and Open Space Element include those related maintaining, protecting, and restoring fish and wildlife habitats to maximize the long-term public and economic benefits from local biological resources. The Water Resources Element includes policies related to the protection of watersheds and their water resources. Additionally, the Land Use Element addresses maintenance of natural resources and lands managed for resource protection.

D. The Project does not include any construction activities, except for construction activities solely related to habitat restoration. Please cite and attach any supporting documents.

As the lead agency, Humboldt County Department of Public Works has determined that the Project does not include any construction activities, except for construction activities solely related to habitat restoration. The Project related construction activities are all related to the overall goal of the Project to restore habitat in the stream-estuary ecotone of Freshwater Creek and Humboldt Bay. Incidental improvements to the drainage along Felt Road are required to successfully complete the restoration activities, including rerouting Wood Creek and upsizing and relocating the Wood Creek Road culvert to improve fish passage and reduce stranding.

Attached supporting documents include Attachment 2 - Project Description, Attachment 3 - Basis of Design Report and 65% Design.



5. CERTIFICATION

I certify that I have the authority to determine whether a project is exempt pursuant to CEQA Guidelines section 15025(a)(1), and this Project meets all the requirements described in Public Resources Code section 21080.56, and that I have submitted all the determinations required therein necessary to obtain the concurrence of the Director of Fish and Wildlife.

Andrew Bundschuh

Date: 4/14/2023

Lead Agency Signature

Printed Name and Title: Andrew Bundschuh, Environmental Permitting and Compliance Manager