US Army Corps of Engineers ®
San Francisco District

Regulatory Division
450 Golden Gate Ave., 4th Floor
San Francisco, CA 94102-3406

SAN FRANCISCO DISTRICT

PUBLIC NOTICE

PROJECT: Lower Bear Creek Habitat Enhancement Project

PUBLIC NOTICE NUMBER: SPN-2023-00036
PUBLIC NOTICE DATE: May 19, 2023
COMMENTS DUE DATE: June 19, 2023

PERMIT MANAGER: Kendra Spicher TELEPHONE: (415) 503-6832 E-MAIL: Kendra.A.Spicher@usace.army.mil

1. INTRODUCTION:
Mattole Salmon Group (POC: Emma Held, (707-629-3433), 1800 Lighthouse Road, Petrolia, California 95558, has applied to the U.S. Army Corps of Engineers (USACE), San Francisco District, for a Department of the Army Permit for stream restoration along Lower Bear Creek (LBC) and raising Lighthouse Road (LHR) located in Humboldt County, California. This Department of the Army permit application is being processed pursuant to the provisions of Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq*.).

2. PROPOSED PROJECT:
Project Site Location: The Project is located adjacent to and on Lighthouse Road, along Lower Bear Creek, near the town of Petrolia, Humboldt County, California (S18 T2S R2W), Lat: 40.289008°, Long: -124.33457°.

Project Site Description: Historically, Lower Bear Creek flowed toward the west and eventually into the head of the Mattole River Estuary. In the 1970's, the stream was channelized across the alluvial fan, directing flow north and into the river. Following channelization, aggradation of sediment has reduced channel capacity, causing out-of-bank flooding across LHR and a private driveway that parallels the channel, and loss of contributing flow from LBC into the Middle Slough. Within the project area, there are 11.12 acres of Waters of the U.S.

Project Description: As shown in the attached drawings, the applicant proposes to realign approximately 2,000 feet of LBC from its present alignment towards the west towards its historical alignment, raise LHR and an existing private drive 2-5 feet, install a culvert crossing on LHR, realign a portion of a private drive and install a bridge crossing on the private drive. The Project would also excavate a sediment capture channel running parallel to LHR and place a minimum of 27 pieces of large wood in the new channel for low-velocity freshwater habitat creation.

Channel Design:

The new channel design consists of four sections: delivery reach, upper depositional reach, lower depositional reach and slough channel reach. The delivery reach would extend downstream from the existing channel approximately 345 feet, ending where the existing fan has a natural slope break. The delivery channel would be steep and confined to convey coarse sediment downstream of the new driveway bridge. The upper depositional reach would continue from there for approximately 380 feet, ending close to the distal end of the existing alluvial

fan. From here, the lower depositional reach would extend downstream for approximately 470 feet and is expected to aggrade with fine and medium grain sands. The project's downstream-most reach is the slough channel reach that extends approximately 860 feet, crosses under LHR and is rerouted into an old channel scar and then into the head of the existing Dogleg Pool. The downstream 500 feet of this reach will be within residual backwater of the Dogleg Pool, providing low velocity slough habitat. An additional capture channel and a series of small alcoves will be excavated alongside the realigned LBC channel as a means to collect bank overflow and reroute it back to the channel before crossing under the road.

Large Wood Placement:

A minimum of 27 pieces of large wood (minimum 12 inches in diameter and minimum 25 feet in length) will be placed in the lower reaches of the project. Wood will be stabilized by weaving and wedging logs between existing trees, burying logs into the bank and anchoring with through-bolts when necessary.

Stream Crossings:

Lighthouse Road Stream Crossing

An open bottom arch culvert with mitered ends set on concrete footings with a concrete apron spanning the footings will be installed at Lighthouse Road.

Private Driveway Bridge

The new bridge will be a single span 60-foot long, 16-foot-wide voided concrete slab bridge placed on concrete footings. The concrete slab will consist of four separate girder modules that are 4 feet wide and 26 inches deep. The concrete slab will double as the driving surface.

Road Construction:

Lighthouse Road

The proposed project will raise Lighthouse Road from 1.5 to 5 feet for a length of 1,500 feet along its current alignment. The new roadway section will be 25 feet wide with 2:1 embankment side slope. An estimated 6,400 cubic yards of materials will be needed to raise LHR to the design elevation. This material is expected to be generated on-site from the channel construction.

Private Driveway

The private drive on APN 104-031-132 will be realigned and raised. The driveway will be relocated approximately 130 feet east of its current location to an existing second driveway on the property for approximately 1,000 feet. The current driveway that parallels LBC would be abandoned for a length of approximately 300 feet. The driveway will be raised 2 to 2.5 feet to match the LHR elevation, and as much as 11 feet to meet the elevation of the new bridge crossing. An estimated 7,125 cubic yards of material is needed to raise the private drive to design elevation. This material is expected to be generated on-site from the channel construction.

Basic Project Purpose: The basic project purpose comprises the fundamental, essential, or irreducible purpose of the project, and is used by USACE to determine whether the project is water dependent. The basic project purpose is to improve fish habitat and reduce flooding.

Overall Project Purpose: The overall project purpose serves as the basis for the Section 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project while allowing a reasonable range of alternatives to be analyzed. The overall project purpose is to restore connectivity of Lower Bear Creek to the Middle Slough of the Mattole River estuary for fisheries habitat enhancements while addressing chronic and episodic sedimentation within the Lower Bear Creek channel that results in flooding of the County maintained Lighthouse Road and an adjacent private driveway.

Project Impacts: The construction of the new channel will utilize rock and gravel to create the channel bed, resulting in temporary impacts to 325 linear feet/0.2 acres of waters of the U.S. from the placement of 700 cubic yards of material. The main channel excavation will occur in the historical flow

path of Lower Bear Creek and will total 2,010 linear feet/2.1 acres and excavate 10,900 cubic yards of material. The capture/side channel excavation will occur adjacent to the historic stream channel in the riparian area/floodplain and will temporarily impact 750 linear feet/0.06 acres of waters of the U.S. and excavate 1,950 cubic yards of material. Usable material generated from channel excavation will be used for raising Lighthouse Road and the private drive as much as possible.

Permanent impacts include the placement of fill at the two proposed LBC crossings. The bridge will result in permanent impacts to 60 linear feet/0.04 acres of waters of the U.S. from the placement of 200 cubic yards of fill. The other LBC crossing proposed is a culvert routing flow under Lighthouse Road and into the Dogleg Pool at the upstream extent of the Mattole Slough. The culvert will result in permanent fill impacts to 75 linear feet/0.06 acres and require 20 cubic yards of fill.

Proposed Mitigation: Best management practices would be implemented for air quality, biological resources, vegetation, wetland habitat, cultural resources, and water quality. The applicant proposes no compensatory mitigation because the project is intended to improve the condition of stream habitat in the project area from its current degraded state and will have a beneficial impact on temperature in the Mattole Middle Slough area. Permanent impacts associated with bridge and culvert installation are minimal and have minimization measures in place.

Establish Exclusion Areas and Erosion Control

Prior to construction, any exclusion areas to protect delineated wetlands or Sensitive Natural Communities would be installed by the contractor pursuant the final construction design plans. To minimize erosion, sediment, and pollutant contribution to the Mattole River, BMPs would be instituted, including:

- Construction would occur in summer when the chance of precipitation is lowest and Mattole River instream flows are at their annual minimum.

– Construction equipment would be cleaned and inspected prior to use. Equipment maintenance and fueling would be done at designated staging areas and away from the Mattole River or any delineated wetlands. Equipment would not enter the wetted environment of the Mattole River.

– On-site stockpiles would be isolated with silt fence, filter fabric, and/or straw bales/fiber rolls.

– Silt fence or fiber rolls would be placed below the project areas to contain loose rolling rocks and sediment. Silt fence/fiber rolls would be kept in place and maintained during the entire project. Any sediment caught by the fence or rolls would be removed before the fence/rolls are pulled.

– Ground disturbed by construction work would be revegetated with fast-growing native grasses and sterile hybrids and mulched when work is complete.

– The site would be monitored during winter rains and any evidence of erosion (rilling, gullies, etc.) would be repaired immediately. In addition, areas where revegetation is not successful would be reseeded and remulched to ensure vegetative ground cover.

Vegetation Removal

Vegetation removal would be limited to minor roadside vegetation in the areas where Lighthouse Road would be installed, within and immediately adjacent to the private driveway and bridge location, in the location of the new Lighthouse Road culvert, as needed in the new Lower Bear Creek stream channel, and in limited areas for construction access. Vegetation removal would include minor mowing, minor brush removal and limited tree removal.

To minimize potential impacts to birds, vegetation could be removed prior to February 1 or after August 31 to avoid the nesting bird season. If vegetation removal or ground disturbance cannot be confined to work outside of the nesting season, a qualified ornithologist would conduct pre-construction surveys within the vicinity of the project area, to check for nesting activity of native birds and to evaluate the site for presence of raptors and special-status bird species. If active nests were detected within the construction footprint or within the construction buffer

established by the Project biologist, the biologist would flag a buffer around each nest.

Project Alternatives: The applicant has submitted an alternative analysis where they explored six alternatives. The no action alternative will results in required ongoing maintenance of LHR to address LBC flooding and sedimentation, resulting in impacts to adjacent aquatic habitat.

Onsite Alternative 1 includes construction of dual sediment capture basins, which would use an actively managed sediment basin for the coarse material and a downstream passive sediment depositional zone for the finer material.

On site alternative 2 includes a single sediment capture basin, which may result in higher risk of channel avulsion and overbank flooding to Lighthouse Road than other options.

On site alternative 3 includes excavating the western portion of the alluvial fan and allowing it to rebuild through natural depositional processes (>20,000 cy storage capacity). This is intended to "set the clock back" in terms of fan development. The option also realigns the driveway, provides a new driveway crossing at head of fan, and uses the realigned driveway embankment to assist in limiting the area designed for sediment deposit.

On site alternative 4 includes natural fan growth confined by berms, which will allow natural deposition along the western side of the fan with minimum 6 feet tall containment berms to protect Lighthouse Road while creating storage for approximately 12,000 cy of sediment deposition. It would realign and raise the driveway along the base of hillslope with a new stream crossing, and use the berms and roadway embankment of the new and raised driveway to contain the sediment depositional zone.

On site alternative 5 is to realign approximately 2,200 feet of Lighthouse Road towards the base of Prosper Ridge, crossing LBC near the head of the alluvial fan to support natural fan processes. Vegetated (willow) steering berms and a "capture channel" constructed in the current roadway footprint would help keep streamflow directed westward, towards the Middle Slough. This option would result in moving County road onto private parcels, requiring additional landowner buy-in and County acquisition of property, and would place public road directly in front of the existing residential structure located immediately west of LBC.

Raising Lighthouse Road appears to best meet the project objectives, allowing for natural functions of the creek and the alluvial fan, and creating unrestrictive fish passage to the habitat south of the road. The alternative with the greatest impacts to wetlands is alternative 5, which would realign Lighthouse Road.

USACE has not endorsed the submitted alternatives analysis at this time. USACE will conduct an independent review of the project alternatives prior to reaching a final permit decision.

3. STATE AND LOCAL APPROVALS:

Water Quality Certification: State water quality certification or a waiver thereof is a prerequisite for the issuance of a Department of the Army Permit to conduct any activity which may result in a fill or pollutant discharge into waters of the United States, pursuant to Section 401 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1341 *et seq*.). The applicant is hereby notified that, unless USACE is provided documentation indicating a complete application for water quality certification has been submitted to the RWQCB within 30 days of this Public Notice date, the District Engineer may consider the application incomplete. No Department of the Army Permit will be issued until the applicant obtains the required certification or a waiver of certification. A waiver can be explicit, or it may be presumed if the RWQCB fails or refuses to act on a complete application for water quality certification within 60 days of receipt, unless the District Engineer determines a shorter or longer period is a reasonable time for the RWQCB to act.

Water quality issues should be directed to the Executive Officer, California Regional Water Quality Control Board, North Coast Region, 5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403, by the close of the comment period.

Coastal Zone Management: Section 307(c) of the Coastal Zone Management Act of 1972, as amended (16 U.S.C. § 1456(c) *et seq*.), requires a non-Federal applicant seeking a federal license or permit to conduct any activity occurring in or affecting the coastal zone to obtain a Consistency Certification that indicates the activity conforms with the state's coastal zone management program. Generally, no federal license or permit will be granted until the appropriate state agency has issued a Consistency Certification or has waived its right to do so. Since the project occurs in the coastal zone or may affect coastal zone resources, the applicant is hereby advised to apply for a Consistency Determination from the California Coastal Commission to comply with this requirement.

Other Local Approvals: The applicant will be applying for the following additional governmental authorizations for the project: County encroachment and grading permits and Section 1600 Lake and Streambed Alteration Agreement

4. COMPLIANCE WITH VARIOUS FEDERAL LAWS:

National Environmental Policy Act (NEPA): Upon review of the Department of the Army permit application and other supporting documentation, USACE has made a *preliminary* determination that the project neither qualifies for a Categorical Exclusion nor requires the preparation of an Environmental Impact Statement for the purposes of NEPA. At the conclusion of the public comment period, USACE will assess the environmental impacts of the project in accordance with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347), the Council on Environmental Quality's regulations at 40 C.F.R. Â§ 1500-1508, and USACE regulations at 33 C.F.R. Â§ 325. The final NEPA analysis will normally address the direct, indirect, and cumulative impacts that result from regulated activities within the jurisdiction of USACE and other non-regulated activities USACE determines to be within its purview of Federal control and responsibility to justify an expanded scope of analysis for NEPA purposes. The final NEPA analysis will be incorporated in the decision documentation that provides the rationale for issuing or denying a Department of the Army Permit for the project. The final NEPA analysis and supporting documentation will be on file with the San Francisco District, Regulatory Division.

Endangered Species Act (ESA): Section 7(a)(2) of the ESA of 1973, as amended (16 U.S.C. Â§ 1531 *et seq*.), requires Federal agencies to consult with either the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) to ensure actions authorized, funded, or undertaken by the agency are not likely to jeopardize the continued existence of any Federally-listed species or result in the adverse modification of designated critical habitat. As the Federal lead agency for this project, USACE has conducted a review of the California Natural Diversity Data Base, digital maps prepared by USFWS and NMFS depicting critical habitat, and other information provided by the applicant to determine the presence or absence of such species and critical habitat in the project area. Based on this review, USACE has made a preliminary determination that the following Federally-listed species and designated critical habitat is present at the project location or in its vicinity and may be affected by project implementation. The project reach of Lower Bear Creek contains Coho salmon (*Oncorhynchus kisutch*), Chinook salmon (*Oncorhynchus tshawytscha*, Steelhead (*Oncorhynchus mykiss*), and Northern Spotted Owl (*Strix occidentalis caurina*). Critical habitat has been also designated for Chinook salmon, Steelhead, and Northern Spotted Owl. The overall project could potentially induce changes in channel morphology, including the loss of pool and riffle habitat and degradation of the riverbed; promote the stranding of salmonids on the affected bars; result in direct mortality of salmonids during construction and relocation of juvenile salmonids from the excavated pools; cause the loss of riparian vegetation and large wood debris; and generate turbidity and downstream sedimentation, the deposition of which would likely contribute to the degradation of spawning gravels. To address project related impacts to Federally-listed species and designated critical habitat, USACE will initiate formal consultation with USFWS and NMFS, pursuant to Section 7(a) of the Act. Any required consultation must be concluded prior to the issuance of a Department of the Army Permit for the project.

Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA): Section 305(b)(2) of

the MSFCMA of 1966, as amended (16 U.S.C. Â§ 1801 *et seq*.), requires Federal agencies to consult with the NMFS on all proposed actions authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is designated only for those species managed under a Federal Fisheries Management Plan (FMP), such as the *Pacific Groundfish FMP*, the *Coastal Pelagics FMP,* or the *Pacific Coast Salmon FMP*. As the Federal lead agency for this project, USACE has conducted a review of digital maps prepared by NMFS depicting EFH to determine the presence or absence of EFH in the project area. Based on this review, USACE has made a *preliminary* determination that EFH is present at the project location or in its vicinity and that the critical elements of EFH may be adversely affected by project implementation. Pacific Coast Salmon FMP and Pacific Groundfish FMP is designated in the project area; potential effects include increased turbidity, decreased water quality, and changes in available habitat and riparian vegetation. To address project related impacts to EFH, USACE will initiate consultation with NMFS, pursuant to Section 305(5(b)(2) of the Act. Any required consultation must be concluded prior to the issuance of a Department of the Army Permit for the project.

Marine Protection, Research, and Sanctuaries Act (MPRSA): Section 302 of the MPRSA of 1972, as amended (16 U.S.C. Â§ 1432 *et seq*.), authorizes the Secretary of Commerce, in part, to designate areas of ocean waters, such as the Cordell Bank, Gulf of the Farallones, and Monterey Bay, as National Marine Sanctuaries for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or aesthetic values. After such designation, activities in sanctuary waters authorized under other authorities are valid only if the Secretary of Commerce certifies that the activities are consistent with Title III of the Act. No Department of the Army Permit will be issued until the applicant obtains any required certification or permit. The project does not occur in sanctuary waters, and a *preliminary* review by USACE indicates the project is not likely to affect sanctuary resources. This presumption of effect, however, remains subject to a final determination by the Secretary of Commerce or his designee.

National Historic Preservation Act (NHPA): Section 106 of the NHPA of 1966, as amended (16 U.S.C. Â§ 470 *et seq*.), requires Federal agencies to consult with the appropriate State Historic Preservation Officer to take into account the effects of their undertakings on historic properties listed in or eligible for listing in the *National Register of Historic Places.* Section 106 of the Act further requires Federal agencies to consult with the appropriate Tribal Historic Preservation Officer or any Indian tribe to take into account the effects of their undertakings on historic properties, including traditional cultural properties, trust resources, and sacred sites, to which Indian tribes attach historic, religious, and cultural significance. As the Federal lead agency for this undertaking, USACE has conducted a review of the latest published version of the *National Register of Historic Places*, survey information on file with various city and county municipalities, and other information provided by the applicant to determine the presence or absence of historic and archaeological resources within the permit area. Based on this review, USACE has made a *preliminary* determination that historic or archaeological resources are not likely to be present in the permit area and that the project either has no potential to cause effects to these resources or has no effect to these resources. USACE will render a final determination on the need for consultation at the close of the comment period, taking into account any comments provided by the State Historic Preservation Officer, the Tribal Historic Preservation Officer, the Advisory Council on Historic Preservation, and Native American Nations or other tribal governments.

5. COMPLIANCE WITH THE SECTION 404(b)(1) GUIDELINES:

Projects resulting in discharges of dredged or fill material into waters of the United States must comply with the Guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b) of the Clean Water Act (33 U.S.C. § 1344(b)). An evaluation pursuant to the Guidelines indicates the project is dependent on location in or proximity to waters of the United States to achieve the basic project purpose. This conclusion

raises the (rebuttable) presumption of the availability of a practicable alternative to the project that would result in less adverse impacts to the aquatic ecosystem while not causing other major adverse environmental consequences. The applicant has submitted an analysis of project alternatives, and the Corps is in the process of reviewing the document for compliance with the Guidelines.

6. PUBLIC INTEREST EVALUTION:
The decision on whether to issue a Department of the Army Permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the project and its intended use on the public interest. Evaluation of the probable impacts requires a careful weighing of the public interest factors relevant in each particular case. The benefits that may accrue from the project must be balanced against any reasonably foreseeable detriments of project implementation. The decision on permit issuance will, therefore, reflect the national concern for both protection and utilization of important resources. Public interest factors which may be relevant to the decision process include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

7. CONSIDERATION OF COMMENTS:
USACE is soliciting comments from the public; Federal, State, and local agencies and officials; Native American Nations or other tribal governments; and other interested parties in order to consider and evaluate the impacts of the project. All comments received by USACE will be considered in the decision on whether to issue, modify, condition, or deny a Department of the Army Permit for the project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, and other environmental or public interest factors addressed in a final environmental assessment or environmental impact statement. Comments are also used to determine the need for a public hearing and to determine the overall public interest in the project.

8. SUBMITTING COMMENTS:
During the specified comment period, interested parties may submit written comments to Kendra Spicher, San Francisco District, Regulatory Division, 450 Golden Gate Avenue, 4th Floor, San Francisco, California 94102-3404; comment letters should cite the project name, applicant name, and public notice number to facilitate review by the Regulatory Permit Manager. Comments may include a request for a public hearing on the project prior to a determination on the Department of the Army permit application; such requests shall state, with particularity, the reasons for holding a public hearing. All substantive comments will be forwarded to the applicant for resolution or rebuttal. Additional project information or details on any subsequent project modifications of a minor nature may be obtained from the applicant and/or agent or by contacting the Regulatory Permit Manager by telephone or e-mail (cited in the public notice letterhead). An electronic version of this public notice may be viewed under the *Public Notices* tab on the USACE website: https://www.spn.usace.army.mil/Missions/Regulatory .