INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

FOR

LA DOO MEADOW STREAMFLOW ENHANCEMENT PROJECT

May 2023

Lead Agency:
County of Humboldt

Lead Agency Contact:
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TABLE OF CONTENTS

ATTACHMENTS

Attachment A: Basis of Design (BOD) Report for the La Doo Meadow Streamflow Enhancement Project, Humboldt County, California (Stillwater Sciences, March 2023)

Attachment B: Project Emissions Background Documentation (CalEEMod)

Attachment C: Bullfrog management plan

I. PROJECT INFORMATION

Date: May 2023

Project Title: La Doo Meadow Streamflow Enhancement Project

Lead Agency: County of Humboldt

Lead Agency Contact:
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3015 H Street
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Applicant:
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srf@calsalmon.org

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Stillwater Sciences
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Current General Plan Designation: County of Humboldt APNS 222-085-002-000 & 222-084-004

- Timberland (T)

Current Zoning: County of Humboldt

- AE-B-5/TPZ

Property Owners and Parcels:

Humboldt County				
Landowner	**Location**	**Parcel #**	**Contact**	**Phone**
Wagner Land Company	Briceland, CA	222-085-002 & 222-084-004	Zachary Johnson	209-712-9992

II. PROJECT DESCRIPTION

The primary objective of this project is construction a 5 million gallon of off-channel pond and associated plumbing infrastructure designed to deliver approximately 15 gallons per minute (GPM)of flow augmentation to Sproul Creek during the 5-month dry season to improve instream aquatic habitat. Storage will be filled with wet-season runoff including rainwater catchment and water pumped from a small Sproul Creek tributary. In addition to the instream flow benefits, this project will also significantly improve the community's resilience to wildfire by providing a large dry-season water source. Other ancillary project components include:

- Construction of a grid-intertie solar power system to offset the energy use and a backup power supply including battery bank, inverter, internet connection, and small control center building to support operations and monitoring capabilities.
- Upgrading access roads within the project area including road/stream crossing upgrades and gravel surfacing to provide year-round access.

These project design features are described in detail in the Basis of Design (BOD) Report and 65% Design Plans included as Attachment A of this Mitigated Negative Declaration (MND).

This project is proposed on the Wagner Land Company ownership and integrated alongside a conservation easement encompassing the entire ranch that is managed by the California Rangeland Trust. This conservation easement guarantees that the ownership will not be subdivided and will be maintained for timber harvest activities and wildlife conservation. These restrictions will be especially beneficial in this region, where small subdivisions are frequently used for cannabis cultivation with detrimental impacts to water quality and supply, as well as fish and wildlife habitat.

After construction has been completed, extensive post-project operations, monitoring and adaptive management will be conducted to ensure that the project is functioning as designed. This will be conducted by the project team (Wagner Land Company, Stillwater Sciences and Salmonid Restoration Federation [SRF]) and with continued involvement of the Project's Technical Advisory Committee (TAC) including representatives from multiple state and federal agencies including Wildlife Conservation Board (WCB), California Department of Fish and Wildlife (CDFW), NOAA Fisheries, State Water Resources Control Board (SWRCB), and North Coast Regional Water Quality Control Board (NCRWQCB).

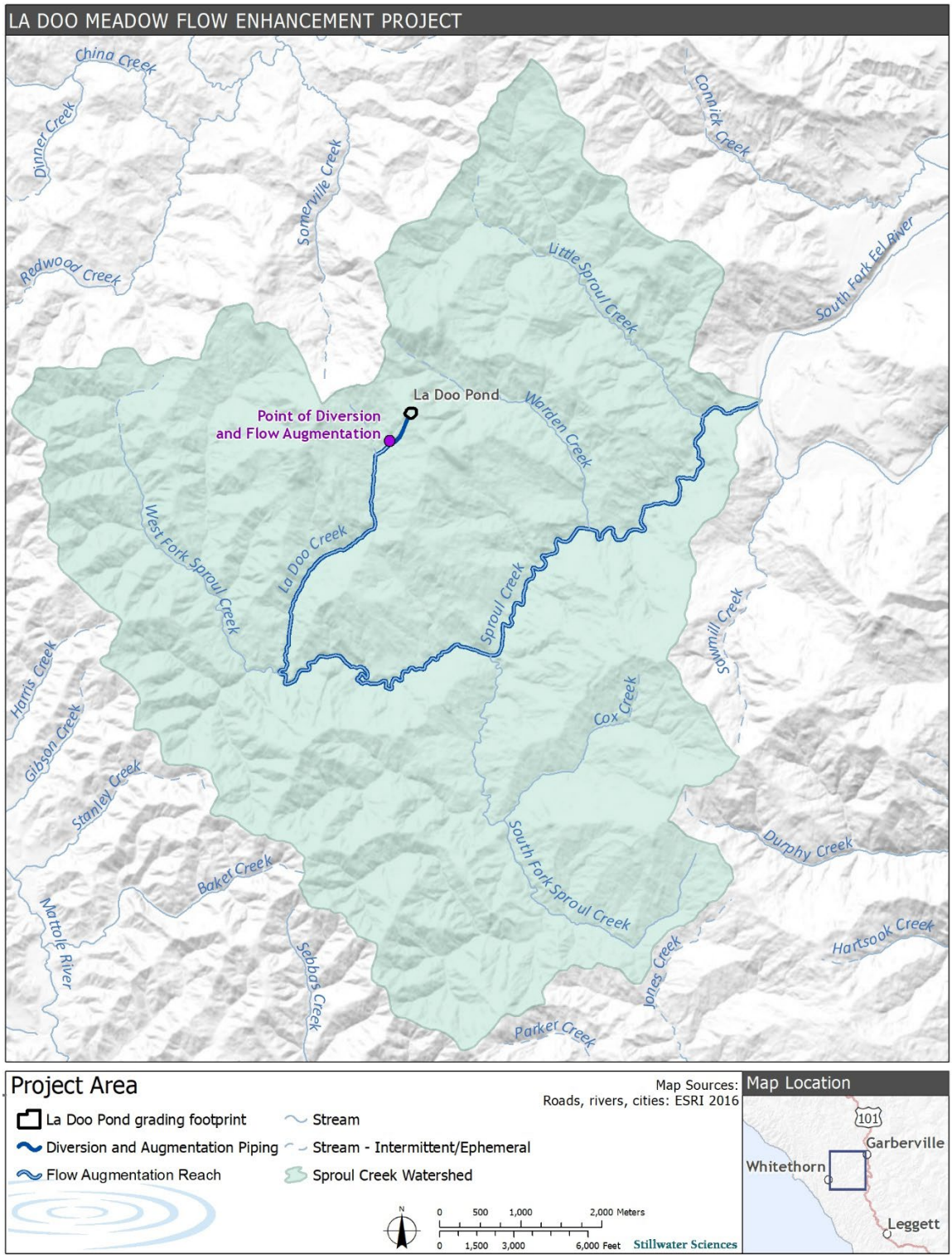

Figure 1: Project Location Map

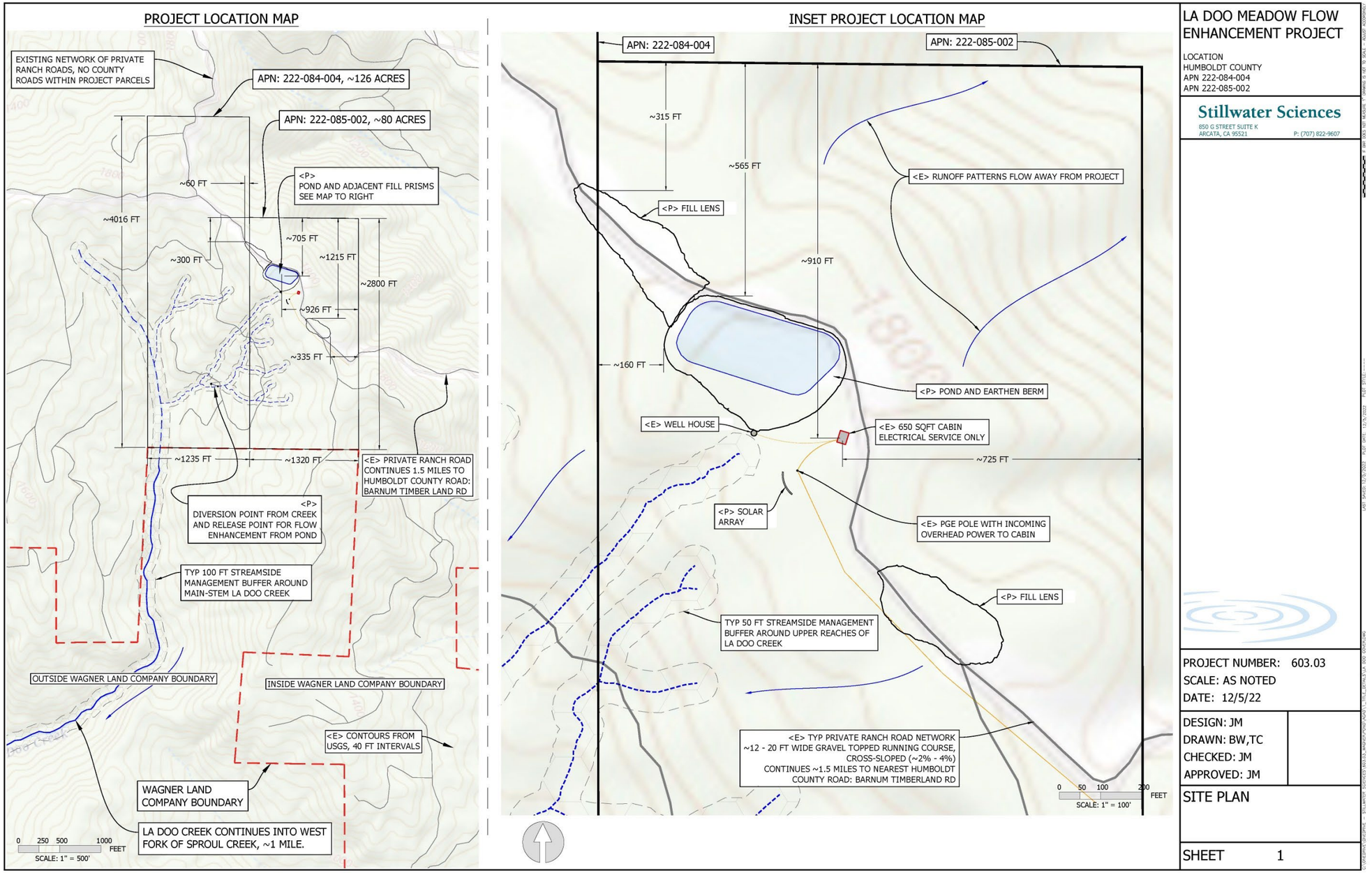

Figure 2: Project Site Plan

Background: The South Fork Eel River is one of five priority watersheds selected for flow enhancement projects in California by the SWRCB and CDFW as part of the California Water Action Plan effort (SWRCB 2019). Sproul Creek is a critical tributary to the South Fork Eel River (NMFS, 2014) that historically supported coho and chinook salmon (*Oncorhynchus tshawytscha*) and steelhead.

Coho salmon stocks in the South Fork Eel River Watershed may have historically constituted one of the largest populations of the species in California (NMFS 2014). However, their population has experienced a precipitous decline, with an approximately 1,200% reduction observed between the 1930s and 1991 (BLM et al. 1996, Brown and Moyle 1991). Today, the population is threatened, with the National Marine Fisheries Service assigning a moderate risk of extinction to the Southern Oregon and Northern California Evolutionarily Significant Unit (SONCC ESU). This ESU is currently listed as threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA).

Numerous factors are responsible for the declines in coho salmon abundance, and many of these limiting factors are also impacting Chinook salmon and steelhead, which are also severely reduced in abundance relative to historical population estimates. Land use practices including logging and road systems have greatly increased winter runoff resulting in decreased groundwater storage and historically low summer streamflows. Widespread removal of large wood from streams has also decreased groundwater storage through channel incision and loss of floodplain connectivity, and resulted in fewer and shallower instream pools that are of insufficient size to withstand drought. Cannabis cultivation has also expanded in the last 15 years, which has resulted in increased water diversions that have affected area watercourses and summer stream flows. Industrial logging practices combined with fire suppression have resulted in overly dense even-aged forests with higher evapotranspiration rates, which significantly contribute to lower dry season flows. Flows in West Fork Sproul Creek, the primary stream reach that will benefit from the project, have fallen below 15 gpm during the driest part of the season in five of the last seven years as described in Section 8.3 of the BOD report for the project included in Attachment A of this MND. The problems of reduced groundwater storage and increased evapotranspiration are intensified during longer dry seasons which have become the norm during the past decade.

SRF and California Trout (CalTrout) have been conducting low flow monitoring in Sproul Creek during the past eight dry seasons. During drought years such as 2015 and 2021, extensive stream reaches within Sproul Creek and its tributaries dry up leading to significant mortality of salmonids.

There are several examples analogous to this Project where stored water is used to directly augment dry-season streamflow. Flow releases from two different agricultural ponds and one municipal groundwater well to tributaries of the Russian River in Sonoma County demonstrate encouraging results. As described in Ruiz et al. (2019), the Sonoma project began in 2015 and is ongoing. Data show that flow augmentations in all years from 2015–2018, appreciably increased wetted habitat and increased stream water dissolved oxygen downstream from the flow release points. While modest compared to winter flows, these augmentations have the potential to increase pool connectivity and improve water quality. A foundational hypothesis for this Project, that increased pool connectivity will bolster over-summer salmonid survival, is supported by the work of Obedzinski, Pierce, Horton, and Deitch (2018). Their study found that days of disconnected surface flow showed a strong negative correlation with juvenile coho salmon survival rate in four tributaries to the Russian River. Provided this evidence, it is anticipated that

the Project's release of approximately 15 GPM into Sproul Creek throughout the dry season is expected to result in significant habitat benefit.

Surrounding Land Uses: The lands surrounding the project consist primarily of large private holdings used for timber production. The proposed pond construction site is located on a ridgetop covered by grassland and flanked by forest.

Project Consistency with Local and Regional Plans: The Project addresses many of the goals and policies included in the Humboldt County General Plan's Water Resources element:

- WR-G2 - Water Resource Habitat**.** River and stream habitat supporting the recovery and continued viability of wild, native salmonid and other abundant cold water fish populations supporting a thriving commercial, sport, and tribal fishery.
- WR-G9 - Restored Water Quality and Watersheds. All water bodies de-listed and watersheds restored, providing high quality habitat and a full range of beneficial uses and ecosystem services.
- WR-P23 - Watershed and Community Based Efforts. Support the efforts of local community watershed groups to protect, restore, and monitor water resources and work with local groups to ensure decisions and programs take into account local priorities and needs.
- WR-P25 - State and Federal Watershed Initiatives. Support implementation of state and federal watershed initiatives such as the Total Maximum Daily Loads (TMDLs), the North Coast Regional Water Quality Control Board's (NCRWQCB) Watershed Management Initiative, the National Marine Fisheries Services and Department of Fish and Game coho recovery plans and the California Non-Point Source Program Plan.
- WR-IMP19 - Coordinate and Support Watershed Efforts. Seek funding and work with land and water management agencies, community-based watershed restoration groups, and private property owners to implement programs for maintaining and improving watershed conditions that contribute to improved water quality and supply.

Additionally, the project also addresses the goals of important statewide and federal plans. The project directly addresses the goals of the California Water Action Plan (SWRCB 2019) and will ensure the restoration of critically important habitat. The Project supports the following actions: 1) Restoration of degraded stream ecosystems to assist in natural water management and improved habitat; 2) Enhancement of water flows in stream systems statewide; 3) Expansion of water storage capacity and improvement of groundwater management; and 4) Management and preparation for dry periods.

The Project addresses Goal B of the WCB Strategic Plan (WCB 2014): Work with partners to restore and enhance natural areas, create viable habitat on working lands, manage adaptively, and ensure long-term ecosystem health and strategic direction. It also addresses goal B.1: Invest in projects and landscape areas that help provide resilience in the face of climate change, enhance water resources for fish and wildlife and enhance habitats on working lands. The Project includes a collaborative team of partners, will improve habitat on adjacent sustainable forestry working land, will include adaptive management, and will help ensure long - term ecosystem health and resilience to climate change related drought as well as intensified rainfall events.

The Project also aligns with Goal 2 of the State Wildlife Action Plan (CDFW 2015) – Enhance Ecosystem Conditions, and Goal 3 – Enhance Ecosystem Functions and Processes: Maintain and improve ecological conditions vital for sustaining ecosystems in California. Specifically, the

project objective is to enhance dry season flows thereby increasing water quantity and availability vital for sustaining aquatic ecosystems during the summer and early fall months.

NOAA Fisheries has prioritized a list of recovery actions for coho salmon in the South Fork Eel River Population chapter of their SONCC Recovery Plan (NMFS 2014). The proposed strategy universal to the top 10 priority actions is listed as "Improve flow timing or volume." Additionally, Sproul Creek is repeatedly identified as a "stream where coho would benefit immediately," and is regarded as a high priority tributary with high habitat value in the South Fork Eel River watershed. While specific action items for this strategy primarily focus on diversion reduction to improve flows, the Project's reservoir surely utilizes the same strategy to accomplish a common goal. Additionally, components of the project do align with specific action items in the recovery plan including increased channel complexity, decreased water temperature, increased dissolved oxygen, and reduced sediment delivery.

Other Public Agencies Whose Approval Is Required (permits, financing approval, or participation agreement): California Wildlife Conservation Board, U.S Army Corps of Engineers, National Marine Fisheries Service, U. S. Fish and Wildlife Service, NCRWQCB, SWRCB, and CDFW.

The Project will aim to secure implementation funding from the CA Wildlife Conservation Board) Streamflow Enhancement Program. The Project may also in the future secure funding from other sources including (but not limited to) State Coastal Conservancy (SCC), CDFW Grant Programs, and Department of Water Resources (DWR). Projects funded by these agencies are subject to review under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).

Current planning, 65% design and CEQA review for the Project is funded solely by the WCB Proposition 1 funds. In the future after CEQA approval, additional grant funding will be sought for final design, permitting, implementation, operations, and monitoring. This Initial Study and MND describe and analyze the potential significant impacts of all Project treatments at all sites. Individual restoration activities will require additional environmental permitting from CDFW, SWRCB, NCRWQCB, and federal agencies. The Project will also include operations, monitoring and adaptive management. Construction is expected to be completed during one dry season, likely 2025, depending on availability of implementation funds as well as contract and permit execution dates. Construction will be performed with standard heavy equipment including excavators, sheepsfoot compactor, bulldozer, and offroad dump trucks. Heavy equipment will be transported to the Wagner property on lowboy gooseneck trailers.

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

As described in detail below, a Cultural Resources Assessment has been completed for the project site which recommends measures to avoid impacts to cultural resources. Through the Special Permit application process with the Humboldt County Planning Department which began in December 2022, local tribes have been notified of the project. A letter of support from the Wailaki Tribe was received on March 29, 2023. An offer of tribal consultation pursuant to AB52 was sent to all area tribes on April 1, 2023 and no requests for consultation were received.

CEQA Requirement:
The Project is subject to the requirements of the CEQA. The Lead Agency is the County of Humboldt (County), per CEQA Guidelines Section 21067. The purpose of this Initial Study is to provide a basis for determining whether to prepare an Environmental Impact Report (EIR) or a

Negative Declaration. This Initial Study is intended to satisfy the requirements of CEQA (Public Resources Code, Div 13, Sec 21000-21177) and the State CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387).

CEQA encourages lead agencies and applicants to modify their projects to avoid potentially significant adverse impacts (CEQA Section 20180[c][2] and State CEQA Guidelines Section 15070[b][2]).

Section 15063(d) of the State CEQA Guidelines states that an IS shall contain the following information in brief form:

1) A description of the project including the project location
2) Identification of the environmental setting
3) Identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to provide evidence to support the entries
4) Discussion of means to mitigate significant effects identified
5) Examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls
6) The name of the person or persons who prepared and/or participated in the IS

The Finding: Although the projects may have the potential to cause minor short-term impacts on soil, vegetation, wildlife, water quality, and aquatic life, the measures that shall be incorporated into the project will lessen such impacts to a level that is less than significant (see initial study and environmental impacts checklist).

Basis for the Finding: Based on the initial study, it was determined there would be no significant adverse environmental effects resulting from implementing the proposed project. The project is designed to provide environmental benefit by enhancing and maintaining quality salmonid spawning and rearing habitat in the project area and downstream through augmentation of dry season stream flows.

Humboldt County finds that implementing the proposed projects will have no significant environmental impact. Therefore, this mitigated negative declaration is filed pursuant to CEQA, Public Resources Code § 21080 (c2). This proposed mitigated negative declaration consists of all of the following:

III. 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	❑ Agricultural and Forestry Resources	❑ Air Quality
☒ Biological Resources	☒ Cultural Resources	❑ Energy
❑ Geology/Soils	❑ Greenhouse Gas Emissions	❑ Mineral Resources
❑ Hazards/Hazardous Materials	❑ Land Use/Planning	❑ Noise
❑ Hydrology/Water Quality	❑ Population/Housing	❑ Public Services
❑ Recreation	❑ Transportation/Traffic	☒ Tribal Cultural Resources
❑ Utilities/Service	❑ Mandatory Findings of Significance	

An explanation for all checklist responses is included, and all answers take into account 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. In the checklist the following definitions are used:

"**Potentially Significant Impact**" means there is substantial evidence that an effect may be significant.

"**Potentially Significant Unless Mitigation Incorporated**" means the incorporation of one or more mitigation measures can reduce the effect from potentially significant to a less than significant level.

"**Less Than Significant Impact"** means that the effect is less than significant and no mitigation is necessary to reduce the impact to a lesser level.

"**No Impact"** means that the effect does not apply to the Project, or clearly will not impact nor be impacted by the Project.

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

- ☐ I find that the proposed project **could not** have a significant effect on the environment, and a **Negative Declaration** will be prepared.
- ☑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **Mitigated Negative Declaration** will be prepared.
- ☐ I find that the proposed project **may** have a significant effect on the environment, and an **Environmental Impact Report** (EIR) 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 those 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

Portia Saucedo, Associate Planner

For Humboldt County Planning and Building Department

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 offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

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

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

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

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

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

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

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

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be 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 analysis of each issue should identify:

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

1. Aesthetics: Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	X	☐

Discussion:

(a) No Impact: The project will not impact a scenic vista. Such an impact will not occur because the project will not be readily visible from any traveled local roadway. The project has been designed with consideration of maintaining low visibility and will serve to restore the watershed to a more natural condition with water flowing in Sproul Creek during the dry season offsetting human consumptive use.

(b) No Impact: The project will not damage scenic resources such as trees, rock outcroppings, and historic buildings within a state scenic highway. Such an impact will not occur because the project is not located in the vicinity of a state scenic highway.

(c) No Impact: The project will not degrade the existing visual character or quality public views of the sites and their surroundings because there are no publicly accessible vantage points overlooking the project site. Access to the site is via a private drive and any overlooking locations are within the Wagner Land Company ownership or adjacent private properties. Through careful planning and design, the natural character of the site will be maintained to the greatest extent practical while still achieving the project objectives. Final berm grading will be blended in with natural topographic features. In addition, native vegetation will be planted within all disturbed areas. It is also important to consider that the overall goal of this project is to enhance dry season flows in Sproul Creek which will restore the natural character of a significant portion of the watershed.

(d) Less Than Significant Impact: The project will not create a new source of substantial light which would adversely affect day or nighttime views in the vicinity of the worksites. Such an

impact will not occur because the restoration project does not require installation of artificial lighting. It is possible that some glare may be created by the solar array. However, any receptors of glare created by the solar panels would be expected to occur to the south of the project area based on the southern orientation of the panels. The land to the south of the project is almost entirely large parcels utilized for timber and there are no residences located to the south of the project. Therefore, the project would have a less than significant impact.

2. Agriculture and Forestry 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. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with 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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?			X	

Discussion:
The project is located on land that is zoned by Humboldt County as Agriculture Exclusive and Timberland Production Zone. The location of the proposed pond and fill is zoned as Agriculture Exclusive but is not currently used for agricultural purposes, although the pond could support future agricultural activities. Further, ponds are traditionally allowed on agricultural lands so the project is not converting agricultural lands to another use. Additionally, fish and wildlife management are allowable uses on this zoning.

(a) No Impact: Based on Humboldt County Web GIS, there are no agricultural soils or prime agricultural soils mapped at the project site so there would be no impact.

(b) No Impact: The project will not conflict with existing zoning for agricultural use or a Williamson Act contract. The project is located on land that is zoned by Humboldt County as Agriculture Exclusive and Timberland Production Zone and periodically used for timber production. Fish and wildlife management (one of the primary purposes of the project) is an allowable use on this

zoning. The project parcel is not under a Williamson Act contract, therefore there would be no impact.

(c) No Impact: The location of the proposed pond and fill is zoned as Agriculture Exclusive and as such will not conflict with existing zoning for, or cause rezoning of, forestland, timberland, or timber zoned Timberland Production. Components of the project located within Timberland Production Zone (i.e., water diversion, piping infrastructure and road upgrades) will not result in the removal of trees. Further, the road upgrade components of the project will support timber production activities on the property.

(d) No Impact: No trees will be removed, and no loss or conversion of forest land will occur.

(e) Less Than Significant Impact: The project will not involve other changes in the existing environment, which due to their location or nature, could result in significant conversion of farmland to non-agricultural use. Fisheries habitat restoration actions either are away from, or are compatible with, existing agricultural uses. The proposed pond is located in an open grassland and will utilize some of the space that could be used for future agricultural activities. However, the proposed pond site represents a very small percentage of the overall ownership and will actually enhance water availability to support future agricultural activities in the project vicinity.

3. Air Quality. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) 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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				X

Discussion:
Humboldt County is designated as 'in attainment' for all National Ambient Air Quality Standards (NAAQS or federal standards). Humboldt County is designated as 'in attainment' for all California Ambient Air Quality Standards (CAAQS or State standards) pollutants except PM_{10}. The North Coast Unified Air Quality Management District (NCUAQMD) has not formally adopted significance thresholds that would apply to projects such as this. For construction emissions, the NCUAQMD has indicated that construction emissions are not considered regionally significant for projects that will be of relatively short duration (less than one year) (NCUAQMD 2015).

Impacts related to construction dust are considered significant if dust is allowed to leave the site (NCUAQMD 2015). Construction activities are subject to Rule 104 (Prohibitions) Section D (Fugitive Dust Emission). Pursuant to Section D, the handling, transporting, or open storage of materials in such a manner, which allows or may allow unnecessary amounts of particulate matter to become airborne, shall not be permitted. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to: 1) covering open bodied trucks when used for transporting materials likely to give rise to airborne dust; and 2) the use of water during the grading of roads or the clearing of land.

(a) Less than significant: The construction portion of the project will last for less than one year (June 1 to November 1). During this period, the project will comply with Rule 104, Section D and cover open body trucks hauling materials off site and use water during the grading of roads, excavation, and land clearing.

(b) Less than significant: Humboldt County is in attainment of all air quality standards, except PM_{10}. The project will comply with Rule 104, Section D and cover open body trucks hauling materials off site and use water during the grading of roads, excavation, and land clearing. This project does not involve significant hauling of materials onsite or offsite so construction work will be primarily comprised of onsite earthwork expected to be completed in approximately 4 months. Therefore, the project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or state ambient air quality standards.

(c) Less than significant: The project will not expose sensitive receptors to substantial pollutant concentrations. Such an impact will not occur because the project will not increase pollutant concentrations and is designed to operate utilizing solar energy. There is the potential for fugitive dust to travel off site and expose neighbors. However, the project will comply with Rule 104, Section D and cover open body trucks hauling materials off site and use water during the grading of roads, excavation, and land clearing. Therefore, it is not expected that sensitive receptors would be exposed to substantial concentrations of PM_{10}.

(d) No Impact: The project will not create other emissions (such as objectionable odors) affecting a substantial number of people.

4. Biological Resources. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Discussion:

Special-status species are defined in this ISMND as those that are:

- listed as endangered or threatened, rare, or proposed/candidates for listing under the ESA and/or CESA;
- designated by CDFW as a Species of Special Concern;
- have a California Rare Plant Rank (CRPR) of 1, 2, 3 or 4; and/or
- have a state ranking of S1, S2, or S3 (critically imperiled, imperiled, or vulnerable, respectively) on CDFW's California Sensitive Natural Communities List (CDFW 2018a).

An in-depth review of the project site and surrounding area was conducted using desktop and field reviews (Appendix F of the BOD Report). The desktop review included querying the following resources:

- The U.S. Fish and Wildlife Service (USFWS) online Information for Planning and Consultation (IPaC),
- The California Native Plant Society's (CNPS) online Inventory of Rare and Endangered Vascular Plants of California,
- CDFW's California Natural Diversity Database (CNDDB),
- CDFW's CNDDB northern spotted owl viewer, and

- National Marine Fisheries Service's (NMFS) California Species List Tools database.

The desktop review generated a list of special status plant and wildlife species with potential to inhabit the project area (Tables 1 and 2). The field review was conducted on 3 May 2019 and was used to assess habitat for the species on the list, determine their potential to be present, and identify what project-related effects on these species would occur, if any. Please see Appendices F and I of the BOD report in Attachment A for more detailed information.

Table 1. Special status plant species with the potential to be present in or around the Project Area.

Scientific name (common name)	Status (Federal, State, CRPR[1])	Habitat association[2]	Source	Likelihood of occurrence
Astragalus agnicidus (Humboldt County milk-vetch)	None/CE/1B.1	Openings, disturbed areas, and sometimes roadsides in broadleaf upland forest and north coast coniferous forest; 390–2,625 ft. Blooming period: April–September	CNPS, CDFW	**Moderate:** Broadleaf upland and north coast coniferous forest habitats present within Project area. Two occurrences within 5–10 mi of the Project area.
Coptis laciniata (Oregon goldthread)	None/None/4.2	Mesic meadows and seeps and streambanks in north coast coniferous forest; 0–3,280 ft. Blooming period: (February) March–May (September–November)	CNPS, CDFW	**Moderate:** North coast coniferous forest habitat present within Project area. Two occurrences approximately 4.5 mi from the Project area.
Erythronium revolutum (coast fawn lily)	None/None/2B.2	Mesic, streambanks, bogs and fens, broadleaf upland forest, and north coast coniferous forest; 0–5,250 ft. Blooming period: March–July (August)	CNPS, CDFW	**Moderate:** Broadleaf upland and north coast coniferous forest habitats present within Project area. Two occurrences within 5–10 mi of the Project area.
Montia howellii (Howell's montia)	None/None/2B.2	Vernally mesic, sometimes roadsides in meadows and seeps, north coast coniferous forest, and vernal pools; 0–2,740 ft. Blooming period: (February) March–May	CNPS, CDFW	**Moderate:** North coast coniferous forest habitat present within Project area. Two occurrences approximately 3.6 mi from the Project area.
Piperia candida (white-flowered rein orchid)	None/None/1B.2	Sometimes serpentinite in broadleaf upland forest, lower montane coniferous forest, and north coast coniferous forest; 95–4,300 ft. Blooming period: (March) May–September	CNPS, CDFW	**Moderate:** Broadleaf upland, lower montane coniferous, and north coast coniferous forest habitats present within Project area. No ultramafic soils mapped or observed, yet multiple

Scientific name (common name)	Status (Federal, State, CRPR[1])	Habitat association[2]	Source	Likelihood of occurrence
				occurrences approximately one mile from the Project area.
Sidalcea malviflora ssp. *patula* (Siskiyou checkerbloom)	None/None/1B.2	Often on roadsides of coastal bluff scrub, coastal prairie, and North Coast coniferous forest; 50–4,035 ft. Blooming period: (March) May–August	CNPS, CDFW	**Moderate: N**orth coast coniferous forest habitats present within Project area. Several occurrences within 5–10 mi of the Project area.
Usnea longissima (Methuselah's beard lichen)	None/None/4.2	On tree branches, usually on old growth hardwoods and conifers in broadleaf upland forest and north coast coniferous forest; 160–4,790 ft. Blooming period: N/A (lichen)	CNPS, CDFW	**Moderate:** Broadleaf upland and north coast coniferous forest habitats present within Project area. Multiple occurrences within 5–10 mi of the Project area.

[1] Status:

Federal

FT Federal Threatened

State

ST Threatened

SSC CDFW species of special concern

Table 2. Special status wildlife species with the potential to be present in or around the Project Area.

Species name	Status[1] Federal/ State	Distribution and habitat associations	Location of suitable habitat in Project area	Likelihood of occurrence
Fish				
Oncorhynchus kisutch (Coho salmon – southern Oregon/northern California coast Evolutionarily Significant Unit)	FT, CH/ST	Spawn in coastal streams and large mainstem rivers (e.g., S.F. Eel River and Sproul Creek) in riffles and pool tails-outs and rear in pools $\geq$ 3 ft deep with overhead cover with high levels oxygen and temperatures between 50–59°F.	The project is in a swale uphill of an intermittent, high gradient watercourse. No suitable habitat occurs in the Project area.	**None**: Natural 14-ft waterfall barrier near mouth of La Doo Creek.
Oncorhynchus tshawytscha (Chinook salmon – California Coastal ESU)	FT, CH/None	Wild coastal, spring, and fall-run Chinook found in streams and rivers between Redwood Creek, Humboldt County to the north and the Russian River, Sonoma County to the south.	The project is in a swale uphill of an intermittent, high gradient watercourse. No suitable habitat occurs in the Project area.	**None**: Natural 14-ft waterfall barrier near mouth of La Doo Creek.
Oncorhynchus mykiss (Steelhead – northern California coast Distinct Population Segment)	FT, CH/None	Inhabits small coastal streams to large mainstem rivers with gravel-bottomed, fast-flowing habitat for spawning. However, habitat criteria for different life stages (spawning, fry rearing, juvenile rearing) can vary significantly.	The project is in a swale uphill of an intermittent, high gradient watercourse. No suitable habitat occurs in the Project area.	**None**: Natural 14-ft waterfall barrier near mouth of La Doo Creek.
Entosphenus tridentatus (Pacific lamprey)	None/SSC	Similar to anadromous salmonids, inhabits coastal streams and rivers with gravel-bottomed, fast-flowing habitat for spawning. Ammocoetes rear in backwater areas with sand, silt, and organic material for 4 to 10 years before migrating to the ocean.	The project is in a swale uphill of an intermittent, high gradient watercourse. No suitable habitat occurs in the Project area.	**None**: Natural 14-ft waterfall barrier near mouth of La Doo Creek.

Species name	Status[1] Federal/ State	Distribution and habitat associations	Location of suitable habitat in Project area	Likelihood of occurrence
Amphibians				
Rana boylii (foothill yellow-legged frog)	None/SSC, CT	Associated with partially shaded, shallow streams, and riffles with rocky substrate. Some cobble-sized substrate required for egg laying. Adults move into smaller tributaries after breeding.	Suitable habitat is present and breeding likely occurs in Sproul Creek downstream of Project area.	**Moderate**: Suitable dispersal habitat present.
Ascaphus truei (Coastal tailed frog)	None/SSC	Associated with perennial and montane streams in hardwood conifer, redwood, Douglas-fir, and ponderosa pine habitats. Inhabits cold, clear, permanent rocky streams in wet forests. Tadpoles require water temperatures below 15°C (59°F).	Suitable habitat may occur in within the perennial reach of La Doo Creek downstream of the tributary containing the point of diversion.	**Moderate**: Suitable habitat may be present downstream of the Project area.
Taricha rivularis (red-bellied newt)	None/SSC	Ranges from southern Humboldt to Sonoma counties. Found in streams during breeding season. Moist habitats under woody debris, rocks, and animal burrows.	Suitable habitat may occur downstream of the tributary containing the point of diversion.	**Moderate**: Suitable habitat may be present.
Rhyacotriton variegatus (southern torrent salamander)	None/SSC	Seeps and small streams in coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Seeps and springs need to be relatively unembedded with fine sediment.	Suitable habitat occurs in high-gradient gravelly seeps and springs within redwood and montane riparian habitat types. May occur within isolated seeps or the perennial reach of La Doo Creek.	**Moderate**: High-gradient seeps and perennial flow may be present downstream of the tributary containing the point of diversion.
Dicamptodon tenebrosus (Coastal giant salamander)	None/SSC	Northern Humboldt County to British Columbia. Wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages.	Suitable habitat occurs in the Sproul Creek and tributaries. Suitable habitat is present in La Doo Creek.	**High**: Suitable habitat present downstream of the Project area.

Species name	Status[1] Federal/ State	Distribution and habitat associations	Location of suitable habitat in Project area	Likelihood of occurrence
Birds				
Strix occidentalis caurina (Northern spotted owl)	FT/ST	Typically found in large, contiguous stands of mature and old-growth coniferous forest with dense multi-layered structure.	Suitable nest/roosting habitat is present southwest of the Project area. Habitat within the Project area is suitable for foraging. The nearest NSO activity center (HUM0282) is located 0.5 mi west-southwest of the diversion area.	**Moderate**: Suitable foraging habitat exists in the Project area.
Brachyramphus marmoratus (Marbled murrelet)	FT/SE	Associated with mature conifers (i.e., redwood and Douglas-fir) for nesting. During the breeding season, may be present 6–8 mi inland.	A small stand of mature, widely spaced conifers is located outside of Project Area. However, no suitable habitat within or adjacent to the Project area.	**None**: No suitable habitat.
Reptiles				
Emys marmorata (western pond turtle)	None/SSC	Ponds, marshes, rivers, streams, and irrigation ditches with abundant vegetation, and either rocky or muddy bottoms, in woodland forest and grasslands. Below 6,000 ft elevation. Basking sites are required. Egg-laying sites are located on suitable upland habitats (grassy open fields) up to 1,640 ft from water.	Suitable habitat may occur in lower Sproul Creek and the South Fork Eel River. However, there are no ponds or suitable watercourses on the Wagner Ranch or neighboring properties.	**None**: No suitable habitat.

Species name	Status[1] Federal/ State	Distribution and habitat associations	Location of suitable habitat in Project area	Likelihood of occurrence
Mammals				
Arborimus pomo (Sonoma tree vole)	None/SSC	Associated nearly exclusively with Douglas-fir trees and occasionally grand fir trees within the north coast fog belt between the northern Oregon border and Sonoma County. Eats Douglas-fir needles exclusively.	Early to late-seral Douglas-fir stands are present adjacent to the Project area, which could provide nesting and foraging habitat.	**Moderate**: Suitable habitat is present in timber stands adjacent to the Project area
Pekania pennanti (Pacific fisher – West Coast DPS)	None/SSC	Associated with dense advanced-successional conifer forests, with complex forest structure and high percent canopy closure; den in hollow trees and snags.	Habitat in the Project area does not correspond to the dense advanced-successional forest this species prefers. Nearest recorded sighting is approximately 7 mi to the southeast near Cooks Valley.	**Low**: Potential suitable habitat is present in the timber adjacent to the Project area.
Antrozous pallidus (pallid bat)	None/SSC	Found throughout California. Roosts in rock crevices, outcrops, cliffs, mines, and caves; trees (underneath exfoliating bark of pine and oak) and in basal hollows; and a variety of vacant and occupied structures (e.g., bridges) or buildings. Roost individually or in small to large colonies (hundreds of individuals). Feeds low to or on the ground in a variety of open habitats, primarily on ground-dwelling arthropods. Forages most frequently in riparian zone, in open oak savannah, and open mixed deciduous forest. Drinks at stream pools.	Suitable foraging habitat throughout most of the Project area. An old hunting cabin is in the Project area.	**Moderate**: May be present in the trees or cabin in the Project area.

[1] Status:

Federal

FT Federal Threatened

State

ST Threatened

SSC CDFW species of special concern

(a) Less Than Significant with Mitigation Incorporated: The project will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by CDFW, National Oceanic and Atmospheric Administration (NOAA) or USFWS. All effects will be less than significant with the incorporation of the mitigation measures listed below.

Plants

No special-status plant species were observed during the protocol-level botanical survey conducted in the Project area on 23 September 2022 (see Appendix D of BOD Report). In addition, there are no records of special-status plant occurrences within the Project area based on the 2022 CDFW CNDDB queries and collection records in the Consortium of California Herbaria (ucjeps.berkeley.edu/consortium). As such, Project activities will have no impact on known special-status plant populations. However, the following design features are incorporated into the project description and discussed further in Appendix D of BOD Report.

- The Project footprint will be minimized to the extent possible.
- The pond will be positioned to minimize impacts on existing vegetation to the extent possible.
- Ground disturbance and vegetation clearing and/or trimming will be confined to the minimum amount necessary to facilitate Project implementation.
- Heavy equipment and vehicles will use existing access roads to the extent possible.
- Construction materials will be stored in designated staging areas.
- Measures to prevent the spread of invasive weeds and sudden oak death pathogens will be taken, including, where appropriate, inspecting equipment for soil, seeds, and vegetative matter, cleaning equipment, utilizing weed-free materials and native seed mixes for revegetation, and proper disposal of soil and vegetation.
- Disturbed soils areas will be revegetated with native grasses and forbs. Please see the erosion control and revegetation sheet in the project design package.

Fish

Coho and Chinook salmon, steelhead, and Pacific lamprey are special-status fish species known to occur in Sproul Creek tributaries downstream from the Project area. There are no fish in La Doo Creek due to a waterfall near the confluence with West Fork Sproul Creek that blocks passage. Therefore, the primary benefit to fish is within West Fork Sproul Creek approximately two miles downstream from the Project. Project-related impacts on these species could result from discharge of sediment from the pond, fill areas, and/or road upgrade components.

It is expected that coho salmon and steelhead will benefit from the Project flow augmentation during the summer and fall months. Road upgrades on the property would reduce sediment input into Sproul Creek tributaries, which has adverse effects on spawning and rearing habitat for fish.

The following measures will be employed by the Project to avoid, minimize, or mitigate indirect sediment-related impacts on special-status fish species and their habitat. Additionally, mitigation measures BIO-8 through BIO-12 which are primarily focused on amphibians, will also provide benefits to fish.

BIO-1: Discharge of sediment will be controlled and minimized with the implementation of best management practices (BMPs) on all disturbed soils that have the potential to discharge into

area watercourses. Applicable BMPs include, but are not limited to, installation of silt fences, straw wattles, and placement of seed-free rice straw. BMPs will be installed at all access points to the work sites, which will minimize the potential for sediment delivery and deleterious effects on salmonids.

Amphibians

Flow augmentation associated with the Project would result in the persistence of surface flows, which may provide benefits to amphibians by maintaining and potentially expanding the amount of available habitat. However, under some conditions the temperature of the released water may be too warm which could result in negative impacts to certain amphibian species as described below.

Foothill yellow-legged frog

The foothill yellow-legged frog is a California species of special concern in the North Coast region. Within California, foothill yellow-legged frogs were historically found in the Sierra Nevada foothills, up to elevations of approximately 6,000 ft, and in the Coast Range from the Oregon state border south to the San Gabriel River in southern California. The pond construction activities will take place in open meadow areas not utilized by foothill yellow-legged frogs. Additionally, work on the road crossing upgrades and point of diversion are along intermittent tributaries that would be dry during construction, so foothill yellow-legged frogs would not be expected to occur. Mitigation measures BIO-2 to BIO-12 below will be employed to avoid or minimize the potential for significant impacts to foothill yellow legged frog.

Red-bellied newt

The red-bellied newt is a California species of special concern. In California, this species is found along the coast from near Bodega, Sonoma County, to near Honeydew, Humboldt County, and inland to Lower Lake and Kelsey Creek, Lake County. It lives in coastal woodlands, especially redwood forests. Adult and juvenile red-bellied newts would likely be occupying terrestrial areas during the construction period and could be affected by heavy equipment that collapses burrows or moves woody debris. Mitigation measures BIO-2 to BIO-12 below will be employed avoid or minimize the potential for significant impacts to red-bellied newt.

Coastal tailed frog

The coastal tailed frog is a California species of special concern. The current distribution of Coastal tailed frogs in California extends from the Oregon border to approximately Anchor Bay, Mendocino County and about as far east as near Big Bend, Shasta County. Project construction activities are not anticipated to impact coastal tailed frog because work will not occur near flowing water. Mitigation measures BIO-2 to BIO-12 below will be employed to avoid or minimize the potential for significant impacts to coastal tailed frog.

Southern Torrent Salamander

The southern torrent salamander is a California species of special concern and is distributed in California along the humid coastal drainages from the Oregon border to approximately Point Arena in Mendocino County. Project construction activities are not anticipated to impact southern torrent salamander because work will not occur near flowing water. However, fine sediment generated from the project and/or flow releases with high water temperature could negatively impact southern torrent salamander. Mitigation measures BIO-2 to BIO-12 below as well as GEO-1 to GEO-4 will be employed to avoid or minimize the potential for significant impacts to southern torrent salamander.

Coastal Giant Salamander

The coastal giant salamander is a CDFW species of special concern and is the largest terrestrial salamander in North America. This species occurs from northern Mendocino County to southwestern British Columbia. This species occurs in wet, humid coastal forests, particularly in Douglas fir, redwood, red fir, and montane and valley-foothill riparian habitats with cold permanent and semi-permanent rocky streams and seepages. Project construction activities are not anticipated to impact coastal giant salamander because work will not occur near flowing water. However, fine sediment generated from the project and/or flow releases with high water temperature could negatively impact southern torrent salamander. Mitigation measures BIO-2 to BIO-12 below as well as GEO-1 to GEO-4 will be employed to avoid or minimize the potential for significant impacts to coastal giant salamander.

BIO-2 - Crossing upgrades and point of diversion installation will be constructed when intermittent watercourses are dry between June 1 and October 15.

BIO-3: To reduce the risk of amphibian entrapment, the Project will follow the Fish Screening Criteria for Salmonids in Appendix S of the California Salmonid Stream Habitat Restoration Manual (Flosi et. al 2010),as well as NOAA Restoration Center/Army Corps of Engineers programmatic biological opinion requirements for all diversion and outflow structures.

BIO-4: A visual observation survey of the Project areas will be conducted within two weeks prior to the start of construction to determine if any special status amphibians are present.

BIO-5: If special status amphibians are present, then a qualified biologist will be present immediately prior to the start of construction to remove any amphibians and relocate them to suitable habitat.

BIO-6: The Project manager or qualified designee will conduct daily morning inspections of the area slated for work to determine if special status amphibians entered the areas overnight. Any individuals will be captured and relocated prior to the start of the day's work.

BIO-7: Terrestrial woody debris will be left in place to the greatest extent practicable during operations within the riparian areas.

The long-term flow augmentation component of the Project has the potential to adversely impact amphibian habitat in the downstream vicinity of the flow release if the water temperature of the flow augmentation is too high. This concern is especially relevant to southern torrent salamander who have the lowest water temperature tolerances of the amphibians described above.

The Project design takes into consideration the objective of providing cool water to the downstream aquatic habitat with flow released from the bottom of the pond through a buried water line. Additionally, temperature sensors will be installed in the pond and at the point of flow release that provide real time data to support project operations. Additional data loggers will also be installed downstream of the project area in La Doo and West Fork Sproul Creeks to track changes in temperature as released water moves downstream. However, there is still the potential for warmer than optimal flow releases to adversely impact downstream amphibians. Mitigation measures BIO-8 through BIO-12 below will be employed during the final design and

project operations phases to avoid or minimize the potential for significant impacts to downstream amphibians from the flow releases.

BIO-8: To support final design, a qualified biologist will conduct a detailed assessment of conditions downstream from the proposed point of flow release to the confluence of mainstem Sproul Creek, to determine the habitat suitability for special status amphibians and the potential for Project impacts. In addition to assessing habitat suitability, the survey will also evaluate the observed distribution of special status amphibian species. The qualified biologist will work with CDFW staff prior to the assessment to develop a study plan including survey timing, extent, and protocols. Findings and recommendations will be summarized in a technical memorandum that will be included as an appendix to the Project's Biological Resources Technical Report. A draft of the memo will be submitted to CDFW for review and comment prior to being finalized.

BIO-9: The 90% and 100% project design will incorporate revisions based on the findings and recommendation from the amphibian habitat assessment (BIO-8). Design revisions may include relocation of the primary point of flow release to reduce anticipated impacts, and/or installation of multiple points of release that promote hyporheic flow and natural cooling of the released water.

BIO-10: During final design and permitting, an operations and management plan will be developed that identifies approaches and protocols for avoidance of impacts to special status amphibians including a monitoring plan. The operations and management plan will contain a decision matrix tool identifying the conditions for flow release and variations in discharge rate based on receiving water conditions.

BIO-11: During project operations, adaptive management of the flow releases will be conducted to avoid impacts to special status amphibians based on monitoring results. The project will have temperature thresholds to avoid discharging water that is warmer than the receiving waters, when increases in temperature may result in negative effects on potentially present special status species based on the realized niche temperature ranges described in Welsh and Hodgson (2008). The project will also avoid discharging water that results in raising water temperatures to harmful levels between the point of release and the confluence of La Doo Creek and West Fork Sproul Creek. Water warmer than the receiving waters may be released when the resulting augmentation does not result in temperatures above optimal levels.

BIO-12: Following project implementation, effectiveness monitoring will be conducted for a minimum of five years to evaluate project success. Monitoring will occur on a monthly time step from the point of discharge down to the confluence of Sproul Creek. Wet/dry mapping will be done before, during and after augmentation to assess project effects on the amount of wetted channel. A qualified biologist will also evaluate broad-level changes in distribution and relative abundance of special status species.

Other Wildlife

Northern spotted owl

The closest northern spotted owl activity center to the Project is approximately 0.5 mi away from the Project area and recent surveys (i.e., within the last four years) have not documented nesting within this activity center (Appendix D of the BOD Report). Nesting habitat does not occur within the Project area but does within the adjacent forest. The Project activities do not include removal of any trees that could provide habitat for owls. Therefore, there will not be any

direct impacts on northern spotted owls or their habitat. However, there is the potential for construction-related noise to affect northern spotted owls that may be on adjacent properties or away from the Project area.

The potential for Project construction to indirectly impact nesting northern spotted owls was preliminary evaluated using USFWS (2006) guidelines. Owls can be affected by noise-related, visual, or physical disturbances, such as created by heavy equipment. USFWS (2006) identifies the distance that sound associated with different types of construction equipment is estimated to disturb northern spotted owls during the breeding season, relative to ambient noise levels. Most types of standard construction equipment (e.g., backhoes, bulldozers, construction vehicles, etc.) would require disturbance buffers of 330–1,320 ft from nesting spotted owl activity centers. No Project activities utilizing these types of equipment are expected to occur within 1,320 ft of a northern spotted owl nest. In addition, as stated above, recent surveys have not found nesting northern spotted owls with the closest known activity center (0.5 mi from the Project area). Therefore, project effects on northern spotted owls would be less than significant.

BIO-12: A pre-construction nesting bird survey will be conducted during the breeding season and within two weeks of the start of construction. Appropriate buffers will be established around all active nests within the Project area.

Sonoma tree vole

Suitable habitat for Sonoma tree voles is present in the timber stand adjacent to the Project area. The Project will not occur within the forest nor remove any trees; therefore, there will be no impact on this species.

Pallid bat

Suitable habitat for pallid bats is present in the timber stand adjacent to the Project area. The Project will not occur within the forest nor remove any trees or structures that could be occupied by this species; therefore, there will be no impact on pallid bat.

Bullfrogs

The construction and operations of the pond has the potential to create habitat for bullfrogs and subsequently impact native species. The following avoidance and minimization measures will be incorporated in the project design, monitoring and maintenance plan. The following strategies will be implemented to minimize the potential for bullfrogs to infest the project sites:

a) Landowner and resident education is one of the most important strategies, as people have been known to intentionally introduce bullfrogs to local bodies of water as a source of food.
b) Monitoring of project sites will also be very important as early detection, before populations can get established, is a key component of control. Monitoring will be conducted as per Attachment C of this ISMND: Bullfrog Monitoring and Management Plan prepared by CDFW.
c) If needed, the off-channel pond may be drained. David Manthorne, CDFW Senior Environmental Scientist recommends draining of ponds if invasive bullfrogs are present to interrupt their life cycle (CDFW Compliance Guidance). According to research by Doubledee et al. (2007), "*Bullfrogs, Disturbance Regimes, and the Persistence of California Red-Legged Frogs ",* draining of ponds can be effective for bullfrog management if draining occurs at least every 2 years.
d) If annual monitoring shows that bullfrogs are present, active measures will be taken in consultation with CDFW and will follow the methods described in Attachment C of this ISMND.

(b) Less than Significant with Mitigation Incorporated: The project will not have a substantial adverse effect on any riparian habitat or other sensitive natural communities identified in local or regional plans, policies and regulations, or by CDFW or USFWS. One sensitive natural community, *Danthonia californica* (California oatgrass) may be present within the proposed pond and fill area footprints (Appendix D of the BOD Report). Mitigation measures BIO-13 to BIO-17 below will be employed to minimize the potential for significant impacts to the California oatgrass natural community.

BIO-13: A vegetation assessment will be conducted in the spring months during the final design phase of the project to determine whether the project will impact the *California oatgrass* sensitive natural community. If it is determined that the California oatgrass sensitive natural community is present within the pond and fill area footprints, the Project's revegetation plan will be updated to mitigate the impact by increasing California oatgrass cover within the project footprint or in suitable areas adjacent to the project footprint.

BIO-14: Planting of seedlings shall begin after December 1, or when sufficient rainfall has occurred to ensure the best chance of survival of the seedlings, but in no case after April 1.

BIO-15: Disturbed and compacted areas shall be re-vegetated with a diversity of native plant species that mimics native communities. Unless otherwise specified, the standard for success is 80 percent survival of plantings or 80 percent ground cover for broadcast planting of seed after a period of 3 years.

BIO-16: To ensure that the spread or introduction of invasive exotic plants shall be avoided to the maximum extent possible, equipment shall be cleaned of all dirt, mud, and plant material prior to entering a work site. When possible, invasive exotic plants at the work site shall be removed. Areas disturbed by project activities will be restored and planted with native plants.

BIO-17: Mulching and seeding shall be done on all exposed soil which may deliver sediment to a stream. Soils exposed by project operations shall be mulched to prevent sediment runoff and transport. Mulches shall be applied so that not less than 90% of the disturbed areas are covered. All mulches, except hydro-mulch, shall be applied in a layer not less than two (2) inches deep. Where feasible, all mulches shall be kneaded or tracked-in with track marks parallel to the contour, and tackified as necessary to prevent excessive movement. All exposed soils and fills, including the downstream face of the road prism adjacent to the outlet of culverts, shall be reseeded with a mix of native grasses common to the area, free from seeds of noxious or invasive weed species, and applied at a rate which will ensure establishment.

(c) No impact: The project will not have a substantial adverse effect on federally protected wetlands as defined by § 404 of the Clean Water Act because there are no USACE jurisdictional wetlands within the project area. Stillwater Sciences conducted a wetland assessment on 22 February 2022 and did not identify any wetlands withing the project footprint as described in Section 5 of the Biological Resources Technical Report for the project including as Appendix D of the BOD report (Attachment A of this MND). No wetlands have been identified within the Project footprint and therefore the project actions will have no effect on wetlands.

(d) Less Than Significant: The Project does not propose any instream construction in anadromous habitat so it will not affect migration of fish between habitat units. Once completed, the project will result in a substantial improvement in the ability of juvenile fish to migrate between habitat units during the dry season. It is expected that the flow augmentation will help maintain

connectivity between habitat units that is currently lacking during dry years. Therefore, impacts to fish are less than significant.

(e) No Impact: The project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Such an impact will not occur because project actions are designed to restore and enhance biological resources. The Humboldt County Streamside Management Area Ordinance requires a Special Permit for all activities within Streamside Management Areas. This project does propose some minor disturbance within intermittent stream channels and banks to upgrade road/stream crossings and install the point of diversion with associated plumbing infrastructure needed for the project. This project has been submitted to the Humboldt County Planning Department with a Special Permit application to allow for these project activities within the Streamside Management Areas.

(f) No Impact: The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Such a conflict will not occur because the project restoration actions will not have a significant adverse impact on any species or habitat. Project actions are designed to restore the natural character of the fish and wildlife habitat at the project work sites. The project specifically supports the California Salmon, Steelhead Trout and Anadromous Fisheries Program Act (Fish and Game Code § 6900 et. seq.).

5. Cultural Resources. Would the project:	Potentially Significant Impact	Less Than Significant with 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?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion:

(a) Less Than Significant with Mitigation Incorporated: The project will not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines § 15064.5.

No resources were identified during site-specific surveys. However, ground disturbance will be required to implement the project at some work sites that could still have the potential to affect historical resources that weren't identified during the site-specific surveys. This potential impact will be minimized to a less than significant level through implementation of the protective measures presented below and in Appendix C of the BOD Report. As a result, any potentially significant impacts will be avoided or mitigated to below a level of significance.

CR-1: Inadvertent Discovery of Cultural Resources - If cultural resources are encountered during construction activities, all onsite work shall cease in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist will be retained to evaluate and assess the significance of the discovery, and develop and implement an avoidance or mitigation plan, as appropriate. For discoveries known or likely to be associated with Native American heritage (prehistoric sites and select historic period sites), the tribes listed in Section 6.2 and those that the County has on file shall also be contacted immediately to evaluate the discovery and, in consultation with the project proponent, the County, and consulting archaeologist, develop a treatment plan in any instance where significant impacts cannot be avoided. Prehistoric materials which could be encountered include obsidian and chert debitage or formal tools, grinding implements, (e.g., pestles, handstones, bowl mortars, slabs), locally darkened midden, deposits of shell, faunal remains, and human burials. Historic archaeological discoveries may include nineteenth century building foundations, structural remains, or concentrations of artifacts made of glass, ceramics, metal or other materials found in buried pits, wells or privies.

(b) Less Than Significant with Mitigation Incorporated: The project will not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § 15064.5. While ground disturbance will be required to implement the project at some work sites that have the potential to affect archaeological resources, this potential impact will be avoided through implementation of the protective measures described above and presented in Appendix C of the BOD Report for all work sites. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.

(c) Less Than Significant with Mitigation Incorporated: The project is highly unlikely to disturb any human remains, including those interred outside of formal cemeteries. While ground disturbance

will be required to implement the project at some work sites that have the potential to affect these resources, this potential impact will be avoided through implementation of the protective measures presented in Appendix C of the BOD Report for all work sites. An archeological monitor will be present during excavation in critical areas.

CR-2: Inadvertent Discovery of Human Remains - If human remains are discovered during project construction, work shall stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie adjacent human remains (Public Resources Code, Section 7050.5). The county coroner shall be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American heritage Commission (NAHC) (Public Resources Code, Section 5097). The coroner will contact the NAHC. The descendants or most likely descendants of the deceased will be contacted, and work shall not resume until they have made a recommendation to the landowner or the person responsible for the excavation work for means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98.

CR-3: Procedures for treatment of an inadvertent discovery of human remains:

a) Immediately following discovery of known or potential human remains all ground-disturbing activities at the point of discovery shall be halted.

b) No material remains shall be removed from the discovery site, a reasonable exclusion zone shall be cordoned off.

c) The property owner shall be notified and the Permittee Project Manager shall contact the county coroner.

d) The Permittee shall retain the services of a professional archaeologist to immediately examine the find and assist the process.

e) All ground-disturbing construction activities in the discovery site exclusion area shall be suspended.

f) The discovery site shall be secured to protect the remains from desecration or disturbance, with 24-hour surveillance, if prudent.

g) Discovery of Native American remains is a very sensitive issue, and all project personnel shall hold any information about such a discovery in confidence and divulge it only on a need-to-know basis, as determined by the CDFW.

h) The coroner has two working days to examine the remains after being notified. If the remains are Native American, the coroner has 24 hours to notify the NAHC in Sacramento (telephone 916/653-4082).

i) The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) of the deceased Native American.

j) The MLD may, with the permission of the landowner, or their representative, inspect the site of the discovered Native American remains and may recommend to the landowner and Permittee means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make

recommendations or preferences for treatment within 48 hours of being granted access to the site (Public Resource Code, Section 5097.98(a)). The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials.

k) Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner or his/her authorized representative rejects the recommendation of the MLD and mediation between the parties by the NAHC fails to provide measures acceptable to the landowner, the landowner or his/her authorized representatives shall re-inter the human remains and associated grave offerings with appropriate dignity on the property in a location not subject to further subsurface disturbance in accordance with Public Resource Code, Section 5097.98(e).

l) Following final treatment measures, the Permittee shall ensure that a report is prepared that describes the circumstances, nature and location of the discovery, its treatment, including results of analysis (if permitted), and final disposition, including a confidential map showing the reburial location. Appended to the report shall be a formal record about the discovery site prepared to current California standards on DPR 523 form(s). Permittee shall ensure that report copies are distributed to the appropriate California Historic Information Center, NAHC, and MLD.

6. Energy. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?				X
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

Discussion:

(a) Less Than Significant: The Project will not result in wasteful, inefficient, or unnecessary consumption or energy resources during construction or operations. The construction contractors will be using heavy equipment as effectively as possible to reduce fuel and labor costs and generation of greenhouse gasses. In addition, Project operations will be powered by a grid intertie solar power system that will be sized to offset grid energy use. The project will not include any generator use.

(b) No impact: The Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The Project includes the installation of a grid intertie solar system.

7. Geology and Soils. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)Directly or indirectly cause 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.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Discussion:

(a) No Impact and Less Than Significant Impact:

(i) There are no earthquake faults on the project site. The nearest fault (Briceland Fault) is located over 8,000 ft to the northeast and is not considered active (CGS 2018). The project site is not located in an Earthquake Fault Zone (CGS 2018). The nearest active fault is the San Andreas fault, which is approximately 9 miles southwest of the project site. Therefore, there would be no impact.

(ii) The project would not result in strong seismic ground shaking or involve construction of features that would be at risk of structural failure due to strong seismic ground shaking. Therefore, there would be no impact.

(iii) Based on the geologic setting and results from the geophysical investigation (Appendix B of the BOD Report), the materials comprising the proposed pond site have low potential for liquefaction under sustained ground shaking. No human habitation structures are being proposed on these sites. Therefore, there would be a less than significant impact.

(iv) The proposed pond site is located within a ridgetop setting with gentle topography and therefore mass wasting is unlikely. In addition, the pond design contains multiple safety features as described in the BOD Report that would further limit the potential for failure. Therefore, there would be a less than significant impact.

(b) Less Than Significant Impact With Mitigation Incorporated: The project will not result in substantial soil erosion or the loss of topsoil. Such an impact will not occur because the Project is designed based on Best Management Practices (BMPs). Existing roads will be used to access work sites wherever possible. The potential for substantial soil loss associated with pond construction will be avoided through implementation of the design features described in the BOD report and mitigation measures below.

GEO-1: Work sites shall be winterized at the end of each day during the work period when rainfall greater than 1/2 inch is forecasted to minimize the eroding of unfinished excavations. Winterization procedures shall be supervised by a professional trained in erosion control techniques and involve taking necessary measures to minimize erosion on unfinished work surfaces. Winterization includes the following: smoothing unfinished surfaces to allow water to freely drain across them without concentration or ponding; compacting unfinished surfaces where concentrated runoff may flow with an excavator bucket or similar tool, to minimize surface erosion and the formation of rills; and installation of culverts, silt fences, and other erosion control devices where necessary to convey concentrated water across unfinished surfaces, and trap exposed sediment before it leaves the work site.

GEO-2: Effective erosion control measures shall be in-place at all times during construction. Construction shall not begin until all temporary erosion controls (i.e., straw bales or silt fences that are effectively keyed-in) are in place down slope or down stream of project activities within the riparian area. Erosion control measures shall be maintained throughout the construction period. If continued erosion is likely to occur after construction is completed, then appropriate erosion prevention measures shall be implemented and maintained until erosion has subsided.

GEO-3: An adequate supply of erosion control materials (gravel, straw bales, shovels, etc.) shall be maintained onsite to facilitate a quick response to unanticipated storm events or emergencies.

GEO-4: Upon project completion, all exposed soil present in and around the project site shall be stabilized within 7 days. Soils exposed by project operations shall be mulched to prevent sediment runoff and transport. Mulches shall be applied so that not less than 90% of the disturbed areas are covered. All mulches, except hydro-mulch, shall be applied in a layer not less than two (2) inches deep. Where feasible, all mulches shall be kneaded or tracked-in with track marks parallel to the contour, and tackified as necessary to prevent excessive movement. All exposed soils and fills, including the downstream face of the road prism adjacent to the outlet of culverts, shall be reseeded with a mix of native grasses common to the area, free from seeds of noxious or invasive weed species, and applied at a rate which will ensure establishment.

(c) Less Than Significant impact: To minimize the risk of the project interacting with or creating geologic instabilities, geomorphic mapping of the greater project area and a geophysical investigation of the site were conducted. Geomorphic mapping did not identify any landslides within the project vicinity. Additionally, best practices for construction will be maintained, including adherence to detailed compaction specifications as well as construction oversight by senior geology and engineering staff.

(d) Less Than Significant Impact : Expansive soils shrink and swell in response to soil moisture levels and generally have a large clay component. The geomorphic investigation suggests that there are clay soils onsite that have low to medium plasticity and have a potential for expansion and contraction. This project proposes earthen fills and hydraulic appurtenances that will be

designed to withstand soil expansion and contraction. In addition, the engineered fills will have be required to meet compaction standards and a High-density Polyethylene (HDPE) liner is proposed to reduce risks associated with expansive soil. Therefore, the potential for substantial direct or indirect risks to life or property from this project being located on expansive soils is less than significant.

(e) No Impact: The project will not create any sources of wastewater requiring a septic system.

(f) Less Than Significant Impact With Mitigation Incorporated:: There are no unique paleontological resources or sites or unique geologic features known to occur within the Project vicinity. However, if such features are discovered during construction, impacts will be reduced to a less than significant level by following mitigation measure below.

GEO-5: Inadvertent Discovery of Unique Paleontological Resources or Unique Geologic Features – If unique paleontological resources or unique geologic features are discovered during project construction, work shall stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie the features. State laws relating to such discoveries will be followed to document findings and work will only proceed after authorization by all relevant jurisdictions.

8. Greenhouse Gas Emissions. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

Discussion:

(a) Less Than Significant Impact: The project will emit greenhouse gases (GHG) primarily through the burning of fuel to operate vehicles and heavy equipment during the construction phase of the project.

Construction and operational emissions were estimated using the CalEEMod (version 2016.3.2). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operation of a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The model was developed in collaboration with the air districts in California. Default data (emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as CEQA documents. Input data and full results from CalEEMod is included in Attachment B of this MND.

The North Coast Unified Air Quality Management District (NCUAQMD) has not identified or recommended any GHG standards or thresholds of significance for the evaluation of construction projects. NCUAQMD has issued a rule stating that stationary sources emitting less than 25,000 tons per year of CO2 equivalent are exempt from compliance determination. Utilizing stationary source compliance rules is not recommended for the evaluation of projects subject to CEQA review and therefore we look to other jurisdictions that have developed thresholds, namely other California air districts, to show the emissions associated with this project in a state-wide context. These thresholds are as follows:

- South Coast Air Quality Management District (SCAQMD): SCAQMD's GHG Working Group has proposed a significance screening level of 3,000 metric tons CO2 equivalent (MT CO2e) per year for residential and commercial projects (SCAQMD 2015).
- Bay Area Air Quality Management District (BAAQMD) has adopted a project-level, operational threshold of significance that requires compliance with a qualified GHG reduction strategy or similar plan, maximum annual emissions of 1,100 MT CO2e per year or less, or achievement of a GHG efficiency rate of no more than 4.6 MT CO2e per

service population per year (BAAQMD 2017). BAAQMD has not adopted a project-level threshold of significance for construction-related GHG emissions.

- Sacramento Metro Air Quality Management District (SMAQMD) has adopted construction and operational GHG thresholds of 1,100 MT CO2e per year for land development and construction projects (SMAQMD 2015).

In the absence of NCUAQMD thresholds, the GHG emissions from this project will be compared to the SMAQMD threshold of 1,100 MT CO2e per year for construction emissions. This is because the SMAQMD has updated their guideline to account for the SB 32 2030 targets for GHG emissions. While utilized for comparative purposes, the significance of the project's potential impact is ultimately based on its long-term interaction with the state's GHG reduction goals as stated in California Air Resources Board's (CARB) 2017 Scoping Plan.

When considering the project's long-term interaction with the state's GHG reduction goals, it is critical to consider the increasing contribution that wildfires have on California's greenhouse gas emissions. Between January 1, and September 18, 2020, fires in California burned through 3.4 million acres and generated an estimated 91 million MT CO2e, or ~26.8 MT CO2e per acre burned (Alberts 2020). These emissions are 25% more than California's annual emissions from fossil fuels. Considering that wildfires are becoming a major source of GHG emissions, this project will almost certainly result in a net reduction of GHG emissions over the life of the project due to the project objective of providing long-term water supply for fire suppression.

The project would emit GHG emissions during construction from off-road equipment, worker vehicles, and any hauling that may occur. Construction emissions would be generated from the exhaust of equipment, the exhaust of construction hauling trips, and worker commuter trips. The construction phases include site preparation, site grading, and building construction. CalEEMod inputs and results are included as Attachment B of this MND. Note that the CalEEMod analyses was conducted for a similar nearby project design estimating 713 MT CO2e for a 15.3-million-gallon storage project. Considering that this project includes ~5-million-gallons of storage, it has an estimated CO2e of 238 MT based on a proportional emission reduction-based project size. The estimated emissions of 238 MT CO2e are below the SMAQMD construction threshold of 1,100 MT CO2e per year.

Based on the current project design, there will be no long term GHG emissions because all energy use will be offset by solar energy generation.

In summary, GHGs emitted by this proposed project fall below typical state thresholds for construction projects. Additionally, long term GHG emission from fire suppression benefits are likely to far offset the construction GHG emissions. In addition to providing streamflow augmentation, the pond is expected to be used to combat wildfires by providing a water source for CalFire. Based on estimated GHG emission from 2020 wildfires in CA (Alberts 2020), 26.8 MT CO2e per acre burned were produced by the fires. Therefore, the project will offset the construction related GHG emission if it prevents approximately 9 acres of wildfire. Based on fire history and climatic trends, it is highly likely that this project will help prevent far greater than 9 acres of wildfire over the 50+ year lifespan of the project. Based on these factors, the project-generated GHG emissions will have a less than significant impact on the environment.

(b) No impact: The project will not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. GHG emissions in

California are regulated under several state-wide measures, most prominently the California Global Warming Solutions Act of 2006, widely known as Assembly Bill (AB) 32, which requires the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions and sets limits on state emissions with a mandate to reduce GHG emissions to 1990 levels by 2020. AB 32 has been followed up by additional legislation and orders mandating efficiency-based thresholds:

- SB 32 requires statewide GHG emissions to 40 percent below 1990 levels by 2030
- B-30-15 provides an interim 2030 goal with the ultimate goal of reducing emissions by 80 percent below 1990 levels by 2050. The B-30-15 interim 2030 emission reduction goal is consistent with SB 32 and represents 'substantial progress' towards the 2050 emissions reduction goal.
- EO S-03-05 directs the state to reduce GHG emissions to 80 percent below 1990 levels by 2050.

Locally, the NCUAQMD maintains air quality conditions in Humboldt County and administers a series of air pollution reduction programs, including open burning permits, grants, permitting of stationary sources, emission inventory and air quality monitoring, and planning and rule development. The NCUAQMD adopted Rule 111 in 2015, which evaluates stationary sources subject to NSR and Title V permitting. Pursuant to Rule 111, stationary sources emitting less than 25,000 tons per year of CO2 equivalent are exempt from compliance determination.

The Humboldt County General Plan commits to actions to further reduce countywide GHG emissions. The County in cooperation with all the cities is currently preparing a regional Climate Action Plan (CAP). Although not yet finalized, the regional CAP targets GHG emission reduction of 40 percent below 1990 levels by 2030 and net zero emissions by 2045.

As previously described, this project will generate GHG emissions during the construction phase, but all long-term operational energy use will be powered and/or offset by renewable energy. Furthermore, the project will provide a dry season water source to combat wildfires in the region which is expected to offset the construction GHG emissions. In summary, this project does not conflict with any plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

9. Hazards and Hazardous Materials. Would the project:	Potentially Significant Impact	Less Than Significant with 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?		X		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?		X		

Discussion:

(a-b) Less Than Significant with Mitigation Incorporated: The project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The only hazardous materials that would be used on site are fuels, lube oil, coolant, and hydraulic fluid associated with heavy equipment used for the construction phase of the project. Any potential significant hazard associated with the accidental release of petroleum and coolant products used with equipment during construction will be minimized through implementation of the mitigation measures below. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.

HAZ-1: Heavy equipment that will be used in these activities will be in good condition and will be inspected for leakage of coolant and petroleum products and repaired, if necessary, before work is started.

HAZ-2: When operating vehicles in wetted portions of the stream channel, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, the responsible party shall, at a minimum, do the following:

a) All equipment shall be cleaned to remove external oil, grease, dirt, or mud. Wash sites shall be located in upland locations so that dirty wash water does not flow into the stream channel or adjacent wetlands;
b) Check and maintain on a daily basis any vehicles to prevent leaks of materials that, if introduced to water, could be deleterious to aquatic life, wildlife, or riparian habitat;
c) Take precautions to minimize the number of passes through the stream and to avoid increasing the turbidity of the water to a level that is deleterious to aquatic life; and
d) Allow the work area to rest to allow the water to clear after each individual pass of the vehicle that causes a plume of turbidity above background levels, resuming work only after the stream has reached the original background turbidity levels.

HAZ-3: All equipment operators shall be trained in the procedures to be taken should an accident occur. Prior to the onset of work, the Permittee shall prepare a Spill Prevention/Response plan to help avoid spills and allow a prompt and effective response should an accidental spill occur. All workers shall be informed of the importance of preventing spills. Operators shall have spill clean-up supplies on site and be knowledgeable in their proper deployment.

HAZ-4: Absorbent materials designed to clean up leaks of hydraulic fluid and other contaminants will be stored in the cab of all heavy equipment operating in or near a stream to provide spill containment and cleanup in case of an accidental spill. In the event of a spill, work shall cease immediately. Clean-up of all spills shall begin immediately. The responsible party shall notify the State Office of Emergency Services at 1-800-852-7550 and the CDFW immediately after any spill occurs and shall consult with the CDFW regarding clean-up procedures.

HAZ-5: All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 65 feet from any riparian habitat or water body and place fuel absorbent mats under pump while fueling. The USACE and the CDFW will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the Permittee shall prepare a plan to allow a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

HAZ-6: Location of staging/storage areas for equipment, materials, fuels, lubricants, and solvents, will be located outside of the streams high water channel and associated riparian area. The number of access routes, number and size of staging areas, and the total area of the work site's activity shall be limited to the minimum necessary to complete the restoration action. To avoid contamination of habitat during restoration activities, trash will be contained, removed, and disposed of throughout the project.

HAZ-7: Petroleum products, fresh cement/concrete, and other deleterious materials shall not enter the stream channel.

HAZ-8: Stationary equipment such as motors, pumps, generators, compressors, and welders, located within the dry portion of the stream channel or adjacent to the stream, will be positioned over drip-pans.

(c) No Impact: The project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Such impact is avoided because the project will not create any feature that will emit hazardous substances.

(d) No Impact: The project worksites are not located on any site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5**.**

(e) No Impact: No project work site is located within an airport land use plan or within two miles of a public airport or public use airport.

(f) No Impact: The project will not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. The project has no effect on access. The project will include road upgrades and installation of firefighting infrastructure including a pond suitable for helicopter and ground-based water withdrawals.

(g) Less Than Significant with Mitigation Incorporated: The project will not expose people or structures directly or indirectly to a significant risk of loss, injury, or death involving wild land fires. At work sites requiring the use of heavy equipment, there is a small risk of an accidental spark from equipment igniting a fire. Firefighting equipment (bulldozer, excavator, fire extinguishers, and hand tools) will be on site during construction. The project's pond will be suitable and available for use by helicopter or ground-based firefighting efforts. The potential for accidental fire will be reduced to a less than significant level through implementation of the project design and mitigation measures presented in this MND.

HAZ-9: All internal combustion engines shall be fitted with spark arrestors.

HAZ-10: The Permittee shall have an appropriate fire extinguisher(s) and firefighting tools (shovel and axe at a minimum) present at all times when there is a risk of fire.

HAZ-11: Vehicles shall not be parked in tall grass or any other location where heat from the exhaust system could ignite a fire.

HAZ-12: The grantee shall follow any additional rules the landowner has for fire prevention.

10. Hydrology and Water Quality. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
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:				
(i) result in substantial erosion or siltation on- or off-site;		X		
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
(iii) 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; or			X	
(iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Discussion:

(a) Less Than Significant with Mitigation Incorporated: The South Fork Eel River watershed has a total maximum daily load (TMDL) established for water temperature and sediment. There is the potential for minor short-term increase in turbidity during construction. Additionally, there is the potential for release of water from the pond with higher than desirable temperature levels as discussed in biological resources section above. The goal of the project is to increase water quantity and improve water quality in the dry season by adding cool water from the off-stream pond to Sproul Creek tributaries. The project design includes features designed specifically for this objective including release from the bottom of the pond, temperature sensors, and buried water line. Additionally, the mitigation measures BIO-8 to BIO-12 above would ensure cool water discharge that would not be in conflict with the TMDL.

There is also potential for water quality in Sproul Creek tributaries downstream from the project to be adversely affected during the wet season if excessive water is diverted out of Sproul Creek tributaries to fill the pond. However, this impact will be avoided through the following proposed diversion approach:

- Diversion season: December 15 to April 30.
- Diversion allowed when Sproul Creek mainstem flow near South Fork Eel confluence is at or above 5 cubic feet per second (cfs).

- Diversion rate from the tributary shall not exceed 1% of Sproul Creek mainstem flow near South Fork Eel confluence.
- A minimum bypass flow of 5 GPM is required at the tributary.

Close collaboration with regulatory agency staff during the final design, permitting, and implementation phases of the project will also ensure that downstream impacts are avoided. Adaptive management during project operations will be guided by monitoring results to further ensure that downstream impacts are avoided or mitigated to below a level of significance as described in **HYD-1**.

The road crossing upgrade component of the project would reduce sediment delivery from the project area into Sproul Creek, which could benefit instream habitat. This reduction in sediment delivery would not be in conflict with the TMDL or Basin Plan. Short-term increases in turbidity associated with the crossing upgrades and point of diversion installation would be controlled by isolating the project area from flowing water, installing BMPs, and revegetating disturbed surfaces.

The design features and mitigation measures **BIO 8-11, GEO 1–4** and **HAZ-1– 8** above, as well as **HYD-1** below will assure that the project actions comply with water quality standards and that impacts on water quality are avoided or mitigated to below a level of significance.

HYD-1: Project operations will be adaptively managed based on flow, temperature and aquatic habitat monitoring results. These monitoring results will be presented to regulatory agency staff on an annual basis and/or as required by final permit conditions. In coordination with regulatory agency staff, the project team will adapt project operations as necessary to optimize aquatic habitat benefits resulting from the project while reducing impacts to a less than significant level. This may include changes to diversion timing/rates, changes to flow release timing/rates, and/or other changes to project operations.

(b) Less Than Significant: The project will not substantially deplete groundwater supplies, interfere substantially with groundwater recharge, or impede sustainable groundwater management in the basin This is because the project site is underlain by nearly impervious shale bedrock, with minimal groundwater recharge potential. In addition, the project is located in an area that was determined to be of low priority by the California Department of Water Resources for the development of a sustainable groundwater management plan. However, there is localized shallow groundwater that is perched on top of the shale bedrock. The project is expected to result in changes to the dynamics of this existing shallow groundwater within the project vicinity because construction of the pond will reduce the ground surface area that recharges the shallow groundwater. Based on groundwater well monitoring at other nearby projects (Stillwater Sciences 2021), most of the water stored in the shallow groundwater aquifer drains within a few weeks following significant precipitation. Therefore, there are no groundwater wells or other existing land uses that rely on this shallow aquifer. It is also important to consider the objective of this project is to provide a significant benefit to riparian and aquatic habitat along Sproul Creek and its tributaries. Based on these considerations, the project impacts on local groundwater will be less than significant.

(c) the project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river.

(i) Less Than Significant with Mitigation: The project would not result in substantial erosion or siltation on- or off-site. Such an impact will not occur because the road crossing upgrade component of the project will decrease overall erosion and sediment delivery. Further, the erosion control mitigation measures (**GEO 1–4**) described above will assure that all project actions, including construction activities, are in compliance with water quality standards, which would reduce impacts to a less than significant level.

(ii) Less Than Significant: The project will not significantly alter the existing drainage pattern of the work sites, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. The project will capture wet-season runoff in the pond. The construction of the proposed pond and associated infrastructure could result in an increased flood risk if the pond suffers a catastrophic failure. However, the project is designed to minimize such a failure by being located within a geologically stable setting, having an armored outflow structure, and HDPE liner. These design features would reduce the potential for failure and associated downstream flood risk to a less than significant level.

(iii) Less Than Significant: The project will not create or contribute runoff water that would exceed the capacity of existing or planned storm-water drainage systems, or provide substantial additional sources of polluted runoff. The project is expected to reduce overall storm water runoff through capture of wet-season runoff and release of stored water during the dry season to improve instream habitat. In addition, the project will improve the road system and associated drainage facilities to increase their capacity to drain a 100-year runoff event. Therefore, this impact would be less than significant.

(iv) Less Than Significant: The project will not place structures within a 100-year flood hazard area, which would significantly impede or redirect flood flows. The pond is outside of the 100-year floodplain.

(d) Less Than Significant: The project is not located in tsunami, or seiche zones. Except for the road/stream crossings and point of diversion, all of the project components (pond, fill areas, and electrical/plumbing components) are well outside of the 100-year flood zone. As such, the risk of release of pollutants due to inundation of the project is less than significant.

(e) Less Than significant: The project is in a basin that was determined to be of low priority by the California Department of Water Resources for the development of a sustainable groundwater management plan. Therefore, there is no sustainable groundwater management plan for this basin. The project will not conflict with or obstruct the implementation of a water quality control plan. In fact, the project is in the South Fork Eel River, which is one of five priority watersheds selected for flow enhancement projects in California by the SWRCB and CDFW as part of the California Water Action Plan effort (SWRCB 2019). Therefore, the impact would be less than significant.

11. Land Use and Planning. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Discussion:

(a) No Impact: The project will not physically divide an established community. This impact will not occur because the project is being entirely conducted on a single property.

(b) No Impact: The activities that compose this project do not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Such an impact will not occur because the project's activities are designed to be consistent with the County's General Plan Water Resources element goals and policies WR-G2, WR-G9, WR-P23, WR-P25, and WR-IMP19.

WR-G2 - Water Resource Habitat. River and stream habitat supporting the recovery and continued viability of wild, native salmonid and other abundant coldwater fish populations supporting a thriving commercial, sport, and tribal fishery.

Relevant project actions: Deliver cool water to Redwood Creek during the summer low flow period, which will improve dry season survivability of juvenile anadromous salmonids.

WR-G9 - Restored Water Quality and Watersheds. All water bodies de-listed and watersheds restored, providing high quality habitat and a full range of beneficial uses and ecosystem services.

Relevant project actions: Sproul Creek currently experiences low flows and warm water temperatures during the summer and early fall months. Cool water flow augmentation from the Project will improve instream habitat quality and anadromous salmonid rearing habitat.

WR-P23 - Watershed and Community Based Efforts. Support the efforts of local community watershed groups to protect, restore, and monitor water resources and work with local groups to ensure decisions and programs consider local priorities and needs.

Relevant project actions: The Project is a collaboration of the Wagner Land Company, Salmonid Restoration Federation, and state and federal agencies with the goal of restoring cool water flow to Sproul Creek during the summer dry season.

WR-P25 - State and Federal Watershed Initiatives. Support implementation of state and federal watershed initiatives such as the TMDLs, the NCRWQCB Watershed Management Initiative, the NMFS and CDFW coho recovery plans and the California Non-Point Source Program Plan.

Relevant project actions: The Project addresses the goals of the California Water Action Plan (SWRCB 2019), Goal B of the WCB strategic plan (WCB 2014), Goal 2 of the State Wildlife Action Plan (CDFW 2015), and host of NOAA Fisheries' recovery actions for coho salmon in the South Fork Eel River. See below for additional details regarding these goals.

WR-IMP19 - Coordinate and Support Watershed Efforts. Seek funding and work with land and water management agencies, community-based watershed restoration groups, and private property owners to implement programs for maintaining and improving watershed conditions that contribute to improved water quality and supply.

Relevant project actions: The Project is a collaboration of the Wagner Land Company, Salmonid Restoration Federation, and state and federal agencies. Funding for the Project planning, design and preliminary permitting was funded by the WCB Proposition 1 Streamflow Enhancement Program.

Additionally, as previously discussed, this project was specifically designed to directly address the goals of the California Water Action Plan (SWRCB 2019) and will ensure the restoration of critically important habitat. The project also addresses Goal B of the WCB strategic plan (WCB, 2014). The Project also aligns with Goal 2 of the State Wildlife Action Plan (CDFW 2015) – Enhance Ecosystem Conditions, and Goal 3 – Enhance Ecosystem Functions and Processes: Maintain and improve ecological conditions vital for sustaining ecosystems in California. Most specifically, the project improves the hydrologic regime and increases water quantity and availability vital for sustaining ecosystems.

12. Mineral Resources. Would the project:	Potentially Significant Impact	Less Than Significant with 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?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Discussion:

(a) No Impact: The project will not 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. Such an impact will not occur because no valuable mineral resources are known to exist at the project site.

(b) No Impact: The project will not 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. Such an impact will not occur because no mineral resource recovery sites occur at the project work sites.

13. Noise. Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Generation of excessive ground-borne vibration or ground-borne noise levels?				X
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

Discussion:

(a) Less Than Significant with Mitigation Incorporated: The project will not result in significant 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. There will be a temporary increase in noise levels at those work sites requiring the use of heavy equipment. It is expected that the highest noise levels would be about 88 dB at 50 ft and would come from bulldozers. However, noise attenuation is expected to be about 7.5 dB per doubling of distance from the source. There is a hunting cabin immediately adjacent to the proposed project site, but no permanent residents inhabit the cabin. The nearest residence is several miles from the edge of the work area. Therefore, it is estimated that the noise level received by the nearby residence would be well below 50 dB. Following construction, project operations will utilize several small pumps but they will not generate excessive noise.

The project will include several mitigation measures to reduce construction noise impacts to a less than significant level. Operational noise will constitute a less than significant impact. Mitigation measures for construction noise include:

NOISE 1: To reduce the possibility of the construction noise and vibrations becoming an annoyance to sensitive receptors near the Project, exterior construction activity shall be confined to the weekday hours of 7:00 am to 7:00 pm or until sunset, whichever is later, and weekend hours of 8:00 am to 6:00 pm or until sunset, whichever is later. No heavy equipment construction activities shall be allowed on Sundays or holidays.

NOISE 2: Construction equipment shall be properly maintained and equipped with noise control devices, such as mufflers and shrouds, in accordance with manufacturers' specifications.

(b) No Impact: The project will not result in exposure of persons to, or generation of, excessive ground-borne vibration or ground-borne noise levels. Such an impact will not occur because only minor amounts of ground-borne vibration or noise will be generated in the short-term at those work sites requiring the use of heavy equipment.

(c) No Impact: None of the project work sites are located within two miles of a private airstrip, public airport, or public use airport.

14. Population and Housing. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Discussion:

(a) No Impact: The project will not induce substantial population growth in an area, either directly or indirectly. Such an impact will not occur because the project will not construct any new homes, businesses, roads, or other human infrastructure.

(b) No Impact: The project will not displace any existing people or housing and will not necessitate the construction of replacement housing elsewhere.

15. Public Services. 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:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?				X
b) Police protection?				X
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X

Discussion:

(a-e) No Impact: The project will not have any significant environmental impacts associated with new or physically altered governmental facilities. Issuance of restoration grants to government agencies could, in some cases, lead to minor increases in staffing to complete projects. Such increases will not lead to any significant adverse impacts, because the increases are short term, and no significant construction will be required to accommodate additional staff.

16. Recreation.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No 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?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Discussion:

(a) No Impact: The project would not increase the use of existing neighborhood and regional parks, or other recreational facilities. Such an impact will not occur because the project actions will restore anadromous fish habitat and do not significantly alter human use or facilities at existing parks or recreational facilities. Overall, the project is expected to increase recreation opportunities by assisting in restoring populations of anadromous fish.

(b) No Impact: The project does not include recreational facilities and does not require the construction or expansion of recreational facilities.

17. Tribal Cultural Resources. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resource Code section 5020.1(k), or		X		
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

Discussion:

(a and b) Less Than Significant with Mitigation Incorporated: The project will not cause a substantial adverse change in the significance of a tribal cultural resource as defined Public Resource Code Section 5020.1(k) or Section 5024.1. No resources were identified during site-specific surveys. However, ground disturbance will be required to implement the project at some work sites that could still have the potential to affect cultural resources that weren't identified during the site-specific surveys. This potential impact will be minimized to a less than significant level through implementation of the protective measures CR-1 through CR-3 described above and in Appendix C of the BOD Report (Attachment A of this MND). As a result, any potentially significant impacts will be avoided or mitigated to below a level of significance.

18. Transportation. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities?				X
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?				X
c) Substantially increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?				X

Discussion:

(a) No Impact: The project will not conflict with any applicable plans, ordinances or policies that address the circulation systems, transit, roadway, bicycle, and pedestrian facilities in or around the project area.

(b) No Impact: Construction of the proposed project would not directly impact any roadways. During the construction phase which is expected to last approximately 4 months, approximately 4 to 10 trips per day by workers and equipment/materials delivery will utilize Sproul Creek Road and US 101. However, these trips would be small compared to existing traffic and would not lead to a significant increase in roadway congestion. Long-term operations and maintenance requirements are minimal (approximately one trip per month) so any long-term traffic volume increase resulting from the project would be negligible. Therefore, the project will not conflict, either individually or cumulatively, with CEQA Guidelines section 15064.3, subdivision (b).

(c) No Impact: The project will upgrade the existing roadway within the project area to support heavy equipment traffic and drain 100-year flood return interval events at crossings.

(d) No Impact: The project will not result in inadequate emergency access. The proposed improvements to the roadway will allow improved access by emergency fire vehicles to private roadways. In addition, the pond would be an available water source for helicopter bucket dipping in the event of a wildfire.

19. Utilities and Service Systems. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new expanded water or wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects?		X		
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				X
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

Discussion:

(a) Less Than Significant with Mitigation Incorporated: The project does not involve relocation or construction of new expanded water or wastewater treatment or stormwater drainage, natural gas, or telecommunications facilities or expansion of existing facilities. The project will construct a facility to store water during the wet season and release water during the dry season to enhance aquatic habitat, so the project is not expected to cause significant negative environmental impacts. The project also includes construction and operation of small-scale solar energy system to offset operational energy use. Impacts that could occur during installation will be primarily associated with ground disturbance, which will be localized at the trenches where utilities will be buried. Impacts will be reduced to a less than significant level by the installation of erosion control BMPs and revegetation and other mitigation measures (**GEO 1–4**) detailed in the Geology Section above.

(b) Less Than Significant: The project relies on wet season diversion from adjacent tributaries and rainfall to fill the ponds and water storage tanks. The diversion will require a new Small Domestic Use registration from the SWRCB. A preliminary hydrologic analyses has been conducted for the project and is summarized in the BOD Report. This analysis shows that there is sufficient water supply during the wet season to fill the pond. The project does not include any future development that would require any future water supply.

(c) No Impact: The project will not produce wastewater or be served by a wastewater facility.

(d) No Impact: The project will not generate a significant volume of solid waste requiring disposal in a landfill. Any waste generated will be minimal and only occur during construction. No waste will be produced during operations.

(e) No Impact: The project will not violate any federal, state, or local statutes or regulations related to solid waste.

20. Wildfire. If located in or near state responsibility areas of lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

(a) No impact: The project will not substantially impair an adopted emergency response plan or emergency evacuation plan. The project includes road upgrades, which will improve emergency response and evacuation on the project property. In addition, the proposed pond and hydrants will provide water necessary for emergency fire responses.

(b) No impact: The project does not propose to construct structures that would be used for human habitation. The project reduces wildfire risk by installing a pond that could be used to fight wildfires. The upgrading and construction of access roads will also reduce wildfire risk by providing passive fire breaks should a wildfire initiate.

(c) Less than significant: The project is located in a meadow area and will include the installation and upgrading of access roads, pond, and electrical/plumbing infrastructure. The access roads can serve as fire breaks and access, which would lessen the risk of fire spread compared to current conditions. The pond can be called upon to supply water in the event of a wildfire, which is a significant improvement compared to current conditions. All new onsite power supply lines will be installed via underground burial and would not increase the risk of wildfire.

(d) Less than significant: The project is located on a relatively flat terrace on a ridgetop and not prone to landslides as described in the BOD Report. Further, there are no nearby residences downslope from the project area.

21. Mandatory Findings of Significance.	Potentially Significant Impact	Less Than Significant with 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?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).				X
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?				X

Discussion:

(a) Less Than Significant with Mitigation Incorporated: The project does have the potential to degrade the quality of the environment. However, the potential is reduced to a less than significant level by design and through implementing the mitigation measures described above. The project shall be implemented in a manner that will avoid short-term adverse impacts to rare plants and animals, and cultural resources during construction. The project activities are designed to improve and restore stream habitat, thereby providing long-term benefits to both anadromous salmonids and other fish and wildlife.

(b) No Impact: The project does not have adverse impacts that are individually limited, but cumulatively considerable. Cumulative adverse impacts will not occur because potential adverse impacts of the project are only minor and temporary in nature and will be mitigated to the extent possible. It is the goal of the project that the beneficial effects of habitat enhancement actions will be cumulative over time and contribute to the recovery of listed anadromous salmonids.

(c) No Impact: The project does not have the potential to cause substantial adverse effects on human beings. Effects on human beings will not occur because the project is located in a rural setting far from any dwellings or other infrastructure used by the public. Furthermore, measures implemented as part of this project will contribute to significant fire safety improvements for the local community through availability of the pond water for CalFire to fight wildfires.

IV. REFERENCES

Note: References listed below with no URL are available at:
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