Wastewater Recycling Expansion Project

Initial Study/Proposed Mitigated Negative Declaration

McKinleyville Community Services District

November 01, 2024

→ **The Power of Commitment**

Initial Study/Proposed Mitigated Negative Declaration

Wastewater Recycling Expansion Project

Prepared for:

McKinleyville Community Services District
1656 Sutter Rd.,
McKinleyville CA 95519

Prepared by:

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1. Project Information

Project Title	Wastewater Recycling Expansion Project
Lead Agency Name & Address	McKinleyville Community Services District 1656 Sutter Rd. McKinleyville CA 95519
Contact Person, Phone Number, Email	Patrick Kaspari, General Manager, (707) 839-3251, pkaspari@mckinleyvillecsd.com
Project Location and Assessor Parcel Numbers (APNs)	McKinleyville, CA; 508-021-006, -007, -008, 508-091-037, 508-081-034, 508-031-001, 506-341-017.
Project Sponsor's Name & Address	McKinleyville Community Services District 1656 Sutter Rd., McKinleyville CA 95519
General Plan Land Use Designation	Agricultural Exclusive Prime (AEP)
Zoning	AE-60/A,F,R= Agricultural, Flood Hazard Area, Riparian AE-60/F,R= Flood Hazard Area, Riparian

1.1 CEQA Requirements

This Project is subject to the requirements of the California Environmental Quality Act (CEQA). The lead agency is McKinleyville Community Services District (MCSD, District). The purpose of this Initial Study is to provide a basis for deciding whether to prepare an Environmental Impact Report, a Mitigated Negative Declaration or a Negative Declaration. This Initial Study is intended to satisfy the requirements of the California Environmental Quality Act, CEQA, (Public Resources Code, Div 13, § 21000-21177), and the CEQA Guidelines (California Code of Regulations, Title 14, § 15000-15387). CEQA encourages lead agencies and applicants to modify their Projects to avoid significant adverse impacts.

Section 15063(d) of the CEQA Guidelines states the content requirements of an Initial Study as follows:

- A description of the Project including the location of the Project;
- An identification of the environmental setting;
- An 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 indicate that there is some evidence to support the entries;
- A discussion of the ways to mitigate the significant effects identified, if any;
- An examination of whether the Project would be consistent with existing zoning, plans; and other applicable land use controls; and
- The name of the person or persons who prepared or participated in the Initial Study.

1.2 Project Introduction

The Wastewater Recycling Expansion Project (Project) includes the expansion of the MCSD's existing water recycling facilities to increase capacity, reduce operational costs, and offset groundwater extraction. The Project would not change capacity at the wastewater management facility (WWMF). The water recycling facilities currently utilize treated wastewater for irrigation, and the proposed Project would expand this existing use. The Water Recycling Planning Study (GHD 2023) included evaluation of four Project alternatives (discussed in Section 1.6) and included the following components:

- Feasibility of extending the recycled water (RW) system to irrigate additional area(s) via flood cells (East Pialorsi Ranch);
- Evaluation of alternative pipeline and site configuration requirements;
- Regulatory compliance needs;
- Development of preliminary concept layouts for the preferred alternative.

The selected Project includes the installation of flood cells, new and replacement RW pipe, three pivot irrigation sprinkler systems ("Pivot Sprinklers #1-3"), and electrical conduit from the adjacent Fischer Road Pump Station (see Section 2 for additional detail). The Planning Study considered site capacity, geology, topography, environmental constraints and costs and determined this alternative to be feasible (GHD 2023). This Initial Study/Proposed Mitigated Negative Declaration (ISMND) includes review of Project preliminary conceptual layouts.

1.3 Project Location

The Project is located in McKinleyville, CA, a suburban residential community in Humboldt County, California (see **Appendix A, Figure 1 [Project Vicinity]**). McKinleyville is approximately 13 miles north of the City of Eureka and approximately 285 miles north of San Francisco. The Project is located in an area of open seasonally grazed and/or harvested, pastoral fields north of the Mad River, and includes 10.32 acres of ground disturbance, and would irrigate 132 acres of ground surface via recycled water irrigation including the Lower Fischer Ranch (43.9 acres), West Pialorsi Ranch (34.7 acres) and East Pialorsi Ranch (53.4 acres). All areas of disturbance and areas affected by the Project are owned by the MCSD or within a utility corridor right-of-way. The Project Area is comprised of the Area of Ground Disturbance. See **Appendix A, Figure 2 (Project Area)** for an overview of existing conditions at the Project Area site.

1.4 Project Background

The MCSD service area is comprised of approximately 12,140 acres and extends north from the Mad River to Patrick Creek, and east from the Pacific Ocean (see **Appendix A, Figure 1 [Project Vicinity]**). Due to the proximity to the Pacific Ocean, the climate, and level of annual precipitation, there is minimal demand for raw water and recycled water apart from agricultural beneficial reuse.

MCSD operates their (WWMF) approximately one mile north of the Project Area, that treats residential and commercial wastewater from the District and serves approximately 16,500 residents (see **Appendix A, Figure 1 [Project Vicinity]**). The WWMF provides advanced secondary treatment of wastewater that consists of headworks screening, in-basin extended aeration system, and secondary clarification.

From October 1 through May 14th, the District chlorinates/dechlorinates and discharges treated wastewater (effluent) to the Mad River when river flow is above 200 cubic feet per second (cfs). From May 15th through September 30th, or when the Mad River flow drops below 200 cfs, the District chlorinates and sends the effluent through polishing wetlands, and from there utilizes this effluence to irrigate land as recycled water where fodder is produced for organic dairy operations. Treated effluent is only dechlorinated when discharging to the Mad River; dechlorination does not occur when the WWMF is producing recycled water for irrigation (see Section 1.5 for additional information). When not discharged to the Mad River, recycled water is used in the Fischer Ranch and Pialorsi Ranch areas (see **Appendix A, Figure 3 [Existing Recycled Water Irrigation Areas and Infrastructure]** for these locations). The District's summer discharge options historically also included the use of two percolation ponds adjacent to the Mad River, however as of October 2022 these ponds have been decommissioned and restored to active floodplain for off-channel salmonid habitat and are no longer available. **Table 1.4-1** displays the locations and average discharge of recycled water within each area during 2021 (when the percolation ponds were still available for use).

Table 1.4-1 Summary of Water Recycling Use in 2021

Recycled Water Use Area	Approx. Irrigation Area (acres)	Application Method	Type of Use	Million Gallons (MG) Discharged
Lower Fischer Ranch	45	Spray	Fodder	1.2
Upper Fischer Ranch	36	Flood (14 acres) and Spray (22 acres)	Fodder	76.0
Pialorsi Ranch – West	35	Spray	Fodder	16.2
Pialorsi Ranch – East	54	Spray	Fodder	
Percolation Ponds	2.3	Flood	Groundwater recharge	65.7
Totals - 2021	172.3			159.1

1.5 Existing Infrastructure

The irrigation pump station, located at the WWMF, is used to convey recycled water to each of the existing and proposed reuse areas (see **Appendix A, Figure 3 [Existing Recycled Water Irrigation Areas and Infrastructure]**). This station consists of three, constant speed, vertical turbine pumps with a firm capacity of 1,100 gallons per minute (gpm). This station also includes a 2,200-gallon hydropneumatic tank and flow meter. No changes or upgrades to the pump station are proposed under this Project.

An existing RW pipe exists between the pump station and the southern extent of Fischer Road. This segment of RW pipe will be replaced with a larger diameter pipe under the Project to accommodate increased flow of recycled water to the proposed flood cells and sprinklers (see **Appendix A, Figure 4 [Project Components]**).

1.6 Project Need

Removal of the two percolation ponds (which have been restored to active floodplain for salmonid habitat as part of a past separate project) has increased the need for additional area to irrigate utilizing treated effluent as recycled water. As shown in **Table 1.4-1**, the percolation ponds accounted for approximately 66 MG of recycled water disposal that will need to be redirected to irrigation uses during the dry months when effluent discharge to the Mad River is prohibited (May 15th through September 30th). RW pipe and surface-level line currently exists within the Pialorsi Ranch, however, is understood to be deficient respective of key operational and performance attributes associated with the goal of maximizing recycled water flows for irrigation to this property. The pipelines are sized between 6-in and 8-in and are not associated with appropriate irrigation facilities such as flood cells or adjustable sprinkler head irrigation systems that match those installed on Fischer Ranch. The irrigation infrastructure within Pialorsi Ranch is not currently capable of meeting District recycled water disposal needs if Fischer Ranch is unavailable for irrigation. Therefore, due to undersized and inadequate infrastructure within the Pialorsi Ranch and the limited disposal capacity of spray irrigation, the only available viable alternative to Mad River discharge is to send water to the Upper Fischer Ranch flood cells. When the Upper Fischer Ranch flood cells are being utilized at capacity, there leaves no other option for effluent discharge besides spraying which does not discharge water fast enough.

Currently, irrigation at the Pialorsi Ranch – East and West typically includes use of approximately 68 MG of on-site well water annually for crop irrigation, in addition to the 16.2 MG of recycled water sprayed. Under the proposed Project, the RW pipe between the pump station and the southern extent of Fischer Road will be replaced, thereby enabling installation of a more sophisticated sprinkler system and greater discharge of recycled water and less use of well water. The replacement of the existing RW pipe also supports the installation of flood cells within the northeast portion of the Pialorsi Ranch which will enable a much greater quantity of effluent discharge.

The Feasibility Study (GHD 2023) analyzed four alternatives:

- Alternative 1 – Concentrated Equal Size Flood Cells (installation of sprinkler irrigation piping and uniformly sized flood cells in one location on the upper Pialorsi Ranch bench)
- Alternative 2 – Varying Flood Cell Areas (installation of sprinkler irrigation piping and non-uniformly sized flood cells in one location on the upper Pialorsi Ranch bench)
- Alternative 3 – Split Upper Bench (installation of sprinkler irrigation piping and uniformly sized flood cells in two locations on the upper Pialorsi Ranch bench)
- No Project

The preferred alternative and Project analyzed in this ISMND is a derivative of Alternative 1, which includes excavation of flood cells within the Pialorsi Ranch - East upper bench, installation of replacement and new RW pipe, installation of a sophisticated sprinkler system, and installation of electrical conduit to support the sprinkler system between the pump station and the three sprinkler locations. The electrical conduit will be located in the same footprint as the replacement and new RW pipe. The difference between Alternative 1 and the preferred alternative is the orientation of the flood cells and row configuration: Alternative 1 had two rows of northeast to southwest oriented flood cells, and the preferred alternative has three rows of north to south oriented flood cells.

1.7 Recycled Water Characteristics

Raw Wastewater

Raw wastewater conveyed and treated at the WWMF is predominately from domestic (i.e., residential) sources with minimal commercial contributions. It is anticipated that additional future raw wastewater contributions will be from residential developments primarily as well. In addition, MCSD has a pretreatment program for grease and an Industrial Discharge Permit Program in effect to help control petroleum and other chemical impacts to the raw wastewater.

MCSD Sewer Ordinance Code, and local limits, prohibit the discharge of toxic chemicals and other harmful compounds to the wastewater sewer system. Residents and businesses routinely receive written materials describing substances that are prohibited from discharge into the wastewater sewer system for the protection of WWMF equipment or cause the recycled water to be unsuitable for irrigation.

Treatment Process

Liquid treatment processes within the WWMF consist of raw wastewater screening, activated sludge extended aeration, secondary clarification, chlorination and dechlorination. Solids treatment processes include biosolids storage basin and periodically dredging and dewatering biosolids prior to off-site disposal. As mentioned, treated effluent is only dechlorinated when discharging to the Mad River; dechlorination does not occur when the WWMF is producing recycled water. During recycled water production, chemical addition at the WWMF is limited to occasional alkalinity boosting (magnesium hydroxide) as well as chlorine for disinfection.

Recycled Water Quality Standards

The allowable applications, required treatment, and use area requirements are defined in the Water Recycling Criteria, Title 22, Division 4, Chapter 3 of the California Code of Regulations (CCR). The CCR sets the criteria for "disinfected secondary-23 recycled water" and the NPDES Permit lists other requirements associated with recycled water irrigation specific to MCSD and approved and permitted Recycled Water Use Areas. The following is a summary of pertinent numerical criteria:

– Average monthly five-day biochemical oxygen demand (BOD5) and total suspended solids (TSS) concentrations shall be equal to or less than 30 and 83 milligrams per liter (mg/L), respectively.
– Coliform bacteria must not exceed:
  - Most Probable Number (MPN) of 23 per 100 milliliters (mL), for samples collected during any calendar month, and
  - Never exceed a MPN of 240 per 100 ml.

Historically, recycled water produced by the District's WWMF has met these criteria. The District's water disposal methods, water quality standards and source documents are summarized in **Table 1.7-1**. In summary, the recycled water has undergone disinfected secondary treatment, looks like drinking water and contains no odor.

Table 1.7-1 MCSD Water Disposal Summary

Permitted Discharge / Recycled Water Use	Water Quality Requirements	Reference Document
Mad River (surface water discharge)	Numerical effluent limits; Table 7 NPDES	NPDES Permit
Percolation Ponds (groundwater) (no longer in use)	Numerical effluent limits; Table 7 NPDES	NPDES Permit
Hiller Storm Water Treatment Wetland and Forested Area (reuse) (not in use)	Disinfected secondary 23 recycled water and numerical BOD5 and TSS limits (see Table 8 of NPDES Permit)	NPDES Permit and this report (MCSD Title 22 Engineering Report) and NPDES Permit (Table 8)
Lower Fischer Ranch (reuse)		
Upper Fischer Ranch (reuse and land discharge)		
Pialorsi Ranch (reuse)		

2. Project Description

2.1 Project Components

The Project includes the installation of:

– ten flood cells of equal area (100-ft by 200-ft; 4.6 acres) on the northeast section of the Pialorsi Ranch – East upper bench. Each cell will be minimally graded (two foot below ground surface maximum) with a two foot berm around it;
– replacement of 2,075 linear feet (lf) of 16-inch RW pipe along Fischer Road;
– installation of 5,060 lf of new 16-inch RW pipe consisting of:
  - 1,775 lf to tee off of the replacement piping towards the northwest (towards Pivot Sprinkler 3);
  - 2,945 lf to tee off of the replacement piping to the east towards the flood cells;
  - 340 lf to tee off of the replacement piping to connect to Pivot Sprinklers #1 and #2; and
– installation of three pivot sprinkler irrigation systems (Pivot Sprinklers #1-3).

In total, Project implementation will result in approximately 10.32 acres of ground disturbance would occur. See **Appendix A, Figure 4 (Project Components)** for an overview of Project components.

The proposed sizing and number of flood cells (ten) matches that of the existing flood cells at Upper Fischer Ranch, which will support similar irrigation capacity (approximately 76 MG annually) and operational approach that District staff are familiar with. Establishing the number of flood cells to be a multiple of five, allows for a weekly operational approach that includes irrigation of one flood cell per day for a five-day work week, and allows for a total two week cycling for operation of the flood cells, which is consistent with the current approach used for the Upper Fischer Ranch flood irrigation system. This operational approach also prevents the application of irrigation water and nutrients from going over agronomic rates. The orientation of the flood cells aligns with the natural contours of the upper bench in order to minimize grading, with three "rows" of flood cells sufficient to fully utilize the area available on the upper bench. Each flood cell will be graded and contained by an approximate two-foot berm. Grading will be minimized, however maximum grading depth will not exceed two feet.

The flood cells will be served by approximately 2,945 lf of new 16-inch RW pipe that will tee off the existing pipeline on Fischer Road, and travel east along the path of an existing gravel access road. Additional tees and blow off valves are included in the conceptual layout to provide flexibility in future piping configurations to enable for irrigation of areas not directly covered by the flood irrigation and sprinkler irrigation systems. See **Appendix A, Figure 5** for a conceptual site plan. The flood cells will remain in seasonal agricultural production.

Along Fischer Road, approximately 2,075 lf of asbestos cement RW pipe that is at the end of it's useful life will be replaced with C900/C905 RW piping that will be up to 16-inches in diameter. This pipe will replace the segment of RW piping between the pump station and the southern extent of Fischer Road. At the southern end of Fischer Road, approximately 340 lf of new up to 16-inch piping will be installed to support new sprinkler heads (Pivot Sprinkler #1 and #2), and approximately 1,775 lf of new up to 16-inch piping will be installed from the tee to the northwest to support Pivot Sprinkler #3.

The proposed sprinklers will use a fully automated pivot sprinkler irrigation system that will be optimized to cover the field with a quarter pivot. The pivot sprinkler wheel system will be connected to the RW pipes and the pivot sprinkler will be stationary but will provide irrigation over the entirety of the southern Irrigation

Areas as shown in **Figure 4 (Project Components)**. A "Big Gun" sprinkler will be connected to the end of the pivot wheel structure to allow for irrigation of the adjacent hillside.

Electrical and communications conduit will be installed from the pump station to each pivot sprinkler in the same footprint as the proposed RW pipe. Electrical and communications panels will be installed to serve electrical loads and provide control functionality to the pivot sprinkler assemblies. The existing recycled water irrigation infrastructure in Pialorsi Ranch, i.e. 6-inch and 8-inch piping, will be abandoned in place. Surface level infrastructure, i.e. mobile sprinklers, will be removed. There are no potable water pipelines within any of the existing recycled water use areas. Existing interior fencing and additional equipment or infrastructure in the Project Area will be removed. Agricultural fencing will remain onsite to support seasonal grazing.

2.2 Construction Details

Flood cells will be graded minimally to result in ten distinct cell basins adjacent to each other. Each cell will have berms along the sides to channel and contain surface recycled water flow. Depth of grading and excavation for the flood cell area is anticipated to be approximately two feet deep, and each berm will be up to two feet. Each cell will be connected via subsurface piping and surface-level nozzles to control recycled water conveyance into the cells. The flood cells will be re-seeded at the close of construction; fodder crop is anticipated to be harvested from the flood cells.

The proposed RW piping, including both replacement and new piping, will be installed at a depth of approximately three feet and will include open trenching construction to install the pipeline. The trench will be approximately four feet wide and will be backfilled with the excavated earthen material and re-seeded.

Construction Schedule and Access

Construction will occur in the dry season, between June and October 2025 from 7 am to 7 pm Monday through Saturday. The Project Area will be accessed via Fischer Avenue.

Stockpiling and Staging Areas

Stockpiling and staging areas will occur within previously disturbed portions of the Project Area, and are shown on **Appendix A, Figure 2**. No staging or stockpiling will occur in areas of one- or three-parameter wetlands.

Within the stockpiling and staging area, BMPs would be utilized to prevent materials and hazardous materials from impacting the environment. It is anticipated that materials excavated from the trench during waterline installation, will be placed adjacent to the trench. This material may remain adjacent to the open trench until the waterline is installed to a degree where the contractor deems it appropriate to backfill the trench. Excess soils (not sourced from trenching), and construction materials will be stored on site within designated stockpiling and staging areas (**Appendix A, Figure 2**). Excess materials may be re-used onsite for backfill and finished grading. Excess materials will not be stockpiled or disposed of onsite once the Project is complete. The contractor will haul additional excess materials off site for beneficial reuse, recycling, or legal disposal.

Equipment

Equipment that may be utilized for construction include: excavator, backhoe, mini excavator, sump pumps, hosing, skid-steer, dump trucks, compactors, and additional specialized hand tools or smaller equipment. Equipment will not be refueled within 50 feet of the Mad River or three-parameter wetland.

Dewatering

It is possible that groundwater may be encountered during installation of the RW piping due to the shallow water table. Should this occur, the groundwater will be pumped out of the trench or excavation area and discharged into the adjacent field to percolate. A silt bag will be placed over the pump hose to contain sediment. Discharge to regulated one- or three-parameter wetlands will not occur.

New subsurface piping to connect to Pivot Sprinkler #3 is proposed to cross an existing drainage ditch located between the Lower and Upper Fischer Ranch irrigation areas (see **Figure 4**). This drainage ditch is anticipated to be dry during construction because it is unlikely that substantial precipitation would have fallen prior to construction, and because the District will not utilize the Upper Fischer flood cells prior to construction of this Project which the drainage ditch is hydrologically connected to. Therefore, no dewatering of surface waters would occur, and no special status fish would be handled or relocated because they are not expected to occur in the ditch at that time because it will have dried up. If water is located within this section of the drainage ditch, it would be isolated by sand bags (or similar) and dewatered via pumping to the adjacent field. Aquatic species would be relocated downstream. No special status fish species would be handled or relocated because they are not expected to occur in the ditch due to its ephemeral nature. The drainage ditch would be restored to pre-construction conditions following installation of the pipe, and therefore no change to drainage pattern would occur.

Environmental Considerations

A Project-level wetland delineation identified wetlands throughout the Project Area (which as mentioned in Section 1.3 equates to the Area of Ground Disturbance) (GHD 2024). Except for areas that will be unavoidably impacted during construction, resource areas to be avoided will be identified prior to construction. Erosion control Best Management Practices (BMPs) will be implemented, including placement of straw wattles at the southern and northwestern extents of the Project Area to limit earthen material from washing into the Mad River should an unseasonable rain event occur, and acquisition of a Construction General Permit which involves preparation of a Stormwater Pollution Prevention Plan (SWPPP) as described in **Section 2.6**. Additional erosion control BMPs will be implemented and maintained until the site is stabilized as required by Project permits.

Considerations for Protected Species

No trees or woody vegetation will be removed to implement this Project, and fodder crop harvesting will occur on the District's regular schedule. Prior to construction, a survey for nesting birds will occur in the Project Area (**Appendix A, Figure 2**) and adjacent areas. If active nests are observed, a no-work construction buffer may be implemented to avoid disturbance to the nesting bird. Nests would be checked weekly until the nest is no longer considered active.

Site Restoration and Closure

Following construction, the contractor will demobilize and remove equipment, supplies, and construction wastes. The disturbed areas will be restored to pre-construction conditions or stabilized with a combination of grass seed (broadcast or hydroseed), straw mulch, and/or rolled erosion control fabric. The site will remain utilized to support grazing and production of fodder crop. As mentioned, the proposed flood cells are anticipated to remain a source of fodder crop production. If required, revegetation would include replanting and any potential compliance monitoring in support of mitigation required by resource agencies for impacts to regulated habitats, such as wetlands.

2.3 Maintenance and Operation

Following construction, MCSD staff will maintain and operate the proposed flood cells, RW piping and sprinklers in accordance with their existing maintenance schedule. It is anticipated that additional MCSD staff time will be required to maintain the proposed flood cells, which will be maintained using the same approaches as is currently being implemented at the Upper Fischer Ranch flood cells.

2.4 Regulatory Permits, CEQA, and NEPA

The McKinleyville Community Services District is the CEQA lead agency for the Project.

It is anticipated that the Project will temporarily impact regulated jurisdictional three-parameter wetlands due to trenching. However, no permanent impacts to three-parameter wetlands, i.e. wetland fill, will occur, and pre-Project conditions will be restored following trenching. Therefore, the Project will require permits from the United States Army Corps of Engineering (USACE) under Section 404 of the Clean Water Act (CWA), and a corresponding Water Quality Certification from the North Coast Regional Water Quality Control Board (NCRWQCB) under Section 401 of the CWA. As part of the Section 404 permitting process, the USACE will review the Project under NEPA and Section 106 of the National Historic Preservation Act.

No permanent impacts to wetlands will occur under the Project (i.e. there will be no loss/conversion of wetlands from filling), rather temporary impacts to wetlands are expected. Therefore, compensatory mitigation for wetlands is not anticipated.

The Project will not directly or indirectly impact anadromous waterways due to the BMPs that will contain sediment within the Project Area and due to the forthcoming erosion control practices in the SWPPP; therefore, no consultation with the National Marine Fisheries Service (NMFS) under Section 7 of the Endangered Species Act will occur. The Project is not expected to require consultation with the United States Fish and Wildlife Service (USFWS), as potential impacts to federal special status plants or wildlife species are not anticipated. The Project also will not impact a stream, banks of stream or riparian vegetation so a permit from the CDFW is not anticipated.

The Project is located within the California Coastal Zone, specifically both within the State and Appeal jurisdictions. Therefore, it is anticipated the permit will be consolidated to the State jurisdiction by the California Coastal Commission. The Project includes improvements to infrastructure which can be considered development. Therefore, a Coastal Development Permit (CDP) will be required.

The Project Area is zoned AE – Agricultural Exclusive. According to Humboldt County zoning code, “Utilities, Minor” are considered a principally permitted land use within this zoning classification. Therefore, a Conditional Use Permit from Humboldt County is not anticipated to be required to implement this Project.

2.5 Tribal Consultation Under Assembly Bill 52

The MCSD has sent out requests for consultation of the proposed Project from California Native American tribes pursuant to Public Resources Code Section 21080.3.1. Under Assembly Bill (AB) 52, notification letters were sent to the Wiyot Tribe, Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, and the Cher-ae Heights Indian Community of the Trinidad Rancheria on July 25, 2024. One response was received from the Blue Lake Rancheria on August 1, 2024 and is discussed in Section 4.18 Tribal Cultural Resources. No other responses were received as of August 25, 2024. However, the Bear River Band of the Rohnerville Rancheria emailed on September 10, 2024 and the Wiyot Tribe emailed on October 10, 2024, both requesting that a cultural monitor be onsite during excavations. Protocols for inadvertent discovery of cultural resources are addressed in Section 4.5 Cultural Resources.

2.6 Compliance with Existing Regulations and Standard BMPs

The Project would abide by the following regulations and industry-accepted BMPs to reduce or avoid potential adverse effects that could result from construction or operation of the Project. In addition to these BMPs, mitigation measures are presented in the analysis sections in Chapter 4 to reduce potentially significant environmental impacts to below a level of significance. The Project's Mitigation Monitoring and Reporting Program will include these actions to ensure implementation.

Stormwater Pollution Prevention Plan (SWPPP)

The Project will obtain coverage under the North Coast Regional Water Quality Control Board (NCRWCB), Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activities (General Permit). The McKinleyville Community Services District will submit permit registration documents (notice of intent, risk assessment, site maps, SWPPP, annual fee, and certifications) to the Water Board. The SWPPP would address pollutant sources, BMPs, and other requirements specified in the Order. The SWPPP would include erosion and sediment control measures, dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment. A Qualified SWPPP Practitioner would oversee implementation of the Project SWPPP, including visual inspections, sampling and analysis, and ensuring overall compliance.

3. 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 & Forestry Resources	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Energy
☐	Geology & Soils	☐	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials
☐	Hydrology & Water Quality	☐	Land Use & Planning	☐	Mineral Resources
☐	Noise	☐	Population & Housing	☐	Public Services
☐	Recreation	☐	Transportation	☐	Tribal Cultural Resources
☐	Utilities & Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance

3.1 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 would be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there would 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 would be prepared.

☐ I find that the proposed MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect: (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that 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 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.

______________________________ ____________

Pat Kaspari — Date

MCSD General Manager

4. Environmental Analysis

4.1 Aesthetics

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
Have a substantial adverse effect on a scenic vista?			✓	
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			✓	
In non-urbanized areas, substantially degrade the existing visual character or quality of public view of the site and its surroundings? (Public Views are those that are experienced from 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?			✓	
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				✓

The MCSD service area spans approximately 12,140 acres, stretching northward from the Mad River to Patrick Creek and extending eastward from the Pacific Ocean. The Project is located in an area of open pastoral fields north of the Mad River and west of Highway 101. The proposed Project will install ten, 100ft by 200ft flood cells, on the northeast section of the Pialorsi Ranch, mirroring that of existing flood cells at Upper Fischer Ranch. Also, the Project will include replacement of existing RW pipe along Fischer Road and the addition of new RW piping to connect to new Pivot Sprinklers #1-3 (all underground).

a) Have a substantial adverse effect on a scenic vista? (Less Than Significant Impact)

For purposes of determining significance under CEQA, a scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public (OPR 2024). The Project Area does not contain a scenic vista by this definition. The visual setting within which the proposed Project consists of agricultural fields, seasonally used for fodder crop production. Terrain across the Project Area gradually slopes down to the southwest. Vegetation throughout the Project Area consists of grasses and other low-habitat value vegetation. Bordering the Project Area are scattered trees as well as the Mad River running directly south of the Project site. The Project features include the incorporation of flood cells, RW pipes, and Pivot Sprinklers designed to closely resemble the existing infrastructure already in place, thereby maintaining a consistent visual appearance and minimizing significant alterations to the landscape. The proposed Project will maintain the overall visual scenery of the area resulting in a less than significant impact.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (Less Than Significant Impact)

The Project Area is situated to the west of Highway 101. The segment of Highway 101 bordering the Project Area qualifies as a state scenic highway (Caltrans 2018). However, the Project's implementation will not adversely affect the scenic qualities of the Highway because the Project design ensures that it won't obstruct or impede any existing views along the highway route. By preserving the uninterrupted vistas and natural landscapes visible from the highway, the project maintains the area's scenic qualities, ensuring that travelers can continue to enjoy the beauty of the surroundings without any negative impact from the project's construction or operation. Furthermore, trees lining the boundary between Highway 101 and the Project Area often restrict visibility of the Project site from the Highway. Impacts are deemed less than significant.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public view of the site and its surroundings? (Public Views are those that are experienced from 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? (Less Than Significant Impact)

Public view of the Project Area is limited to those traveling along Fischer Road, Highway 101 and from neighboring residential housing and barns to the north. Visual elements of the Project include agricultural fields used for seasonal grazing and hay production. The purpose of the Project is to expand on the existing usage of treated wastewater for fodder crop irrigation. The required infrastructure is visually consistent with what is already present. Therefore, in this non-urbanized setting, implementation of Project components will not substantially degrade existing visual character or quality of public view of the Project site and its surroundings.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (No Impact)

The installation of three new pivot sprinkler systems poses the risk of introducing light or glare into the surrounding area. This potential glare stems from sunlight reflecting off water droplets during operation, as well as the reflective properties of the system's metal components. While these factors contribute to the possibility of increased glare, the overall impact is deemed less than significant. This determination is based on the understanding that the fields will be unoccupied during irrigation, minimizing the potential for direct disruption to individuals. Additionally, any glare generated is expected to be negligible and unlikely to significantly affect motorists or pedestrians.

4.2 Agriculture and Forest Resources

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
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?				✓
Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
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))?				✓
Result in the loss of forest land or conversion of forest land to non-forest use?				✓
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?				✓

The Project Area is designated as AE "Agriculture Exclusive" zoning, and it does not contain any forested land or resources. (Humboldt County 2024). Existing agricultural uses include raising hay and other fodder crops.

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance)? (No Impact)

As of the date of this ISMND, the Department of Conservation (DOC)'s Farmland Mapping and Monitoring Program has not been completed for Humboldt County. Therefore, lands within the Project Area have not been formally analyzed by the DOC to determine if they meet the criteria for being designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

For this analysis, "Agricultural Soils" and "Prime Agricultural Soils" designations via the Humboldt County WebGIS online mapping tool were utilized, which utilizes soils data from the Natural Resources Conservation Service (NRCS). According to the Humboldt County WebGIS, the entirety of the Project Area is Prime Agricultural Soil (Humboldt County 2024). Additionally, the Project Area meets the definition of Prime Agricultural Land via California Government Code 51201 (c) which is to be utilized in the absence of FMMP mapping (per Public Resources Code 21060.1).

According to Section 51201(c) of the Government Code:

"Prime Agricultural Land" means any of the following:

1. *All land that qualifies for rating as class I or class II in the NRCS land use capability classifications.*
2. *Land which qualifies for rating 80 through 100 in the Storie Index Rating.*
3. *Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture.*
4. *Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars ($200) per acre.*
5. *Land which has returned from the production of unprocessed agricultural plant products an annual gross value of not less than two hundred dollars ($200) per acre for three of the previous five years.*

Implementation of the Project would not result in the conversion of land out of agricultural use. The area in the proposed flood cells would be harvested for fodder crop in the dry season which aligns with existing land management. Implementation of the Project would also include temporary soil disturbance along the proposed RW pipe installation areas, however once the ground is restabilized via compaction and revegetation agricultural use would continue in the proposed pipe alignments. Overarchingly this Project will install the infrastructure to sustainably use recycled wastewater for agricultural purposes. No land will be converted out of agricultural productivity under the Project. No impact would occur.

b) Conflict with Agricultural Zoning or Williamson Act Contract? (No Impact)

Within the AE-zoned Project Area, there are no Williamson Agricultural Preserves or Williamson Act Contracts present (Humboldt County 2024). Construction and maintenance of water piping align with the compatible uses stated in the Agriculture Exclusive designation. According to Humboldt County code, a principally permitted land use in the AE zone is "utilities, minor". Hence, no conflicts with the Agricultural zoning are foreseen, and no impact would occur.

c, d) Conflict with Forest Land Zoning or Convert Forest Land? (No Impact)

There are no forest lands, timberland, or lands zoned Timberland Production Zone in the Project Area; therefore, no forest land or timberland would be converted to non-forest or non-timberland use. No impact would result.

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? (No Impact)

As stated in question a) the Project contains Prime Agricultural Land, and no Prime Agricultural Land will be converted out of agricultural production due to Project implementation. The proposed flood cells will be harvested for fodder crop in the dry season, which is consistent with existing land management. Soil disturbance during the installation of pipes will occur, but this disturbance is temporary and the area will be restored to pre-construction conditions through compaction and revegetation efforts, enabling continued agricultural activity along the pipe routes once stabilization is achieved. There are no other changes in the existing environment caused by the Project that would negatively impact farmland or forest land in or adjacent to the Project Area, and therefore no impact would result.

4.3 Air Quality

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
Conflict with or obstruct implementation of the applicable air quality plan?		✓		
Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		✓		
Expose sensitive receptors to substantial pollutant concentrations?		✓		
Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓	

The Project is located within the Humboldt County portion of the North Coast Air Basin (Air Basin) which is managed by the North Coast Unified Air Quality Management District (NCUAQMD). The NCUAQMD monitors air quality; enforces local, State, and federal air quality regulations for counties within its jurisdiction; inventories and assesses the health risks of Toxic Air Contaminants (TACs); and adopts rules that limit pollution.

a) Conflict with or obstruct implementation of the applicable air quality plan? (Less than Significant with Mitigation)

This impact relates to consistency with an adopted attainment plan. Within the Project vicinity, the NCUAQMD is responsible for monitoring and enforcing local, state, and federal air quality standards. Humboldt County is designated 'attainment' for all National Ambient Air Quality Standards. Pursuant to California Ambient Air Quality Standards, Humboldt County is designated attainment for all criteria air pollutants except PM_{10}. Humboldt County is designated as "non-attainment" for the State's PM_{10} standard.

PM_{10} refers to inhalable particulate matter with an aerodynamic diameter of less than 10 microns. PM_{10} includes emission of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} emissions include unpaved road dust, smoke from wood stoves, construction dust, open burning of vegetation, and airborne salts and other particulate matter naturally generated by ocean surf. Therefore, any use or activity that generates airborne particulate matter may be of concern to the NCUAQMD. The proposed Project would create PM_{10} emissions in part through vehicles coming and going to the Project Area and the construction activity associated with the Project.

To address non-attainment for PM_{10}, the NCUAQMD adopted a Particulate Matter Attainment Plan in 1995. This plan presents available information about the nature and causes of PM_{10} standard exceedances and identifies cost-effective control measures to reduce PM_{10} emissions to levels necessary to meet California Ambient Air Quality Standards. However, the NCUAQMD states that the plan, "should be used cautiously as it is not a document that is required in order for the [NCUAQMD] to come into attainment for the state standard" (NCUAQMD 2024). Therefore, compliance with applicable NCUAQMD PM_{10} rules is applied as the threshold of significance for the purposes of analysis. NCUAQMD Rule 104 Section D, Fugitive Dust Emissions, is applicable to the Project.

Rule 104, Section D – Fugitive Dust Emissions is used by the NCUAQMD to address non-attainment for PM_{10}. Pursuant to Rule 104 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 covering open bodied trucks when used for transporting materials likely to give rise to airborne dust and the use of water during the grading of roads or the clearing of land. During earth moving activities, fugitive dust (PM_{10}) would be generated. The amount of dust generated at any given time would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. Unless controlled, fugitive dust emissions during construction of the Project could be a potentially significant impact, therefore, Mitigation Measure AQ-1 would be incorporated to comply with NCUAQMD's Rule 104 Section D.

Operation of the Project would not include the handling, transporting, or open storage of materials in which particulate matter may become airborne. Due to the absence of handling, transport, or open storage of materials that would generate particulate matter, operation of the Project is not expected to conflict with NCUAQMD's Rule 104 Section D. No impact from operation of the Project would result.

Mitigation

Implementation of Mitigation Measures AQ-1 is proposed to reduce the potential impact related to PM_{10} fugitive dust by requiring BMPs.

Mitigation Measure AQ-1: BMPs to Reduce Air Pollution

The contractor shall implement the following BMPs during construction:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, active graded areas, excavations, and unpaved access roads) shall be watered two times per day in areas of active construction as necessary.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph, unless the unpaved road surface has been treated for dust suppression with water, rock, wood chip mulch, or other dust prevention measures.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes. Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications.

- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The NCUAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

With implementation of Mitigation Measure AQ-1, the Project would implement relevant fugitive dust (PM10) controls during construction and would not conflict with applicable air quality plans. This impact would be reduced to a less-than-significant level with mitigation.

b) Result in a cumulatively considerable net increase in any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard? (Less than Significant with Mitigation)

The Project's potential to generate a significant amount of criteria pollutants of concern during Project construction and operation is assessed in this Section. As noted above, Humboldt County is designated nonattainment of the State's PM10 standard. The County is designated attainment for all other state and federal standards. Potential impacts of concern will be exceedances of state or federal standards for PM10. Localized PM10 is of concern during construction because of the potential to emit fugitive dust during earth-disturbing activities.

Construction

Localized PM_{10} (Fugitive Dust)

The Project would include clearing and grubbing, grading, trenching, and asphalt paving. Generally, the most substantial localized air pollutant emissions would be fugitive dust generated from site clearing and grading. If uncontrolled, these emissions could lead to both health and nuisance impacts. Construction activities would also temporarily generate emissions of equipment exhaust and other air contaminants. The Project's potential impacts from equipment exhaust are assessed separately below.

The NCUAQMD does not have formally adopted thresholds of significance for fugitive, dust-related particulate matter emissions above and beyond Rule 104, Section D which does not provide quantitative standards. For the purposes of analysis, this document uses the Bay Area Air Quality Management District (BAAQMD) approach to determining significance for fugitive dust emissions from Project construction. The BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by BAAQMD are implemented for a project, then fugitive dust emissions during construction are not considered significant. BAAQMD recommends a specific set of "Basic Construction Measures" to reduce emissions of construction generated PM_{10} to less than significant. Without incorporation of these Basic Construction Measures, the Project's construction-generated fugitive PM_{10} (dust) would result in a potentially significant impact.

The Basic Construction Measure controls recommended by the BAAQMD are incorporated into Mitigation Measure AQ-1. These controls are consistent with NCUAQMD Rule 104 Section D, Fugitive Dust Emission and provide supplemental, additional control of fugitive dust emissions beyond that which would occur with Rule 104 Section D compliance alone. Therefore, with incorporation of Mitigation Measure AQ-1, the Project would result in a less than significant impact for construction-period PM_{10} generation and would not violate or substantially contribute to an existing or projected air quality violation.

Regional Criteria Pollutants

The NCUAQMD does not have established CEQA significance criteria to determine the significance of impacts that would result from projects such as the proposed Project; however, the NCUAQMD does have criteria pollutant BACT thresholds for new or modified stationary source projects proposed within the NCUAQMD's jurisdiction. For construction emissions, the NCUAQMD has indicated that emissions are not considered regionally significant for projects whose construction would be of relatively short duration, lasting less than one year. NCUAQMD has indicated that it is appropriate for lead agencies to compare proposed construction emissions that last more than one year to its BACT thresholds for stationary sources identified in Rule 110(E)(1), which are:

– Nitrogen Oxides – 40.0 tons per year, 50.0 pounds per day

– Reactive Organic Gases – 40.0 tons per year, 50.0 pounds per day

– PM_{10} – 15.0 tons per year, 80.0 pounds per day

– Carbon Monoxide – 100 tons per year, 50.0 pounds per day

CalEEMod version 2022.1.1.26 was used to estimate air pollutant emissions from Project construction (**Appendix B – Air Quality Modeling Results**). Material hauling volumes were estimated based on similar projects. The Project's estimated construction emissions are provided in Table 4.3-1 and 4.3-2 for annual and daily emission rates, respectively. As shown in the tables, the Project would not exceed the NCUAQMD's thresholds of significance. Therefore, the Project's construction emissions are considered to have a less than significant impact.

Table 4.3-1 Annual Construction Regional Pollutant Emissions

Parameter	Maximum Annual Emissions (tons/year)			
	ROG	NO_X	CO	PM_{10}
Project Construction (2025)	<0.1	0.4	0.4	<0.1
NCUAQMD Stationary Source Thresholds	40.0	40.0	100	15.0
Exceed Threshold?	No	No	No	No

Table 4.3-2 Daily Construction Regional Pollutant Emissions

Parameter	Average Daily Emissions (pounds/day)			
	ROG	NO_X	CO	PM_{10}
Project Construction (2025)	3.7	34.2	35.3	1.5
NCUAQMD Stationary Source Thresholds	50.0	50.0	500.0	80.0
Exceed Threshold?	No	No	No	No

Operation

Following construction, the Project would not include any stationary sources of air emissions. MCSD staff will maintain and operate the Project facilities. The Project will not lead to a need for additional staffing by MCSD because the Project will streamline the recycled irrigation system that is in-part already in place. The proposed Project would not increase vehicle traffic on local streets and trails, increase the area's population. Therefore, the Project is not anticipated to result in an increase in operational emission above existing conditions and would result in no impact.

c) Expose sensitive receptors to substantial pollutant concentrations? (Less than Significant with Mitigation)

Sensitive receptors include school-aged children (schools, daycare, playgrounds), the elderly (retirement community, nursing homes), the infirm (medical facilities and offices), and those who exercise outdoors regularly (public and private exercise facilities, parks).

The nearest sensitive receptors, is a residence owned by the District which is located adjacent to proposed trenching in the northwestern portion of the Project Area (west of the flood cells). The house is approximately 10 feet away from the proposed trenching pathway and is occupied by a District employee. The next nearest sensitive receptor is 50 feet away from the Project Area located in the northeast segment near the staging area, and 100 feet located along Fischer Avenue north of the Pump Station. The nearest educational facility is the McKinleyville Head Start Center, located 0.96 miles northeast, and the nearest school is the McKinleyville Middle School approximately 1.5 miles northeast.

BAAQMD's Basic Construction Measures included in Mitigation Measure AQ-1 (BMPs to Reduce Air Pollution) minimize idling times for trucks and equipment to five minutes (as required by the California Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, included in Title 13, Section 2485 of California Code of Regulations [CCR]) and ensures construction equipment is maintained in accordance with manufacturer's specifications.

Project construction activities would occur over one construction season in 2025. The Project would not result in prolonged construction equipment use, and construction activity would occur throughout the Project Area footprint and would not occur at any one location for an extended period of time. Due to distance to the nearest potential receptor, the limited duration and activity for construction, and the implementation of Mitigation Measure AQ-1, which would control fugitive dust, the Project would not result in the exposure of sensitive receptors to substantial pollutant concentrations. Therefore, with implementation of Mitigation Measure AQ-1, the construction-related impact would be less than significant with mitigation.

Following construction, the Project will not include any stationary sources of air emissions or new emissions that will result in substantial long-term operational emissions of criteria air pollutants that will substantially affect sensitive receptors. Therefore, Project operation will not expose nearby sensitive receptors to substantial pollutant concentrations.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (Less than Significant)

Implementation of the Project would not result in major sources of odor because discharged recycled water will have gone through the disinfected secondary treatment process, and will not contain an odor. The Project type is not one of the common types of facilities known to produce odors (i.e., landfill, coffee roaster, etc.). Minor odors from the use of equipment during construction activities would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. The Project emissions or odors caused by construction would not adversely affect a substantial amount of people; the Project's construction impact would be less than significant.

Following construction, Project operations will not result in any major sources of odor or emissions because the recycled water will have gone through the disinfected secondary treatment process. Therefore, a less than significant impact would result.

4.4 Biological Resources

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
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?		✓		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				✓
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		✓		
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?				✓
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
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?				✓

A Biological Resources Technical Memorandum and Wetland Delineation Report were prepared to assess baseline environmental conditions within the Project Area, and are included as **Appendix C and D**, respectively. These studies evaluate the potential for any special status plants, wildlife species, or any sensitive natural communities (SNCs) or wetlands to occur. Under Section 7 of the ESA, critical habitat should be evaluated if designated for federally listed species that may be present in the Biological Study Area (BSA). The BSA, or the area directly or indirectly impacted by the proposed Project, encompasses a 0.25-mile radius around the Project Area.

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? (Less Than Significant with Mitigation)

Special-status Plant Species

Special status plant species under State jurisdiction include those listed as endangered, threatened, or as candidate species by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA). Plant species on CNPS California Rare Plant Ranking (CRPR) Lists 1A, 1B and 2A and 2B are considered eligible for state listing as endangered or threatened pursuant to the California Fish and Game Code and CDFW has oversite of these special status plant species as a trustee agency. As part of the CEQA process, such species should be considered as they meet the definition of Threatened or Endangered under Sections 2062 and 2067 of the California Fish and Game Code. There are occasions where CRPR List 3 or 4 species might be considered of special concern particularly for the type locality of a plant, for populations at the periphery of a species range, or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology.

Two seasonally appropriate floristic surveys for special status plants were conducted in the Project Area on March 18, 2024, and July 6, 2024. No special status plants were detected in the Project Area. GHD conducted surveys for special status plant species and vegetation assessments during the spring and summer surveys.

Based on database searches, historical records, and an overview of the primary literature, no special status plant species had a high potential of occurring in the Project Area, and seven special status plant species had a moderate potential of occurring. The species with a moderate potential of occurring are the sea-watch (*Angelica lucida*) with a CRPR of 4.2, Leafy-stemmed miterwort (*Mitellastra caulescens*) with a CRPR of 4.2, Howell's montia (*Montia howellii)* with a CRPR of 2B.2, Maple-leaved checkerbloom (*Sidalcea malachroides*) with a CRPR of 1B.2, Siskiyou checkerbloom (*Sidalcea malviflora ssp.patula*) with a CRPR of 1B.2, Coast checkerbloom (*Sidalcea oregana ssp. Eximia*) has a CRPR of 1B.2, and Scouler's catchfly (*Silene scouleri ssp. Scouleri*) has a CRPR of 2B.2.

Sixteen additional special status plant species were thought to have a low likelihood of occurring within the Project Area (**Appendix C – Biological Resources Technical Memorandum**). Given that required protocol level plant surveys are completed with no detections of sensitive plant species during the initial survey, the impact on special-status plants is considered less than significant.

Special Status Wildlife Species

A database search of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), National Marine Fisheries Service (NMFS) California West Coast Region Species List Tool, and California Natural Diversity Database (CNDDB) search encompassing eight USGS 7.5 Minute Quadrangles (hereafter quads) surrounding the Arcata North quad (Crannell, Panther Creek, Tyee City, Blue Lake, Eureka, Arcata South, and Korbel) was conducted by GHD on July 9, 2024. In addition, citizen science databases such as eBird, and iNaturalist were reviewed for additional local wildlife information. (**Appendix C**).

The potential for species to occur was determined at the level of the BSA. Explanations for determinations are provided in **Table 2** within **Appendix C**.

Special Status Bird Species

There is one special status bird species, the CDFW Species of Special Concern Bryants savannah sparrow (*Passerculus sandwichensis alaudinus*), with a moderate potential to occur within the BSA. There is suitable moist grassland habitat present within the Project Area. Ruderal habitat areas are also adjacent to the PSB, increasing flyover potential. No other special status bird species have a moderate to high potential to occur within the Project Area.

In addition, migratory and nesting birds are protected by the Migratory Bird Treaty Act and Fish and Game Code. If state special status and/or native migratory birds are nesting in the Project Area, or up to 300 feet during construction activities (as feasible taking into account private property), these species may be impacted by removal of nesting habitat, elevated levels of noise, and anthropogenic disturbance. This impact is potentially significant.

Mitigation

Mitigation Measure BIO-1 has been incorporated into the Project to reduce the impact to special status bird species.

Mitigation Measure BIO-1: Avoidance and Minimization Measures to Protect Special Status and Nesting Birds

- Ground disturbance shall be conducted outside of the nesting bird season (which is generally assumed to primarily occur between March 15 – August 15). If ground disturbance or vegetation clearing cannot be confined to outside of the nesting bird season, a qualified biologist shall conduct a pre-construction survey in suitable habitat. This survey shall include a full area search for nesting activity within the Project Area and a buffered distance of 50 feet from the Project Area. In addition, this should include frequent visual raptor scans with binoculars within 300 feet of the Project Area.
- If ground disturbance and vegetation removal work lapses for seven days or longer during the nesting season in the direct vicinity of the area surveyed, the qualified biologist shall conduct a supplemental nesting bird pre-construction survey before Project work is reinitiated.
- If active nests are detected within the Project Area and 50-foot buffer or within the 300-foot area (for raptors), the biologist shall flag a buffer around each nest. Construction activities shall avoid nest sites until the biologist determines that the young have fledged or nesting activity has ceased. If nests are documented outside of the Project Area, but up to 300 feet of the Project Area, buffers would be implemented as needed. In general, the buffer size for common species would be determined on a case-by-case basis in consultation with CDFW (as needed) and, if applicable, with USFWS. Buffer sizes would take into account factors such as (1) noise and human disturbance levels at the construction site; (2) distance and amount of vegetation or other screening between the construction site and the nest; and (3) sensitivity of individual nesting species.
- The qualified biologist shall monitor all nests at least once per week to determine whether birds are being disturbed. If signs of disturbance or distress are observed, the qualified biologist shall immediately implement adaptive measures to reduce disturbance. These measures may include, but are not limited to, increasing buffer size, and/or halting disruptive construction activities in the vicinity of the nest until fledging is confirmed or nesting activity has ceased.

Implementation of Mitigation Measure BIO-1 would reduce potential impacts to special status and nesting bird species to a less-than-significant level.

Special-status Mammal Species

No special status mammal species have a moderate or high potential to occur within the Project Area due to a lack of suitable habitat available (**Appendix C**).

Special Status Invertebrate Species

No special status invertebrate species have a moderate or high potential to occur within the Project Area due to a lack of suitable habitat available (**Appendix C**).

Special-status Insect Species

No special status insect species have a moderate or high potential to occur within the Project Area due to a lack of suitable habitat available (**Appendix C**).

Special-status Fish Species

No special status fish species have a moderate or high potential to occur within the Project Area due to a lack of suitable habitat available (**Appendix C**).

Special-status Amphibian and Reptiles Species

No special status amphibian or reptile species have a moderate or high potential to occur within the Project Area due to a lack of suitable habitat available (**Appendix C**).

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (No Impact)

Sensitive Natural Communities

A database query of CNDDB returned two terrestrial communities in the eight USGS quads surrounding the Project location: Northern Coastal Salt Marsh and Northern Foredune Grassland. Protocol level vegetation assessments and mapping of Sensitive Natural Community (SNC) occurred during site surveys conducted March 18, 2024, and July 6, 2024. No SNC were identified within the PSB (**Appendix C – Biological Resources Technical Memorandum**). No impact would occur.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (Less Than Significant with Mitigation)

Wetlands

A wetland delineation was completed on April 18th, 2024 (**Appendix D – Wetland Delineation Report**) to determine the extent of wetlands and other waters within the Project Area based on hydrophytic vegetation, hydric soils, and wetland hydrology using methods and indicators outlined in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region. In addition, the Project is within the California Coastal Zone and also the McKinleyville Area Local Coastal Plan. Wetland delineation results are summarized in **Table 4.1**.

Within the Project Area, the wetland delineation resulted in two USACE-jurisdictional wetlands (three-parameter) that are located along the eastern shoulder of Fischer Ave and a ditch that is hydrologically connected to the Mad River (**Appendix D**).

Under the Coastal Act, as well as the McKinleyville Area Local Coastal Plan, wetland areas shall be defined to satisfy at least one of the following three criteria: (1) the presence of at least periodic predominance of hydrophytic vegetation; (2) predominately hydric soils; (3) periodic inundation for seven (7) consecutive days.

Two CCC-jurisdictional wetlands (one-parameter) are located along the eastern shoulder of Fischer Avenue and on the southern side of Wetlands 4 (**Appendix D**). These areas would be regulated under the Coastal Act and the McKinleyville Area Local Coastal Plan as one-parameter wetlands.

Table 4.4-1 Wetlands within the Wastewater Recycling Expansion Project

Wetland Name	Central lat/long	Wetland Size	Jurisdiction
Wetland 1	(40.929190, -124.120151)	20,965 ft^2; 0.481 ac	USACE
Wetland 2	(40.929190, -124.120151)	130 ft^2; 0.003 ac	CCC
Wetland 3	(40.931411, -124.125747)	3,825 ft^2; 0.088 ac	CCC
Wetland 4	(40.931537, -124.125600)	415 ft^2; 0.009 ac	USACE
Total USACE Wetland in Project Area		**21,380 ft^2; 0.491 ac**	
Total CCC One-parameter Wetland in Project Area		**3,955 ft2; 0.091 ac**	

Upland sampling points were also described within areas of planned disturbance to confirm and document the absence of any wetland indicators in these areas. The upland points did not meet the hydrophytic vegetation parameter, as the vegetation plots did not pass the prevalence index test and in most cases did not pass the dominance test. While many plots contained primarily facultative plants, these plants were not acting as hydrophytic vegetation, and were present on convex slopes with well drained soils. In addition, upland plots that had primarily facultative plants showed a Prevalence Index of greater than 3, therefore hydrophytic vegetation is not present in mapped uplands.

Two pits were dug to 15 inches, and one pit dug to 12 inches in the upland test plots. The upland soils did not meet the hydric soils parameter to be considered a wetland. Soils in uplands did not show hydric soil characteristics and contained mostly a sandy loam texture with no redoximorphic features. Therefore, hydric soils are not present and not a qualifying parameter for wetlands.

The upland did not have any primary or secondary indicators of wetland hydrology to meet the hydrology parameter. Therefore, the upland plots did not meet any parameters to be considered a wetland.

Based on the current design, the Project would have temporary impacts to wetlands (**Table 4.4-2**). Temporary impacts would occur due to construction impacts from trenching and pipe installation predominantly at the ditch crossing at Wetland 4 and in the adjacent one-parameter Wetland 3. It should be noted that Wetland 4 is anticipated to be dry during construction because MCSD would not discharge recycled water to the Upper Fischer Ranch flood cells in proximity to construction beginning to promote dry conditions. The proposed pipe along Fischer Road would be installed subsurface to the roadway and no disturbance would occur in Wetlands 1 or 2 within the adjacent agriculture fields.

In areas of disturbance, soil would be backfilled into trenches and the area seeded with a native grass mix and restored to pre-project conditions. No permanent impacts to wetlands would occur because the proposed area of pipe installation (i.e. temporary impacts) would be restored to pre-project conditions, and because pivot sprinkler #3 would be on wheels and therefore would not be permanently located within a wetland. The flood cells and pivot sprinklers #1 and #2 are in area of uplands. No permanent impacts to wetlands would occur under the Project (i.e. there would be no loss of wetlands), rather temporary impacts to wetlands are expected. Therefore, mitigation for wetlands is not anticipated.

Table 4.4-2 Approximate Impacts to Wetlands

	Total Delineated (square feet / acres)	Current Estimated Permanent Impacts (square feet / acres)	Current Estimated Temporary Impacts (square feet / acres)
Three Parameter Wetlands	21,335 / 0.490	0 / 0	410 / 0.009
One Parameter Wetlands	3,945 / 0.091	0 / 0	3,815 / 0.088

Mitigation

Mitigation Measure BIO-2: Avoidance and Protection of Wetlands

The Project shall implement the following avoidance and protection measures for juxtaposed Waters of the United States and Waters of the State that would not be impacted (filled or excavated) during Project construction:

- The Project shall attempt to avoid or minimize impacts to wetlands/waters to the greatest extent feasible in the final design plans.
- Juxtaposed wetlands (not proposed for disturbance) shall be clearly identified in the construction documents and reviewed by the McKinleyville Community Services District prior to issuing for bid to ensure they are clearly marked as equipment exclusion zones during construction.
- Suitable perimeter control measures, such as silt fences, or straw wattles shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These measures shall be installed prior to any clearing or grading activities.

Wetlands temporarily disturbed during Project construction shall be restored to pre-Project topography and seeded with a CA native grass seed mix.

Mitigation Measure BIO-2 requires clear identification and avoidance of wetlands outside of the construction footprint, and requires restoration of temporarily impacted wetlands within the construction footprint to pre-Project conditions including seeding with CA native grass seed. Implementation of Mitigation Measure BIO-2 would reduce potential impacts to wetlands to a less-than-significant level.

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? (No Impact)

Project construction and operations do not include in-water work or any other activity that might impede fish migration. In addition, the piping installation for Pivot Sprinkler #3 would occur when the seasonal drainage ditch is dry. The only new proposed aboveground elements would be the Pivot Sprinklers #1 – #3 which would have a minimal ground footprint that is easily traversable. Thus, no impact would occur.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (No Impact)

McKinleyville Area Local Coastal Plan

The Resource Protection Policies and Standards section 3.40 and 3.41 of the McKinleyville Coastal Area Plan (Humboldt 2014) summarizes policies germane to the protection of biological resources. Policy 3.41.C.7 indicates permitted uses within wetlands as incidental public service purposes. The Project would be wastewater recycling as part of a public utility service. In addition, 3.41.D.c. exempts agricultural lands designated Agriculture Exclusive from wetland buffer requirements. The Project does not propose any tree or riparian vegetation removal. No conflicts with policies or ordinances protecting biological resources have been identified. Therefore, no impact would occur.

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? (No Impact)

There are no adopted Habitat Conservation, Community Conservation, or approval local, regional, or state habitat conservation plans that apply to the Project Area. No impact would result.

4.5 Cultural Resources

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?				✓
Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		✓		
Disturb any human remains, including those interred outside of formal cemeteries?		✓		

The cultural resources study area is described as the Area of Potential Effect (APE) which is equivalent to the Project Area and area of ground disturbance (see **Appendix A, Figure 2**). An Archaeological Survey Report (ASR) was prepared for the Project by Roscoe and Associates (RA 2024). There are two previously recorded cultural resource sites that overlap into the APE. The ASR assessed the potential for surficial and/or buried archaeological and historical resources in the proposed APE through the completion of the following:

- Records and literature search at the Northwest Information Center (NWIC) of the California Historical Resources Information Center (CHRIS);
- Further literature review of publications, files, and maps for ethnographic, historic-era, and prehistoric resources and background information;
- Communication with the Native American Heritage Commission (NAHC) to request a review of the Sacred Lands File and contact information for the appropriate tribal communities;
- Contact with the appropriate local Native American Tribes;
- Pedestrian survey of the APE;
- Shovel test units throughout known and potential areas of cultural sensitivity within the APE;
- Ground penetrating radar in areas of known cultural sensitivity outside the APE;
- Metal detector investigation throughout known and potential areas of cultural sensitivity overlapping within and outside of the APE.

Study results were used as a technical basis for evaluating potential impacts to historic and cultural resources under CEQA.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? (No Impact)

The historical Wynn Dairy is located within the APE. A waterline will be excavated in the driveway through the building complex and equipment and materials will be staged within the building complex. No buildings or structures will be impacted by this excavation. The site will be restored to pre-Project conditions. No impacts to the built environment of this historic resource are proposed, and therefore no impact would occur.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (Less than Significant Impact with Mitigation)

According to the ASR, no archaeological deposits were identified within the APE (RA 2024). However, two archaeological deposits were documented within the irrigation area (RA 2024). No excavation or other ground disturbance is proposed outside of the APE (i.e. within the irrigation area located outside of the APE) and therefore no impact to the documented archaeological deposits would occur.

Native American tribes and the NAHC were contacted to discuss the proposed Project through the ASR process. Consultation between Roscoe and Associates, the Blue Lake Rancheria, the Wiyot Tribe, and the Bear River Band of the Rohnerville Rancheria Tribal Historic Preservation Officers (THPOs) occurred (RA 2024). All three THPOs responded with interest and concern regarding the archaeological sensitivity of the area surrounding the Mad River estuary with particular concern for the two documented cultural sites and Wiyot cemetery in the vicinity of the APE. The THPO from the Wiyot Tribe was onsite during all exploratory work throughout the ASR process. Due to the cultural sensitivity of the vicinity, it is possible that archaeological resources may be inadvertently discovered during ground disturbance which could result in a potentially significant impact. To ensure potential impacts to archeological resources remain less than significant, Mitigation Measures CR-1 and CR-2 would be implemented to establish a monitoring plan with the requirement for THPOs to be onsite during ground disturbance, and protocols from Roscoe and Associates and Native American consultation for inadvertent archaeological discovery. The request from the tribes has been incorporated into Mitigation Measures CR-1 specific to archeological resources.

Mitigation

Implementation of Mitigation Measures CR-1 and CR-2 would reduce the potential impact to archaeological resources by requiring procedures to plan for monitoring and during excavation that shall be taken in the event of inadvertent discovery.

Mitigation Measure CR-1: Tribal Cultural Monitoring and Monitoring Plan

A Monitoring Plan shall be drafted in consultation with the Blue Lake Rancheria, Wiyot Tribe and Bear River Band of Rohnerville Rancheria. The Monitoring Plan shall include the following:

- specifics of post-implementation recording requirements,
- how discoveries will be addressed,
- how collections will be curated or reburied, and
- information to consult with the Native American Heritage Commission to determine the most likely descendant for the site may also be appropriate and will assist the consultation process should human remains be inadvertently discovered.

All ground disturbing work shall be monitored by a Tribal Cultural Monitor who will ensure the proper treatment of inadvertently discovered resources in accordance with the Monitoring Plan.

Mitigation Measure CR-2: Inadvertent Discovery of Archaeological Material

A pre-construction meeting shall be held with field contractors, where the protocols for inadvertent discovery (described below) shall be communicated. If cultural materials for example: chipped or ground stone, historic debris, building foundations, or bone are discovered during ground-disturbance activities, work shall be stopped within 20 meters (66 feet) of the discovery, per the requirements of CEQA (Title 14 CCR 15064.5 (f)). Work near the archaeological finds shall not resume until a professional archaeologist, who meets the Secretary of the Interior's Standards and

Guidelines, has evaluated the materials and offered recommendations for further action. Tribal representatives shall be notified.

Implementation of Mitigation Measures CR-1 and CR-2 would reduce the potential impacts to a less-than-significant level during construction because a monitoring plan would be developed in coordination with the Blue Lake Rancheria, Wiyot Tribe and Bear River Band of Rohnerville Rancheria to guide the inadvertent discovery of an archaeological resource, and because a Tribal Cultural Monitor will be onsite during ground disturbance, and because standards to address discovery of unanticipated archaeological resources and to preserve and/or record those resources consistent with appropriate laws and requirements would be adhered to.

c) Disturb any human remains, including those interred outside of formal cemeteries? (Less than Significant Impact with Mitigation)

The ARS disclosed that a Wiyot cemetery was located in the vicinity of the APE, however no human remains were encountered in the shovel test pits, ground penetrating radar or excavation pits. However, human remains may be encountered in the APE inadvertently. In the event that human remains are encountered during construction, Mitigation Measure CR-3 would be implemented to ensure any potential impact would be less than significant.

Mitigation

Implementation of Mitigation Measure CR-3 would reduce the potential impact to archaeological resources or human remains by requiring procedures that shall be taken in the event of inadvertent discovery.

Mitigation Measure CR-3: Inadvertent Discovery of Human Remains

If human remains are discovered during project construction, work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie adjacent to human remains (Public Resources Code, Section 7050.5). The Humboldt County coroner will 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 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 will 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.

Implementation of Mitigation Measure CR-3 would reduce the potential impacts of inadvertent discovery of human remains to a less-than-significant level during construction because a plan would be implemented to address discovery of unanticipated human remains and to preserve and/or record those resources consistent with appropriate laws and requirements.

4.6 Energy Resources

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?		✓		
Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓

a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation? (Less than Significant with Mitigation)

Construction

Temporary energy use in connection with Project construction would entail consumption of diesel fuel and gasoline by construction equipment and by the transportation of earth moving equipment, construction materials, supplies, and construction personnel. Given the short construction period and implementation of State regulations regarding vehicle emission and fuels standards, such as the Low Carbon Fuel Standard and anti-idling regulations, energy use related to construction would not be wasteful or inefficient.

Inefficient construction-related fuels use would also be avoided due to the measures in Mitigation Measure AQ-1 (BMPs to Reduce Air Pollution). Equipment idling times would be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes or less (as required by Mitigation Measure AQ-1). Because construction would not encourage activities that would result in the use of large amounts of fuel and energy in a wasteful manner, and the incorporation of Mitigation Measure AQ-1 would reduce idling time, impacts related to the inefficient use of construction-related fuels would be less than significant with mitigation.

Operation

The Project will not lead to a need for additional staffing by MCSD because the Project will streamline the recycled irrigation system that is in-part already in place. The proposed Project would not increase vehicle traffic on local streets and trails, or increase the area's population. Additionally, no changes to the existing pump stations are proposed. Therefore, the Project is not anticipated to result in an increase in operational emission above existing conditions and would result in no impact.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (No Impact)

There are no local plans for renewable energy that would apply to the Project. Implementation of the Project would not obstruct a state plan for renewable energy. The Project would not conflict with or inhibit the implementation of the State Energy Action Plan, or other State regulations. The Project would not inefficiently utilize energy due to incorporation of Mitigation Measure AQ-1, which limits idling time and provides measures to protect air quality. The Project would temporarily require the use of equipment to construct the components of the Project; however, these activities would be temporary and would not interfere with the broader energy goals of the State.

Operationally, the Project would not adversely impact operational automobile-related energy consumption. The majority of California's energy-related plans are not directly applicable to the Project or its operations. The Project would therefore not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. No impact would result.

4.7 Geology and Soils

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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?				✓
Strong seismic ground shaking?				✓
Seismic related ground failure, including liquefaction?			✓	
Landslides?			✓	
Result in substantial soil erosion or the loss of topsoil?			✓	
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?			✓	
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?			✓	
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?				✓
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		

Regional geology is influenced by the Mendocino Triple Junction, which is located approximately 50 miles southwest from the Project Area. The Mendocino Triple Junction is active and small earthquakes and other seismic activity is relatively common in the greater Project vicinity. The Project is located approximately 0.3 miles south of Mad River Fault Zone, which is an active Holocene thrust fault (DOC 2024). The Project Area is comprised of approximately 93 percent of 226 Arcata and Candymountain soils, 2 to 9 percent slopes.

Four other soil associations that each cover less than 10 percent of the Project Area are listed in the Custom Soil Resource Report located within **Appendix F of Appendix D – Wetland Delineation Report**.

a, 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. (No Impact)

According to the California Geological Survey (CGS), there are no known Alquist Priolo Fault Zones in the Project Area; therefore, the Project would have no impact with regard to the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map. The nearest fault zone is the Holocene-age Mad River Fault Zone approximately 0.3 miles north (DOC 2024). Project activities, which include shallow excavation and grading, would not cross any known fault. The Project would not change the exposure of people or structures to risk of loss, injury, or death from fault rupture. No impact would result.

a, ii) Strong seismic ground shaking? (No Impact)

The Humboldt County coast is a highly active tectonic region that has been subjected to numerous earthquakes of low to moderate strength and occasionally to very strong earthquakes. Seismicity in the region is attributed primarily to the Mendocino Triple Junction, or the interaction between the Pacific, Gorda, and North American plates. Because the Project is located within a seismically active area, the probability that strong ground shaking associated with large magnitude earthquakes would occur during the design life of the Project is high (DOC 2024).

Project implementation would not increase the risk of strong seismic ground shaking or exposure to strong seismic ground shaking above existing conditions. The Project does not include structures for human occupancy and therefore the Project would not expose people to strong seismic ground shaking above and beyond existing conditions. For these reasons, the Project would have no impact on strong seismic ground shaking.

a.iii, a.iv, c, d) Liquefaction, landslides, or otherwise unstable soils? (Less Than Significant Impact)

Liquefaction is a phenomenon involving loss of soil strength and resulting in fluid mobility through the soil caused by intense ground shaking (i.e. seismic events). Liquefaction typically occurs when loose, uniformly sized, saturated sands or silts are subjected to repeated shaking in areas where the groundwater is less than 50 feet below ground surface. In addition to the necessary soil and groundwater conditions, the ground acceleration must be high enough, and the duration of the shaking must be sufficient, for liquefaction to occur. Most of the Project Area is located in a mapped area of potential liquefaction (Humboldt County 2024). Project elements within the area include the proposed RW piping, and sprinkler system. The flood cells are outside of the mapped area of potential liquefaction. Project implementation would not increase the risk of liquefaction or exposure to liquefaction above existing conditions because liquefaction is caused by ground shaking (i.e. seismic events), and the Project does not propose elements that would cause ground shaking and no faults are located in the Project Area that could potentially affect seismicity. Therefore, a less than significant impact regarding liquefaction would occur.

The Project Area is generally flat but includes a section with slopes of approximately seven percent. The flood cells are proposed on this slope. The existing flood cells on the Upper Fischer Ranch are on a four percent slope, and ponded water is observable at the base of the hillside. Ponded water is anticipated to occur at the base of the proposed flood cell slope. The Upper Fischer Road flood cells were installed approximately 25 years ago in two phases: five cells were installed in 2000 and the other five cells were installed in 2005. There is no evidence of landslides in the Upper Fischer Ranch flood cell area (MCSD pers. comm. 2024). The base of both the existing flood cells and proposed flood cells have a landslide susceptibility index of 1-2 (USGS 2024). The proposed flood cells would be vegetated and the roots would cause soil to remain intact and be less prone to a landslide event. No bare soil would be present, further reducing the potential for a landslide. Due to the absence of landslide activity on the existing Upper Fischer Ranch flood cell slope, which contains the same landslide susceptibility index as the proposed flood cells, and vegetated conditions, its unlikely that a landslide would occur due to implementation of the Project. Therefore, a less than significant impact would occur.

Expansive soils can cause considerable distress to roads and building foundations as they “rise-and-fall” in accordance with the cycles of soil wetting (swelling) and drying (shrinking), due to the high percentages of silicate clays. Expansive soils can also be defined as those with a Plasticity Index (PI) of greater than 12 (Caltrans 2023). Mapping by the U.S. Natural Resources Conservation Service (NRCS) provides the Plasticity Index from 15 inches to 0 inches of the soils within the Project Area, which are summarized in Table 4.7-1 below.

Table 4.7-1 Plasticity Index of Soils in Project Area (0 to 15 inches below ground surface)

Soil Type	Plasticity Index	Acres in the Project Area	Percent of Project Area
Arlynda, 0 to 2 percent slopes	12.0	0.1	2.2%
Madriver, 0 to 2 percent slopes	8.0	0.0	0.9%
Megwil and Cannonball soils, 0 to 5 percent slopes	8.0	0.1	1.0%
Arcata and Candymountain soils, 2 to 9 percent slopes	6.0	4.9	93.3%
Lepoil-Candymountain complex, 2 to 15 percent slopes	14.0	0.1	2.6%

Therefore, the Lepoil-Candymountain complex soil is considered an expansive soil. This soil complex is located along the northern portion of Fischer Road and the pathway east towards the flood cells (**see Figure 5.4** in **Appendix D**). As noted above, the Project does not include structures for human occupancy and no changes to land uses would occur under the Project. Although there is the potential for unstable soils due to the high clay content and associated expansive nature along northern Fischer Rd and along the eastern alignment towards the flood cells, the Project would not create unsafe conditions because it would not result in high visitation or occupancy by humans. Therefore, these potential impacts would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil? (Less Than Significant Impact)

Construction activities, including the operation of heavy machinery would disturb soil and, therefore, have the potential to cause erosion. Erosion and sediment control provisions prescribed in the Humboldt County Code and NCRWQCB regulations would be required as part of the Project. Erosion control measures may include, but not be limited to, silt fences, straw wattles, soil stabilization controls, site watering for controlling dust, and sediment detention basins. Compliance with existing regulations requires development and implementation of a SWPPP in accordance with the State General Construction Permit (see **Section 2.6**). These mandatory ordinance requirements and permits are designed to maintain potential water quality impacts at a less than significant level during and post construction. Therefore, with incorporation of the SWPPP, the potential soil erosion impact would be less than significant.

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? (No Impact)

The Project would utilize recycled water, defined within California water code section 13050(n), as "water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource." The Project would not involve the use of septic tanks or other alternative wastewater disposal systems. No impact would result.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Less Than Significant Impact with Mitigation)

Paleontological resources are the remains or traces of prehistoric animals and plants. Paleontological resources, which include fossil remains and geologic sites with fossil-bearing strata are non-renewable and scarce and are a sensitive resource afforded protection under environmental legislation in California. State law requires reasonable mitigation of adverse environmental impacts that result from development of public land and affect paleontological resources (PRC Section 30244).

As shown in Table 4.7-1, the majority of the Project is comprised of Arcata and Candymountain soils. This soil type consist of parent materials of marine deposits derived from sedimentary rock (NRCS 2024). The soil horizons associated with this soil type are developed and contain mineral soil, however due to the marine parent material it is possible that paleontological resources may be encountered. Therefore, the impact related to the potential disturbance or damage of previously undiscovered paleontological resources, if present, is considered potentially significant.

Mitigation

Implementation of Mitigation Measure GEO-1 would reduce the impact of construction activities on potentially unknown paleontological resources by addressing discovery of unanticipated buried resources and preserving and/or recording those resources consistent with appropriate laws and requirements.

Mitigation Measure GEO-1: Inadvertent Discovery of Paleontological Resources

In the event that fossils are encountered during construction (i.e., bones, teeth, or unusually abundant and well-preserved invertebrates or plants), construction activities shall be diverted away from the discovery within 50 feet of the find, and a professional paleontologist shall be notified to document the discovery as needed, to evaluate the potential resource, and to assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the material, if it is determined that the find cannot be avoided. The paleontologist shall make recommendations for any necessary treatment that is consistent with currently accepted scientific practices. Any fossils collected from the area shall then be deposited in an accredited and permanent scientific institution where they will be properly curated and preserved.

Implementation of Mitigation Measure GEO-1 would reduce this potential impact to a less-than-significant level during construction because a plan to address the discovery of unanticipated paleontological resources and to preserve and/or record those resources consistent with appropriate laws and requirements would be implemented.

4.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				✓

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Less than Significant)

NCUAQMD has not adopted regulations regarding the evaluation of greenhouse gas (GHG) emissions in a CEQA document and has not established CEQA significance criteria to determine the significance of impacts with regard to GHGs. The NCUAQMD has stated that they would not comment adversely on the use of thresholds of significance from the Bay Area Air Quality Management District (BAAQMD) for projects within Humboldt County. However, the BAAQMD has recently revised their adopted recommended CEQA thresholds of significance for GHG. The BAAQMD's Justification Report for the newly adopted greenhouse gas thresholds identify the thresholds as specific for 'development projects' of commercial/residential development and other projects. Per the Draft Justification Report:

> *The Air District has developed these thresholds of significance based on typical residential and commercial land use projects and typical long-term communitywide planning documents such as general plans and similar long-range development plans. As such, these thresholds may not be appropriate for other types of projects that do not fit into the mold of a typical residential or commercial project or general plan update.*
>
> *Lead agencies should keep this point in mind when evaluating other types of projects. A lead agency does not necessarily need to use a threshold of significance if the analysis and justifications that were used to develop the threshold do not reflect the particular circumstances of the project under review. Accordingly, a lead agency should not use these thresholds if it is faced with a unique or unusual project for which the analyses supporting the thresholds as described in this report do not squarely apply. In such cases, the lead agency should develop an alternative approach that would be more appropriate for the particular project before it, considering all of the facts and circumstances of the project on a case-by-case basis.* (emphasis added)

Additionally, the BAAQMD's Justification Report states:

> *There is no proposed construction-related climate impact threshold at this time. Greenhouse gas emissions from construction represent a very small portion of a project's lifetime GHG emissions. The proposed thresholds for land use projects are designed to address operational GHG emissions which represent the vast majority of project GHG emissions. (BAAQMD 2022)*

Therefore, as the BAAQMD and NCUAQMD do not have recommended thresholds of significance to apply to construction-period emissions or roadway/infrastructure projects, the Sacramento Metropolitan Air Quality Management District's (SMAQMD) and South Coast Air Quality Management District's (SCAQMD) recommended GHG methodology and thresholds for construction impacts were applied. For project construction, SMAQMD has a threshold of 1,100 metric tons of carbon dioxide ($MTCO_2e$) per year threshold of significance (SMAQMD 2020). SCAQMD recommends a threshold of 1,100 $MTCO_2e$ applied to construction and operation; SCAQMD recommends that construction emissions be amortized over the life of the project, defined as 30 years, and added to the operational emissions for comparison against the threshold of significance.

In order to assess the potential impact of construction-generated emissions, the construction GHG emissions are annualized over an assumed 30-year project lifespan, added to operational emissions, and compared against a threshold of 1,100 $MTCO_2e$.

Project construction activities would result in exhaust emissions from on-road trucks, worker commute vehicles, and off-road heavy-duty equipment. Construction would require clearing, earthmoving, and delivery equipment, as used for similar Projects. Construction emissions were estimated using CalEEMod version 2022.1.1.26 and were estimated to be approximately 83.9 $MTCO_2e$ from all construction activities, or 2.8 $MTCO_2e$ per year when annualized over the assumed 30-year lifespan of the Project. Required maintenance of the Project would be similar to existing conditions with regard to GHG emissions. Therefore, the Project would not generate an increase in operation-related emissions.

Project emissions of 2.8 $MTCO_2e$ per year (annualized construction) would be less than the 1,100 $MTCO_2e$ threshold. Therefore, the Project's impact would be less than significant.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (No Impact)

The California Air Resource Board (CARB) 2022 Scoping Plan identifies a path to meet the SB 32 GHG, as well as reducing anthropogenic GHG emissions to 85 percent below 1990 levels by 2045, and achieving carbon neutrality by 2045 or earlier, consistent with Assembly Bill 1279 (AB 1279). The 2022 Scoping Plan includes measures to move to a zero-emissions (decarbonized) transportation sector and phasing out the use of natural gas in residential and commercial buildings. The 2022 Scoping Plan would also reduce emissions of short-lived climate pollutants (SLCPs) and includes mechanical CO2 removal and carbon capture and sequestration actions, as well as natural working lands management and nature-based strategies. The plan's measures are identified in Table 2-2 and Table 2-3 of the 2022 Scoping Plan. The measures are statewide and programmatic in nature. The 2022 Scoping Plan is largely advisory, as CARB does not directly regulate many of the sectors identified by the plan's measures.

The 2022 Scoping Plan states that local action by municipalities can support and amplify efforts to reduce GHGs. Local government decisions play a critical role in supporting state-level measures to contain the growth of GHG emissions associated with the transportation system and the built environment. Local actions, provided in Appendix D of the 2022 Scoping Plan, are not required by statutory or gubernatorial direction, and are not binding, but contain guidance and information regarding actions that other jurisdictions may choose to take that complement the 2022 Scoping Plan measures. However, the 2022 Scoping Plan measures are broad policy and regulatory initiatives that would be implemented at the state level and do not relate to the construction and operation of individual projects such as the Project.

The Project is analyzed for consistency with the 2022 Scoping Plan in Table 4.8-1 – Consistency Analysis Between Project and 2022 Scoping Plan. As shown in the table, the Project is consistent the actions for the

Scoping Plan scenario outlined in 2022 Scoping Plan for AB 32 GHG inventory sectors. Therefore, the Project would not conflict with AB 1279 or the 2022 Scoping Plan and would result no impact.

Table 4.8-1 Consistency analysis between Project and 2022 Scoping Plan

Scoping Plan Sector and Action	Consistency/Applicability Determination
GHG Emissions Reductions Relative to the SB 32 Target - 40% below 1990 levels by 2030.	**Not Applicable** This is a statewide measure that cannot be implemented by the Project or lead agency.
Smart Growth / Vehicle Miles Traveled (VMT) - VMT per capita reduced 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045.	**Not Applicable** This is a statewide measure and VMT reduction goal that is not applicable to all individual projects due to regional variations and growth projections. Additionally, the Project would not increase staffing of the MCSD, increase population in the area, or result in an increase in operational trips.
Light-duty Vehicle (LDV) Zero Emission Vehicles (ZEVs) - 100% of LDV sales are ZEV by 2035	**Consistent.** This is a statewide measure that cannot be implemented by the Project or lead agency. However, the standards would be applicable to the light-duty vehicles that would access the Project Area during construction and operation.
Truck ZEVs - 100% of medium-duty (MDV)/HDV sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report).	**Consistent.** This is a statewide measure that cannot be implemented by the Project or lead agency. However, the standards would be applicable to the trucks that would access the Project Area during operation.
Aviation - 20% of aviation fuel demand is met by electricity (batteries) or hydrogen (fuel cells) in 2045. - Sustainable aviation fuel meets most or the rest of the aviation fuel demand that has not already transitioned to hydrogen or batteries.	**Not Applicable** This is a statewide measure that cannot be implemented by the Project or lead agency. The Project does not involve an aviation uses.
Ocean-going Vessels (OGV) - 2020 OGV At-Berth regulation fully implemented, with most OGVs utilizing shore power by 2027. - 25% of OGVs utilize hydrogen fuel cell electric technology by 2045.	**Not Applicable** The Project does not involve an ocean-going vessels.
Port Operations - 100% of cargo handling equipment is zero-emission by 2037. - 100% of drayage trucks are zero emission by 2035.	**Not Applicable** The Project does not involve a port.

Scoping Plan Sector and Action	Consistency/Applicability Determination
Freight and Passenger Rail - 100% of passenger and other locomotive sales are ZEV by 2030. - 100% of line haul locomotive sales are ZEV by 2035. - Line haul and passenger rail rely primarily on hydrogen fuel cell technology, and others primarily utilize electricity.	**Not Applicable** The Project does not involve freight or passenger rail.
Oil and Gas Extraction - Reduce oil and gas extraction operations in line with petroleum demand by 2045.	**Not Applicable** The Project does not involve or gas extraction.
Petroleum Refining - CCS on majority of operations by 2030, beginning in 2028. Production reduced in line with petroleum demand.	**Not Applicable** The Project does not involve or petroleum refining.
Electricity Generation - Sector GHG target of 38 million metric tons of carbon dioxide equivalent (MMTCO2e) in 2030 and 30 MMTCO2e in 2035. - Retail sales load coverage. - 20 gigawatts (GW) of offshore wind by 2045. - Meet increased demand for electrification without new fossil gas-fired resources.	**Not Applicable** This measure would apply to electricity providers. The Project is not an electricity provider.
New Residential and Commercial Buildings - All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030.	**Not Applicable** The Project does not include residential or commercial buildings.
Existing Residential Buildings - 80% of appliance sales are electric by 2030 and 100% of appliance sales are electric by 2035. - Appliances are replaced at end of life such that by 2030 there are 3 million all-electric and electric-ready homes—and by 2035, 7 million homes—as well as contributing to 6 million heat pumps installed statewide by 2030.	**Not Applicable** This is a measure for the state to modify its requirements for appliance sales to affect energy efficiency of existing residential buildings. The Project would not include appliance manufacturing or sales, or continued use of existing residential buildings.
Existing Commercial Buildings - 80% of appliance sales are electric by 2030, and 100% of appliance sales are electric by 2045. - Appliances are replaced at end of life, contributing to 6 million heat pumps installed statewide by 2030.	**Not Applicable** The Project would not include continued use or existing commercial buildings.
Food Products - 7.5% of energy demand electrified directly and/or indirectly by 2030; 75% by 2045.	**Not Applicable** The Project does not include agricultural or mass food production.
Construction Equipment - 25% of energy demand electrified by 2030 and 75% electrified by 2045.	**Not Applicable** Although the Project would involve the use of construction equipment, construction would occur in 2025, prior to the electrification goal. Additionally, the Project would not own the construction fleet used.

Scoping Plan Sector and Action	Consistency/Applicability Determination
Chemicals and Allied Products; Pulp and Paper - Electrify 0% of boilers by 2030 and 100% of boilers by 2045. - Hydrogen for 25% of process heat by 2035 and 100% by 2045. - Electrify 100% of other energy demand by 2045.	**Not Applicable** This measure would apply to the energy sources for pulp and paper manufacturers. The Project is not pulp or paper manufacture.
Stone, Clay, Glass, and Cement - CCS on 40% of operations by 2035 and on all facilities by 2045. - Process emissions reduced through alternative materials and CCS.	**Not Applicable** This measure would apply to the direct GHG emissions from CCS industries. The Project is not a CCS industry.
Other Industrial Manufacturing - 0% energy demand electrified by 2030 and 50% by 2045.	**Not Applicable** This measure would apply to the energy sources for industrial manufacturers. The Project is not an industrial manufacturer.
Combined Heat and Power - Facilities retire by 2040.	**Not Applicable** This measure would apply to the existing combined heat and power energy facilities. The Project is not combined heat and power facility.
Agriculture Energy Use - 25% energy demand electrified by 2030 and 75% by 2045.	**Not Applicable** The Project does not directly include agricultural production.
Low Carbon Fuels for Transportation - Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen.	**Not Applicable** This measure would apply to the bulk fuel providers The Project is not a fuel provider.
Low Carbon Fuels for Buildings and Industry In 2030s blended in pipeline. Renewable hydrogen blended in fossil gas pipeline at 7% energy (~20% by volume), ramping up between 2030 and 2040. In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters.	**Not Applicable** This measure would apply to natural gas utilities and energy providers. The Project is not an energy provider.
Non-combustion Methane Emissions - Increase landfill and dairy digester methane capture. - Some alternative manure management deployed for smaller dairies. - Moderate adoption of enteric strategies by 2030. - Divert 75% of organic waste from landfills by 2025. - Oil and gas fugitive methane emissions reduced 50% by 2030 and further reductions as infrastructure components retire in line with reduced fossil gas demand.	**Consistent** The Project does not include a landfill or dairy. The Project would reduce construction waste with implementation of state mandated recycling and reuse mandates.
High GWP Potential Emissions - Low GWP refrigerants introduced as building electrification increases, mitigating HFC emissions.	**Not Applicable** The Project does not include refrigerant use.

Source of Scoping Plan Reduction Measures: CARB 2022

4.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
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?			✓	
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
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?				✓
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓

A regulatory database review of available online government records was evaluated within the Project Area to determine the presence and location of existing and/or historical soil and groundwater contamination, including the SWRCB’s Geotracker and California Department of Toxic Substances Control (DTSC), EnviroStor. The regulatory database review was completed to identify contamination that could potentially pose an exposure risk to humans and/or the environment.

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less Than Significant Impact)

Project construction will involve minor grading to enable the installation of the ten flood cells and excavation and trenching for replacement and installation of the RW pipes. This process will necessitate the transportation and utilization of standard hazardous materials inherent in construction, including petroleum products like fuel and lubricants for construction equipment and vehicles. These materials are commonly utilized in construction, pose no immediate hazard, and will be employed in limited quantities.

Compliance with a comprehensive network of local, state, and federal laws is mandatory for the storage, handling, and transportation of hazardous materials. The use of hazardous materials during Project construction will be subject to relevant regulations, such as California Health and Safety Code Section 25531, Division 20, Chapter 6.5, and other standards enforced by departments and boards under the California Environmental Protection Agency (Cal/EPA). The Project will adhere to Cal/EPA hazardous materials regulations consolidated under the Unified Program, administered by the Department of Toxic Substances Control (DTSC), the SWRCB, NCRWQCB, NCUAQMD, and the Department of Resources Recycling and Recovery (CalRecycle). Local Certified Unified Program Agencies (CUPAs), such as the Humboldt County Division of Environmental Health (HCDEH), oversee Unified Program enforcement, including inspections and compliance with hazardous materials regulations set forth by the Unified Program within the Project Area.

Worker exposure to hazardous materials will be regulated by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA), ensuring worker safety through hazard communication regulations, worker training, and compliance with signage/postings requirements. Hazard communication protocols will include identifying and labeling hazardous substances, conveying information regarding storage, handling, and transportation of hazardous substances, and developing health and safety plans to safeguard employees.

Construction specifications for the Project will mandate hazardous materials management in accordance with applicable laws and regulations. Contractors will be responsible for containing hazardous materials, preventing worker, public, and environmental exposure during construction, and legally disposing of potential generated hazardous materials (which is not anticipated to occur).

Stormwater management requirements will be implemented during construction through the SWRCB's Construction General Permit which addresses materials management, spill prevention, control, and concrete and waste management. Two 12 foot by 12 foot concrete pads are proposed for Pivot Sprinklers #1 and #2 bases. Pivot Sprinkler #3 will be on wheels and will not require a concrete base.

The regulatory framework, BMPs, and construction protocols ensure appropriate risk mitigation and hazard protections, resulting in no significant hazard to the public or environment from hazardous materials during Project construction. Compliance with existing and future hazardous materials laws and regulations will mitigate the potential for significant hazards during construction.

Following construction, intermittent maintenance and repair will likely involve fuels or lubricants which are considered hazardous materials, however the operational risk associated with these activities is low, resulting in no significant hazard to the public or environment during Project operation. For these reasons this potential impact is considered less than significant.

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? (Less Than Significant Impact)

The Project would utilize heavy machinery to perform construction-related tasks including grading, trenching, excavation, and transportation of materials. There is always the possibility when equipment is operating that an accident could occur, and fuel could be released onto the soil. Equipment on site during construction will be required to have emergency spill cleanup kits immediately accessible in case of fuel or oil spills. Equipment would not be refueled within 50 feet of the Mad River or three-parameter wetland. If equipment must be washed, it will be washed off-site. Therefore, this potential impact is considered less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (No Impact)

The McKinleyville Head Start Center, an educational facility, is positioned approximately 0.96 miles northeast of the nearest point to the Project Area, and the McKinleyville Middle School is 1.5 miles northeast of the nearest point to the Project Area. Construction activities are anticipated to involve the utilization of hazardous materials such as fuels, lubricants, degreasers, paints, and solvents. While these materials are commonly employed in construction and are not considered acutely hazardous, they would be utilized in modest quantities. Various laws and regulations are in place to ensure the safe transportation, use, storage, and disposal of hazardous materials, as discussed in the Impact section of Section 4.9 (a) and (b) above.

Although construction activities could potentially lead to minor releases of hazardous substances, the likelihood of a spill or release posing a threat to individuals at nearby schools is minimal, considering the nature of the materials, the small quantities involved, and the distance of the school from the Project Area. Therefore, due to the contractors' obligation to adhere to current and future hazardous materials laws and regulations governing the transport, usage, and disposal of hazardous materials, coupled with the nature and volume of hazardous materials potentially used by the Project, and the McKinleyville Head Start Center being situated beyond a quarter-mile, there would be no impact associated with the use of hazardous materials on the education center during construction. Project construction and operation will not affect the McKinleyville Head Start Center or McKinleyville Middle School.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (No Impact)

A search was conducted of hazardous materials sites compiled in accordance with Government Code Section 65962.5, which includes databases such as the DTSC, Envirostor database and the SWRCB Geotracker database. The Project Area does not fall within or within a half-mile radius of any site listed in the Envirostor database (DTSC 2024). Furthermore, it is not situated on or within a half-mile distance of any hazardous materials site or cleanup site as delineated in the GeoTracker database (SWRCB 2024). Given that the Project is not in proximity to a hazardous materials site, there would be no significant risk posed to the public or the environment from implementation of the Project, resulting in no impact.

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? (No Impact)

The nearest airport is the California Redwood Coast-Humboldt County Airport (ACV), which is located approximately 3.5 miles north of the Project Area. The ACV is covered by the 2021 Airport Land Use Compatibility Plan (ALUCP) prepared for the Humboldt County Airport Land Use Commission (ALUC) by ESA (Humboldt County 2021). The Project is not located within an airport land use plan, airport influence area or within two miles of a public airport. Therefore, no impact would result.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (No Impact)

The Project Area is covered under the Humboldt County Emergency Operations Plan (EOP). The Humboldt County EOP identifies the emergency response and evacuation policies and procedures for hazards related to earthquake, tsunami, extreme weather, flooding/flash flooding, landslides, transportation accidents, hazardous materials, interface wildland fire, energy shortage, offshore toxic spill, civic disturbance, terrorist activities, and national security (Humboldt County 2015).

The Humboldt County EOP establishes a structure for Humboldt County Operation Area agencies to respond to large-scale emergencies requiring multiagency participation or activation of the Humboldt County Emergency Operations Center (EOC) (Humboldt County 2015). Hazard mitigation and risk assessment strategies for Humboldt County Operation Area are formalized in the Humboldt County Operational Area Hazard Mitigation Plan (HMP).

The Project would not impair implementation or physically interfere with the established Humboldt County EOP, or Humboldt County HMP because the Project would not block roadways or other access points that may be needed by emergency vehicles. Therefore, no impact will occur.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (No Impact)

The Project does not include structures or other recreation components that would expose people or structures to loss, injury or death due to wildland fires. Therefore, no impact would occur. Wildland fire risks are addressed in Section 4.20 (Wildfire) of the ISMND. For more detailed information on the Project's potential impact to exacerbate wildland fire risk, please refer to Section 4.20 of the document.

4.10 Hydrology and Water Quality

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		✓		
Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
Result in substantial erosion or siltation on- or off-site?			✓	
Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓	
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?			✓	
Impede or redirect flood flows?			✓	
In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			✓	
Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

The Project is located in the Mad River Valley - Dows Prairie School Area Basin groundwater basin, the Mad River hydrologic unit, specifically the Blue Lake 109.10 hydrologic area, and the Lower Mad River watershed. The Project is directly adjacent to the Mad River. The majority of the Project Area is located within the FEMA flood zone and the entire Project Area is within the California Coastal Zone (Humboldt County 2024).

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? (Less Than Significant Impact with Mitigation)

Construction activities such as site clearing, grading, excavation, and material stockpiling, placement of aggregate base, and related construction activities could leave soils exposed to rain or surface water runoff that may carry soil contaminants (e.g., nutrients or other pollutants) into waterways adjacent to the site, degrade water quality, and potentially violate water quality standards for specific chemicals, dissolved oxygen, suspended sediment, or nutrients to surface waters. The greatest potential Project impacts to water quality would result from sediment mobilization and movement offsite during construction. This impact is considered to be potentially significant.

The proposed Project is anticipated to disturb over one (1) acre of land, therefore compliance with State Water Board Order No. 2009-0009 would be required which would regulate stormwater runoff from Project construction activities. Project operations would obtain coverage under State Water Resources Control Board Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities, as amended by Order No. 2012-0006. In compliance with the National Pollutant Discharge Elimination System requirements, a Notice of Intent would be prepared and submitted to the North Coastal Regional Water Board prior to undertaking construction, providing notification and intent to comply with the State of California Construction General Permit (CGP). In addition, a SWPPP would be prepared for pollution prevention and control prior to initiating site construction activities (See Section 2.6).

The Construction SWPPP would be written by a Qualified SWPPP Developer (QSD) and would identify and specify the use of best management practices (BMPs) erosion control, sediment control, off-site tracking control, wind erosion control, non-stormwater management control, and waste management and materials pollution control. A sampling and monitoring program would be included in the Construction SWPPP that meets the requirements of the CGP to ensure the BMPs are effective. A Qualified SWPPP Practitioner (QSP) would oversee implementation of the Plan, including visual inspections, sampling and analysis, and overall compliance with the SWPPP and CGP.

It is anticipated that the Project will temporarily impact regulated jurisdictional three-parameter wetlands. Should that occur, the Project will require permits from the USACE under Section 404 of the CWA, and a corresponding Water Quality Certification from the NCRWQCB under Section 401 of the CWA. As part of the Section 404 permitting process, the USACE will review the Project under NEPA and Section 106 of the National Historic Preservation Act. No permanent impacts to wetlands will occur under the Project (i.e. there will be no loss of wetlands), rather temporary impacts to wetlands are expected. Therefore, mitigation for wetlands is not anticipated.

Implementation of BMPs summarized in Section 2.6, combined with Mitigation Measure BIO-2 would reduce potential water quality impacts during Project construction activities to a less-than-significant level by requiring measures to minimize erosion, sediment, and pollutant contribution to surface waters, and to restore temporarily impacted wetlands to pre-Project conditions.

Irrigated agricultural lands are not considered point sources of discharge, and therefore the Project would not result in a new point source of discharge. The Project would also not result in a substantial increase in impervious surfaces relative to the surrounding area. Therefore, less than significant operational impact would result.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin? (No Impact)

The Project is located in the Mad River Valley - Dows Prairie School Area Basin (1-008.02), which has a Sustainable Groundwater Management Act (SGMA) Basin Priority of Very Low and is not listed as Critically Overdrafted (DWR 2004). Under existing conditions, groundwater is pumped and utilized in the Project Area to irrigate the Pialorsi Ranch (east and west). Following implementation of the Project recycled wastewater would be utilized to irrigate this area, thereby reducing use of groundwater resources. Additionally, during construction contractor-supplied water would be used for dust suppression on work areas as necessary. As mentioned in Section 2 (Project Description), it is possible that groundwater may be encountered during installation of the RW piping due to the shallow water table. Should this occur, the groundwater will be pumped out of the trench or excavation area, and discharged into the adjacent field to percolate. A silt bag will be placed over the pump hose to contain sediment. For these reasons, the Project would not deplete aquifer volume or lower groundwater levels. No construction or operational impact to groundwater resources would result.

c, i) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site? (Less Than Significant Impact)

The Project is gently sloped and drains west to the Mad River. A drainage ditch is located between the Lower and Upper Fischer Ranch irrigation areas, which flows west into the Mad River. New subsurface piping is proposed to cross the drainage ditch for installation of Pivot Sprinkler #3. As mentioned in Section 2.2 (Construction Details), this drainage ditch is anticipated to be dry during construction because it is unlikely that substantial precipitation would have fallen prior to construction, and because the District will not utilize the Upper Fischer flood cells prior to construction of this Project which the drainage ditch is hydrologically connected to. Therefore, no dewatering of surface waters would occur, and no special status fish would be handled or relocated because they are not expected to occur in the ditch at that time because it will have dried up. If water is located within this section of the drainage ditch, it would be isolated by sand bags (or similar) and dewatered via pumping to the adjacent field. Aquatic species would be relocated downstream. No special status fish species would be handled or relocated because they are not expected to occur in the ditch due to its ephemeral nature. The drainage ditch would be restored to pre-construction conditions following installation of the pipe, and therefore no change to drainage pattern would occur. Remaining Project construction elements would not significantly alter existing topography in manner that would result in a change of the existing drainage pattern because no other water crossings are proposed, and no changes to topography are proposed.

Erosion control and sediment prevention would be implemented during construction to avoid impacts to water quality, including those related to siltation (See impact “a” above). The Project would be required to adhere to BMPs and conditions to be included in a SWPPP (See Section 2.6), the CCC CDP, and Clean Water Act Section 401 permits to prevent erosion-related impacts during construction. Substantial on- or off-site erosion and siltation would not result, and the potential construction-related impact with regard to erosion and siltation would be less than significant. Therefore, the potential impact would also be less than significant.

c, ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (Less Than Significant Impact)

The majority of the Project is located within a mapped FEMA flood hazard zone, with the exception of the proposed flood cell area which is located on a bluff (Humboldt County 2024). The Project includes no elements that would substantially increase the area of impervious surface (the proposed impervious areas are two 12 foot by 12 foot concrete pads for pivot sprinklers #1 and #1), and therefore wouldn't contribute additional runoff. The proposed flood cells and sprinkler systems would be used as part of MCSD's water recycling infrastructure, which is designed to infiltrate into the ground and not result in an increase in runoff. There are ten proposed flood cells, which was intentionally designed to be a multiple of five which allows for a weekly operational approach that includes irrigation of one flood cell per day for a five-day work week and allows for a total two week cycling for operation of the flood cells. This approach is consistent with the current approach used for the Upper Fischer Ranch flood irrigation system. The flood cells would be utilized for irrigation in the summer and fall when the Mad River flows are typically below 200 cfs and recycled water cannot be directly discharged to the Mad River. Ponded water could occasionally occur near the flood cells which would remain within the District's Irrigation Areas, however consistent flooding would not occur. Due to Project design and proposed maintenance, a less than significant impact would occur.

c, 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? (Less Than Significant Impact)

As discussed above in Section 4.10 (c) (i), the Project would not increase impervious surfaces and proposed recycled irrigation water would be sprayed and released in flood cells in the Project Area at a rate similar to the existing Upper Fischer Ranch. Grading would occur during summer and fall months when conditions are driest, to minimize the risk of rainfall during the construction period and thus stormwater runoff when graded soils are exposed. As discussed above in Hydrology and Water Quality Impact (a), requirements of the SWPPP, CDP, CWA Section 401, and GEO-1 would also be implemented, including measures to prevent polluted stormwater runoff during construction. Thus, any construction-related impact would be less than significant.

Operationally, the Project does not include elements that would significantly alter topography and rates of stormwater runoff. The potential operational impact would be less than significant.

c, iv) Impede or redirect flood flows? (Less Than Significant Impact)

The majority of the southwest portion of the Project Area is located within the FEMA 100-year flood zone, with the exception of the proposed flood cell area which is located on a bluff (Humboldt County 2024). The pivot sprinkler system would be above ground and under flood conditions have the potential to catch debris, however would not block flood flows because water can move under and around them. Existing topography would not be significantly altered in such a manner as to redirect flood flows. For these reasons, the potential impact on the impediment or redirection of flood flows would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation? (Less Than Significant Impact)

Construction is planned to occur in the dry summer and early fall months and would therefore not occur during typical flood conditions (see Section 2.2). Thus, there would be no potential for a flood-related release of pollutants during construction.

The majority of the Project Area is located within a tsunami hazard zone (Humboldt County 2024). The ten flood cells, which would account for the most earthwork, are located outside of the tsunami hazard zone. Therefore, only the waterline and sprinkler system elements could be affected by a tsunami. Should a tsunami occur during construction, potential pollutants would be sediment from trenching and fuel or oil from heavy machinery. Tsunami events would cause unavoidable destruction throughout the Mad River region. However, proposed Project elements would not expose the surrounding area to a significantly increased risk of pollutant release as negligible pollutants or materials of concern would be introduced to the Project Area. A less than significant impact would occur.

The Project Area is not located near a larger isolated body of water that may be affected by a seiche and therefore no impact from a seiche would occur.

Operational maintenance of the Project may involve occasional repair and vegetation maintenance (e.g., mowing), which could involve hazardous materials (e.g., small equipment fuel). However, these materials would not be stored within the Project Area and therefore would unlikely be present to be released into the environment in the event of a flood or tsunami event. The potential operational related impact would be less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (No Impact)

The relevant water quality control plan is the NCRWQCB's Basin Plan which establishes thresholds for key water resource protection objectives for both surface waters and groundwater. Groundwater resources would cease to be utilized under the Project and would therefore benefit the quantity or quality of groundwater availability in the Mad River Valley - Dows Prairie School Area Basin.

The Project would abide by requirements listed within the MCSD NPDES Permit which sets standards for recycled water quality. The Project would also be required to obtain coverage under SWRCB's Construction General Permit, which would include development and implementation of a SWPPP, and obtain coverage under CCC's CDP. The Project is also required to obtain and adhere to Clean Water Act Section 401 permits (see Section 2.4) for proposed wetlands fill. Adherence to these regulatory requirements and associated requisite monitoring would ensure a conflict with the Basin Plan does not occur.

The Project would meet and/or support the following McKinleyville Area Local Coastal Plan goals and policies which regulate hydrology and water quality during construction and operation of the Project: Drainage (Policy 3310), Sensitive and Critical Habitats (Policy 3422). The Project would also meet and/or support the following Humboldt County General Plan Water Resource Element goals and policies that regulate hydrology and water quality during construction and operation of the Project: Erosion and Sediment Discharge (Policy WR-P10), Implementation of NPDES Permit (Policy WR-P35), and Erosion and Sediment Control Measures (Policy WR-P42). No impact would result.

4.11 Land Use and Planning

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Physically divide an established community?				✓
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?				✓

This section evaluates the potential impacts related to land use, as it applies to construction and operation of the Project. The Project is located within McKinleyville, and the entirety of the Project Area is within the Coastal Zone. Therefore the Project is subject to the 2007 McKinleyville Area Local Coastal Plan.

a) Physically divide an established community? (No Impact)

The proposed Project would not divide an existing neighborhood or community. The Project is situated amidst expansive pastoral fields to the north of the Mad River. All areas undergoing disturbance and those influenced by the Project are under the ownership of the MCSD. No impact would result.

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? (No Impact)

The Project Area's land use designation is Agriculture Exclusive Prime (AEP), and Natural Resource (NR) (Humboldt County 2007). The Project is in alignment with the McKinleyville Area Local Coastal Plan, because it does not introduce new or conflicting land uses. As a result, implementation of the Project would not result in a significant environmental impact. The Project will streamline and optimize the recycled water irrigation process while adhering to established land use designations and plans. Therefore, no impact would occur.

4.12 Mineral Resources

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
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?				✓
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?				✓

This section evaluates the potential impacts related to mineral resources associated with the Project.

a, b) 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, or a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (No Impact)

The Project would require minor use of rock, gravel, sand, and other similar materials for construction. However, there are no active mines, no known areas with mineral resource deposits, and no mapped SMARA parcels within the Project Area (Humboldt County 2024). Additionally, the Project Area is also not designated by the Humboldt County General Plan, McKinleyville Area Local Coastal Plan, or other local land use plans as having locally important mineral resources within the Project Area (Humboldt County 2002; Humboldt County 2017). Thus the Project would not have a significant impact on locally available minerals or mineral resources valuable to the region or the State because the amount of rock, gravel and sand needed for the Project is relatively small in comparison to larger projects and the Project Area does not have known important mineral resources. No impact would result.

4.13 Noise

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Result in 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?			✓	
Result in generation of excessive groundborne vibration or noise levels?			✓	
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?				✓

Current noise conditions in the Project Area consist of road noise associated with vehicles on Highway 101, recreationists utilizing the Hammond Trails (Fischer Ave), nearby residential homes, the and Mad River to the south. The nearest sensitive receptors, is a residence owned by the District which is located adjacent to proposed trenching in the northwestern portion of the Project Area (west of the flood cells). The house is approximately 10 feet away from the proposed trenching pathway and is occupied by a District employee. The next nearest sensitive receptor is 50 feet away from the Project Area located in the northeast segment near the staging area, and 100 feet located along Fischer Avenue north of the Pump Station. The nearest educational facility is the McKinleyville Head Start Center, located 0.96 miles northeast, and the nearest school is the McKinleyville Middle School approximately 1.5 miles northeast.

Per appendix B of the McKinleyville Area Local Coastal Plan, the standards of the Humboldt County General Plan Noise Element can be used in an advisory role under CEQA for impact analysis. Standard N-S1 of the Humboldt County General Plan specifies that the Land Use/Noise Compatibility Standards shall be used as a guide to ensure compatibility of land uses (shown as Table 13-C in the Humboldt County General Plan), and Implementation Measure N-IM6 (Noise Control Ordinance) states that an ordinance shall be prepared which will include definitions of excessive levels of noise for construction activities. As of the date of this ISMND, the County has not adopted a noise ordinance with defined limits on noise levels at construction sites, or land use and noise compatibility standards for construction noise.

a) Result in 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? (Less Than Significant Impact)

Construction of the proposed Project would temporarily increase noise in the immediate vicinity of the Project site resulting from use of construction equipment, and increased traffic by construction workers who commute to and from the Project site.

Construction is expected to require up to five months to complete (June through October 2025) and would occur between 7 a.m. to 7 p.m. Monday through Saturday. Noise impacts depend on type of construction equipment, timing, and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas near noise-sensitive land uses, or when construction lasts over extended periods of time. Equipment to be utilized onsite include excavator, backhoe, mini excavator, sump pumps, skid-steer, dump trucks, compactors and potentially other specialized equipment. Jackhammers may be utilized when working along segments of Fischer Avenue that are paved. No pile driving, which is highly noisy, would occur.

Currently, Humboldt County has not established construction-related noise standards. Given that construction would be temporary and intermittent, would not include excessively noisy equipment, and would only occur during daytime hours, potential noise impacts generated during the construction phase would be less than significant.

Per Humboldt County General Plan Standard N-S1 and Table 13-C (Land Use/Noise Compatibility Standards) the Project is located within an agriculture land use category, and the “normally acceptable noise levels” range from approximately 75 – 91+ dBA. Project operation includes use of equipment, routine maintenance and repair. Noise generated from use of pivot sprinklers, and vegetation management would contribute negligible sources of noise after completion and would not exceed 91 dBA. There would be no operational impact.

b) Result in generation of excessive groundborne vibration or noise levels? (Less Than Significant Impact)

As mentioned, equipment to be utilized in the Project include excavator, backhoe, mini excavator, sump pumps, skid-steer, dump trucks, compactors, and potentially other specialized equipment. Jackhammering may be utilized when working along the segments of Fischer Avenue that are paved. Noise and vibrations associated with this equipment would be temporary and would occur within regular work hours. The majority of Project work will occur well away (at least 200 feet) from sensitive receptors, however work along the paved roadway in the staging area would be approximately 50 feet from a sensitive receptor, and work along upper Fischer Avenue would occur approximately 80-100 feet from sensitive receptors. This work may be noisy from use of a jackhammer, however it would be temporary and of short duration relative to the entire Project and would occur within regular work hours. Therefore, a less than significant impact would occur.

During Project operation, no heavy equipment would be utilized. Routine vegetation management would occur, which is consistent with current operations. No operational impact would occur.

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? (No Impact)

The nearest airport is the Arcata-Eureka Airport (ACV), which is located approximately 3.4 miles north from the Project Area. The ACV is within the 2021 Airport Land Use Compatibility Plan prepared for the Humboldt County Airport Land Use Commission. The Project is not located within the Airport Land Use Compatibility Plan Noise Contours for ACV (ESA 2021). Therefore, Project construction would not exacerbate existing airport noise. No impact would result.

4.14 Population and Housing

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

The 2022 population for the town of McKinleyville was estimated to be 16,913 people, with 6,726 housing units (DataUSA 2024).

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (No Impact)

The Project involves expanding existing water recycling facilities to decrease operational costs, and alleviate groundwater extraction. This expansion includes integrating additional irrigation infrastructure and capacity into vacant fields owned by MCSD. There is currently no limit to recycled water irrigation capacity based on this Project. The Project does not include increasing or changing the capacity of the WWMF, residential or commercial development, nor does it include road expansion. Therefore, the Project's potential to influence population growth directly or indirectly in McKinleyville is minimal and no significant impact on population growth is anticipated from implementation of the Project.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (No Impact)

The proposed Project does not involve demolition of any existing housing structures and will not displace substantial numbers of existing people or housing. No impact will occur.

4.15 Public Services

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire Protection?				✓
Police protection?				✓
Schools?				✓
Parks?				✓
Other public facilities?				✓

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for public services? (No Impact)

As detailed in Section 4.14 (Population and Housing), implementation of the Project would not directly or indirectly lead to an increase in population growth because the Project does not include construction of residences or roadways, expansion of the WWMF capacity, or other public services. Currently, fire protection services for the Project Area are provided by the Arcata Fire District, while police services are managed by the Humboldt County Sheriff's Office, aligning with the standard services offered across McKinleyville. The Project will not lead to a need for additional staffing by MCSD because the Project will streamline the recycled irrigation system that is in-part already in place. No new hazards, alterations to the road network that could impede emergency service access, or need for additional schools will occur due to implementation of the Project. Additionally, the Project will have no impact on local parks because the Project does not overlap with a park, however, does overlap with a segment of the Hammond Trail (Fischer Road) which is further discussed in Section 4.16 (Recreation). No impact to public services would occur.

4.16 Recreation

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?			✓	
Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?				✓

Numerous recreational facilities exist within the Project vicinity. The Project Area includes a section of the Hammond Trail along Fischer Avenue and the Mad River Hammond Bridge to the south of the Project. The Mad River is located directly to the south and west of the Project. The Mad River Beach and a boat ramp is located to the west on the adjacent side of the Mad River.

a) 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? (Less Than Significant)

The Project does not include new or modified recreational amenities. Construction of the Project would temporarily restrict use of the Hammond Trail during pipe trenching and installation along Fisher Avenue, which may temporarily increase use of adjacent parks and recreational facilities outside the Project Area. The Hammond Trail along Fischer Avenue will remain open to bicyclists and pedestrians, however the pathway that they may utilize for cycling or walking would be narrowed. This restriction in access to the Hammond Trail along Fischer Avenue would be temporary, lasting for up to three months, and would not be long enough to create physical deterioration on the adjacent parks and recreational facilities. Thus, construction impacts would be less than significant.

After construction, the operation of the Project would allow Hammond Trail use consistent with current use and would have no effect on regional park use. Operationally, no impact would result.

b) Include or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? (No Impact)

The Project would temporarily narrow access of the Hammond Trail during construction along Fischer Avenue. This trail narrowing would be short-term in duration (approximately up to three months) and would not be significant to require the construction or expansion of recreational facilities. The Project would not create additional trails or recreational facilities beyond current use. No impact would result.

4.17 Transportation

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			✓	
Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			✓	
Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				✓
Result in inadequate emergency access?			✓	

The Project Area includes the southern terminus of Fischer Avenue at the Mad River Hammond Bridge. Fischer Avenue is a class III bike route for the Hammond Trail (HCOG 2018). Public vehicles can utilize Fischer Avenue, however are not able to utilize the Mad River Hammond Bridge, therefore vehicles need to turn around at the southern extent of Fischer Avenue. An access road exists at the southern extent of Fischer Avenue that MCSD utilizes. In general, vehicular traffic within the Project Area along Fischer Avenue is minimal and predominantly includes MCSD vehicles for maintenance work within the Project Area. Additionally, Anderson Avenue may be utilized by trucks and other equipment for access to the northeast portion of the Project which includes the flood cells.

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? (Less than Significant Impact)

The proposed Project includes construction on Fischer Avenue but would not constitute an extension of the roadway network, rather would include breaking up pavement in sections of roadway to install subsurface piping. Following pipe installation the disturbed roadway would be restored to pre-construction condition or better, and would not result in an expansion of the roadway. Construction would result in vehicle trips by construction workers and haul-truck trips for material deliveries via Highway 101 at School Road and along Fischer Avenue and/or Anderson Avenue. Construction-related traffic would be temporary, would vary on a daily basis, and would be distributed over the course of a workday and work week. Fischer Avenue within the Project Area dead-ends at the Mad River Hammond Bridge and continues as an MCSD access road to the west. Thus, this portion of Fischer Avenue does not provide a thru way for public vehicular traffic. A temporary closure of Fischer Avenue south of the MCSD irrigation pump station to non-MCSD vehicular traffic would be required for construction and MCSD would follow County requirements for temporary roadway closures including signage and public noticing. Access for bicyclists along Fischer Avenue (Hammond Trail) would remain open and physically separated from the construction area. Thus, temporary construction impact on the circulation system would be less than significant.

Once completed, the proposed Project would not increase vehicle traffic on local streets and trails, increase the area's population, or redirect traffic patterns, and access would be the same as the current use. As the operational Project is not extending or altering a roadway network or trail, the Project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Therefore, no impact would result during operation of the Project.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)? (Less Than Significant Impact)

Pursuant to SB 743 and the current CEQA Guidelines, evaluation of a project's potential transportation impact requires consideration of vehicle miles traveled (VMT), which refers to the amount and distance of automobile travel attributable to a project. Section 15064.3, subdivision (b), of the CEQA Guidelines lists the criteria for analyzing transportation impacts from proposed projects. The criteria are broken into four categories, including land use projects, transportation projects, qualitative analysis, and methodology. Transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact. This section was added by the state legislature in an attempt to separate CEQA's purpose and role from traffic or other issues related to ease of use of single occupancy vehicles.

Examples of projects that result in the potential to increase VMT include:

- Changes in land use
- Expanded roadways (e.g., new roads, additional lanes)
- Private development
- Expanded public service facilities, such as new police stations, new fire stations, or new administrative buildings
- Residential development, such as a new sub-division

The proposed Project includes none of the above listed elements and does not include any component that could be characterized as resulting in a potential increase in VMT. The OPR Technical Advisory provides various screening criteria related to VMT that quickly identify when a project should be expected to cause a less than significant impact without conducting a detailed VMT study. According to the OPR Technical Advisory, projects that generate fewer than 110 trips per day can be assumed to cause a less than significant transportation impact (OPR 2019). The Project would not create new buildings, new employees, increase the length of roadway, add new roadways, or increase the number of travel lanes. Construction would not generate more than 110 trips per day, and operational maintenance would occur under MCSD's typical maintenance schedule and is not anticipated to generate additional trips more than currently occurs. Therefore, the impact would be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (No Impact)

The Project does not propose an alteration in the geometric design of a street or road. Project elements include a waterline that would be located below ground, and existing conditions along the roadway network would be restored to pre-Project conditions and would therefore not substantially increase potential hazards due to geometric design. There are no changes to land use associated with this Project. No impact would occur.

d) Result in inadequate emergency access? (Less Than Significant Impact)

During construction, Fischer Avenue and School Road may experience minor and limited construction-related traffic when equipment is dropped off and picked up from the site. However, no lane closures or traffic control would be implemented on Fischer Avenue or School Road because once equipment is dropped off to the Project site, it would remain onsite (within staging areas). Portions of Fischer Avenue would be excavated for pipe installation and would therefore be narrowed during construction. Fischer Avenue would remain accessible by vehicles during construction along this segment (including emergency response vehicles). For these reasons, potential Project construction impacts on vehicular access would be less than significant.

Following construction, the Project would return to pre-Project conditions. No operational impact on emergency access would result.

4.18 Tribal Cultural Resources

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historic Resources, or in a local register of historic resources as defined in Public Resources Code section 5020.1(k)?		✓		
Cause a substantial adverse change in the significance of a tribal cultural resource that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to the criteria set forth in subdivision (c) of the Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of the Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.		✓		

a, b) Cause a substantial adverse change in the significance of a tribal cultural resource? (Less Than Significant with Mitigation)

CEQA requires lead agencies to determine if a proposed Project would have a significant effect on tribal cultural resources. The CEQA Guidelines define tribal cultural resources as: (1) a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American Tribe that is listed or eligible for listing on the California Register of Historical Resources, or on a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or (2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code Section 5024.1(c), and considering the significance of the resource to a California Native American tribe.

Under Assembly Bill (AB) 52, notification letters were sent to the Wiyot Tribe, Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, and Cher-ae Heights Indian Community of the Trinidad Rancheria on July 25, 2024. The AB 52 process gives tribes 30 days of receipt of the formal notification to initiate consultation which would end on August 25, 2024. A response was received from the Blue Lake Rancheria on August 1, 2024, who indicated they are requesting additional information and a copy of the Archaeological Survey Report (“Cultural Survey Report”) under AB52 consultation. No other responses were received as of August 25, 2024. However, the Bear River Band of the Rohnerville Rancheria emailed on September 10, 2024 and the Wiyot Tribe emailed on October 10, 2024, both requesting that a cultural monitor be onsite during excavations. This request is included as Mitigation Measure CR-1 – Tribal Cultural Monitor and Monitoring Plan. This mitigation measure also requires the production of a Monitoring Plan in coordination with all three tribes. Standard inadvertent discovery protocols for archaeological resources and human remains are also included as Mitigation Measures CR-2 and CR-3.

4.19 Utilities and Service Systems

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			✓	
Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				✓
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?				✓
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?			✓	
Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			✓	

The MCSD operates a wastewater management facility (WWMF) situated approximately one mile north of the Project Area. This facility treats residential and commercial wastewater from the District, serving approximately 16,500 residents. The Project will not modify the existing WWMF, and rather will expand upon MCSD's current use of treated wastewater for irrigation purposes located south of the WWMF.

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (Less than Significant Impact)

As described in Section 2 (Project Description), the Project is a utilities project involving the expansion of treated wastewater to be used as irrigation. Electrical and communications conduit will be laid from the Fischer Road Pump Station to each sprinkler, facilitating the operation and control of the pivot sprinkler assemblies. Additionally, electrical and communications panels will be installed to supply power and control functionality to the pivot sprinkler assemblies. The Project Area, shown in **Appendix A, Figure 2**, represents the entirety of disturbance. With implementation of the Stormwater Pollution Prevention Plan and mitigation measures throughout this ISMND, no significant environmental impacts would occur from implementation of the Project. Therefore, a less than significant impact would occur.

b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years? (No Impact)

The Project will not heighten the demand for freshwater supplies, rather it will reduce the use of freshwater supplies via the reduction in groundwater pumping provided by the increase in available recycled wastewater. The focus of the Project is on expanding the existing water recycling facilities operated by MCSD to bolster irrigation capacity of recycled water, cut operational expenses, and offset groundwater extraction. By enlarging the utilization of treated wastewater for irrigation purposes, the Project contributes to conserving freshwater resources.

The raw wastewater conveyed and treated at the WWMF primarily originates from domestic sources, with minimal commercial contributions anticipated in the future. Treatment processes within the facility involve various stages, including raw wastewater screening, activated sludge extended aeration, secondary clarification, chlorination, and dichlorination. Recycled water generated at the WWMF is utilized in various locations, including the Fischer Ranch, and Pialorsi Ranch, when not discharged into the Mad River.

Previously, irrigation at the Pialorsi Ranch utilized approximately 68 million gallons of on-site well water annually, in addition to 16.2 million gallons of recycled water distributed through subsurface pipe and surface-level waterlines. Under the proposed Project, the replacement of the existing recycled water pipe between the pump station and the southern extent of Fischer Road will facilitate the installation of an advanced sprinkler system and increase the discharge of recycled water while reducing reliance on well water. This replacement also supports the installation of flood cells within the northeast portion of the Pialorsi Ranch, enabling a significantly greater quantity of effluent discharge. With the addition of new infrastructure, the Project will have a capacity of approximately 76 million gallons of recycled irrigation water annually. For these reasons there would be no impact on water supply because implementation of the Project would increase freshwater supplies.

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? (No Impact)

The Project will not lead to an increase in demand for wastewater treatment or disposal services provided by MCSD because the Project does not propose residences or other structures which would require wastewater services. No impact would occur.

d, e) 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? (Less Than Significant Impact)

The solid waste providers servicing the area include Humboldt Sanitation (HS) and the Humboldt Waste Management Authority (HWMA). During the construction phase of the proposed Project, minimal solid waste would be generated, such as removal of the existing recycled water pipe to be replaced. However, once operational, the Project would not generate solid waste. Potential excess soils and construction materials would be stored in designated staging areas and would be reused on-site for backfill and finishing grading purposes. After completion of the Project, excess materials would not be stockpiled on-site.

Instead, the contractor would transport potential excess materials off-site for beneficial reuse, recycling, or lawful disposal.

Solid waste collected as part of the Project would be disposed of through the services provided by HS or HWMA. The Project's solid waste generation would not exceed State or local standards, nor would it overwhelm the capacity of local infrastructure. Furthermore, the Project would not impede the achievement of solid waste reduction objectives. Its primary focus remains on expanding infrastructure to utilize treated wastewater for irrigation purposes. Therefore, a less than significant impact on solid waste management is anticipated.

4.20 Wildfire

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
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?			✓	
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?				✓
Expose people or structures to significant risks, including downslope or downstream flooding or landslides as a result of runoff, post-fire slop instability, or drainage changes?			✓	

This section evaluates potential impacts related to wildfire risk. The Project Area is located within a Local Responsibility Area (LRA) where Arcata Fire Protection District is the primary emergency response agency responsible for fire suppression and prevention (Humboldt County 2024). Most of the Project Area is not mapped with a Fire Hazard Severity Zone (FHSZ) and is noted as non-Wildland /non-Urban indicating a minimal wildfire hazard. However, a small piece of the Project Area in the northeastern side is mapped as Moderate FHSZ (Humboldt County 2024). The closest fire station to the Project Area is the Arcata/McKinleyville Station located approximately two miles northeast of the Project Area and the Arcata/Mad River Station approximately four miles southeast.

a) Substantially impair an adopted emergency response plan or emergency evacuation plan (No Impact)

A review of the Humboldt County EOP (Humboldt County 2015) indicates that the Project construction would not impair emergency response activities nor established evacuation routes because there are no established routes in the EOP. Project operation would not impair implementation or physically interfere with an established emergency response or evacuation plan because roadways would not be blocked; see Section 4.9 (Hazards and Hazardous Materials, Impact (f)) for discussion of the Project's effect on emergency response and evacuation plans.) No impact would result.

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? (Less than Significant Impact)

The Project Area includes topography that is gently sloping to the east and where windy conditions are common. Fire ignition risk associated with construction activities is low because grass will be mowed prior to construction activities, and would be limited to accidental ignition associated with a potential heavy machinery-related incident. The Project would not otherwise increase exposure to wildlife fire above existing conditions. The impact would be less than significant.

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? (No Impact)

The Project is expanding existing recycled wastewater irrigation infrastructure. Irrigation of the fields in the Project Area will decrease the risk of wildland fire in the Project Area. Implementation of the Project would not result in a need to expand wildfire protection infrastructure to the Project Area or in the immediate vicinity of the Project because no residences or structures are proposed. Therefore, new roads for fire defense and expanded emergency water sources would not be required. No impact would result.

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? (Less than Significant Impact)

The construction of the Project would not pose risk above and beyond existing risk to individuals or structures. The Project Area consists of gently sloping terrain with the greatest topographical relief in the northeast along the bluff, followed by relatively flat land to the west. While vegetation is present, the immediate Project Area is not forested. Moreover, the risk of fire ignition associated with construction activities is minimal because grass within the Project Area would be mowed prior to construction, and because of the moist conditions from morning fog. No residences or structures exist downslope of the bluff. Due to the minimal fire risk, and absence of residence of structures within or downslope of the Project Area, this potential impact is considered less than significant. Project operation would contain the same wildfire risk as is present under existing conditions, and therefore no impact would occur from Project operation.

4.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less-than-Significant w/ Mitigation Incorporated	Less-than-Significant Impact	No Impact
Does the project:				
Have the potential to substantially 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?		✓		
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)?			✓	
Have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?			✓	

a) Does the project have the potential to substantially 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? (Less Than Significant with Mitigation)

As evaluated in this IS/MND, the Project would not substantially 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; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.

Mitigation measures are listed herein to reduce impacts related to Air Quality, Biological resources, Cultural Resources, Energy Resources, Geology and Soils, Hydrology and Water Quality, and Tribal Cultural Resources. With implementation of the required mitigation measures, impacts would be less than significant.

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)? (Less than Significant Impact)

Cumulative impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Table 4.21-1 provides a list of past, present, and reasonably foreseeable future projects within and near the Project Area (within 0.5 mile), including their anticipated construction schedules (if known). Efforts to identify cumulative projects included outreach to the Humboldt County Planning and Building Department, Humboldt County Department of Public Works (HCDPW), and the McKinleyville Community Services Districts.

Table 4.21-1Cumulative Projects Summary

Agency	Project	Summary	Construction Year
HCDPW	APN 508-091-039 Subdivision	Six lot subdivision of 3.87-acre parcel.	2024-25

The APN 508-091-039 Subdivision is located approximately 0.19 mile north of the Project on Anderson Avenue and has the potential to be under construction when the proposed Project is under construction. Thus, potential impacts would be analyzed with this worst-case scenario. Potential cumulative air quality impacts related to PM10 fugitive dust, with the twice daily watering of exposed surfaces set in MM AQ-1, would remain less than significant. Potential cumulative noise impacts would remain less than significant as Humboldt County has not established construction-related noise standards that pertain to the proposed Project activities, construction impacts would remain less than significant. Potential cumulative transportation impacts are unlikely to occur because Anderson Avenue is parallel to Fischer Avenue and equipment and trucks are unlikely to use Anderson Avenue to access the Project Area. The impacts associated with the proposed Project analyzed in this IS/MND would not add appreciably to any other existing or foreseeable future significant cumulative impact on aesthetics, agriculture and forest resources, biological resources, cultural resources, energy resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, land use planning, mineral resources, population and housing, public services, recreation, tribal cultural resources, utilities and service systems, or wildfire.

The impacts associated with the proposed Project analyzed in this IS/MND would not add appreciably to an existing or foreseeable future significant cumulative impact, such as visual quality, cultural resources, biological, traffic impacts, or air quality degradation. Incremental impacts, if any, would be negligible and undetectable. Any applicable cumulative impacts to which this Project would contribute would be mitigated to a less-than-significant level. Therefore, the impact would be less than significant.

c) Does the Project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly? (Less Than Significant Impact)

The Project has been planned and designed to avoid significant environmental impacts. As discussed in the analysis throughout Section 4 of this IS/MND, the Project would not have environmental effects that would cause substantial adverse direct or indirect effects on human beings. The impact would be less than significant.

5. References

Bay Area Air Quality Management District (BAAQMD). 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans. April.

California Air Resources Board (CARB). 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November 16.

California Department of Conservation (DOC). 2024. Maps. Layers Accessed: Alquist-Priolo Fault Hazard Zones, Shaking Potential for California, California Important Farmland, Williamson Act. Accessed: March 2024. https://maps.conservation.ca.gov/DataViewer/index.html

California Department of Toxic Substances Control (DTSC). 2024. EnviroStor Hazardous Waste and Substances Site List (Cortese). Accessed: March 2024. https://www.envirostor.dtsc.ca.gov

California Department of Transportation (Caltrans). 2018. California State Scenic Highway System Map. Available online at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa

California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual.

California Department of Transportation (Caltrans). 2023. Highway Design Manual, 7th Edition.

DataUSA. 2021. McKinleyville, CA Data Profile. Accessed in March 2024. https://datausa.io/profile/geo/mckinleyville-ca#housing

Department of Water Resources (DWR). 2004. Department of Water Resources Bulletin 118 Alluvial Groundwater Basins/Subbasins Humboldt County, California. Mad River Groundwater Basin, Dows Prairie Subbasin.

ESA. 2021. Airport Land Use Compatibility Plan. Prepared for the Humboldt County Airport Land Use Commission (ALUC). https://humboldtgov.org/DocumentCenter/View/95080/2021-Airport-Land-Use-Compatibility-Plan-adopted-04132021-33-MB.

Federal Highway Administration. 2006. FHWA Highway Construction Noise Handbook.

Humboldt County. 2002. McKinleyville Community Plan.

Humboldt County. 2015. Emergency Operations Plan, Humboldt Operational Area. Humboldt County, CA https://humboldtgov.org/DocumentCenter/View/51861/Humboldt-County-Emergency-Operations-Plan-2015

Humboldt County. 2017. Humboldt County General Plan. Noise Element.

Humboldt County. 2021. Airport Land Use Compatibility Plan (ALUCP). Available online: https://humboldtgov.org/DocumentCenter/View/95080/2021-Airport-Land-Use-Compatibility-Plan-adopted-04132021-33-MB

Humboldt County. 2024. Humboldt County WebGIS. Accessed: April 2024. https://webgis.co.humboldt.ca.us/HCEGIS2.0/

Humboldt County Association of Governments (HCAOG). 2018 Humboldt Regional Bicycle Plan.

McKinleyville Community Services District (MCSD). 2024. Personal communication. Email and phone communication regarding existing conditions within the Project Area and the Upper Fischer Ranch.

North Coast Unified Air Quality Management District (NCUAQMD). 2024. Planning & CEQA, NCUAQMD Criteria Pollutant Attainment Status. Website: https://www.ncuaqmd.org/planning-ceqa. Accessed: August 2, 2024.

Office of Planning and Research (OPR). 2019. Technical Advisory on Evaluating Transportation Impacts in CEQA. December. Available online at: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

Office of Planning and Research (OPR). 2024. CEQA Statute and Guidelines handbook.

Roscoe and Associates (RA). 2024. An Archaeological Survey Report for the McKinleyville Community Services District Water Recycling Project, Humboldt County, California. Roscoe and Associates, Bayside, California, USA. CLASSIFIED

Sacramento Metropolitan Air Quality Management District. (SMAQMD). 2020. SMAQMD Thresholds of Significance Table. Accessed August 2024. Available at https://www.airquality.org/residents/ceqa-land-use-planning/ceqa-guidance-tools

State Water Resources Control Board (SWRCB). 2024. GeoTracker. Accessed: March 2024. https://geotracker.waterboards.ca.gov/map/

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). (2024). Web Soil Survey. Accessed March 2024 at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

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Chryss Meier, Air Quality Planner

Misha Schwarz, Senior Environmental Scientist - Reviewer

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Roscoe and Associates

James Roscoe, Principal Investigator of Archaeology

Melinda Salisbury, Archaeologist

Kelly Hughes, Archaeologist

Appendices

Appendix A Figures

Figure 1 Project Vicinity
Figure 2 Project Area
Figure 3 Existing Recycled Water Irrigation Areas and Infrastructure
Figure 4 Project Components
Figure 5 Conceptual Site Plan

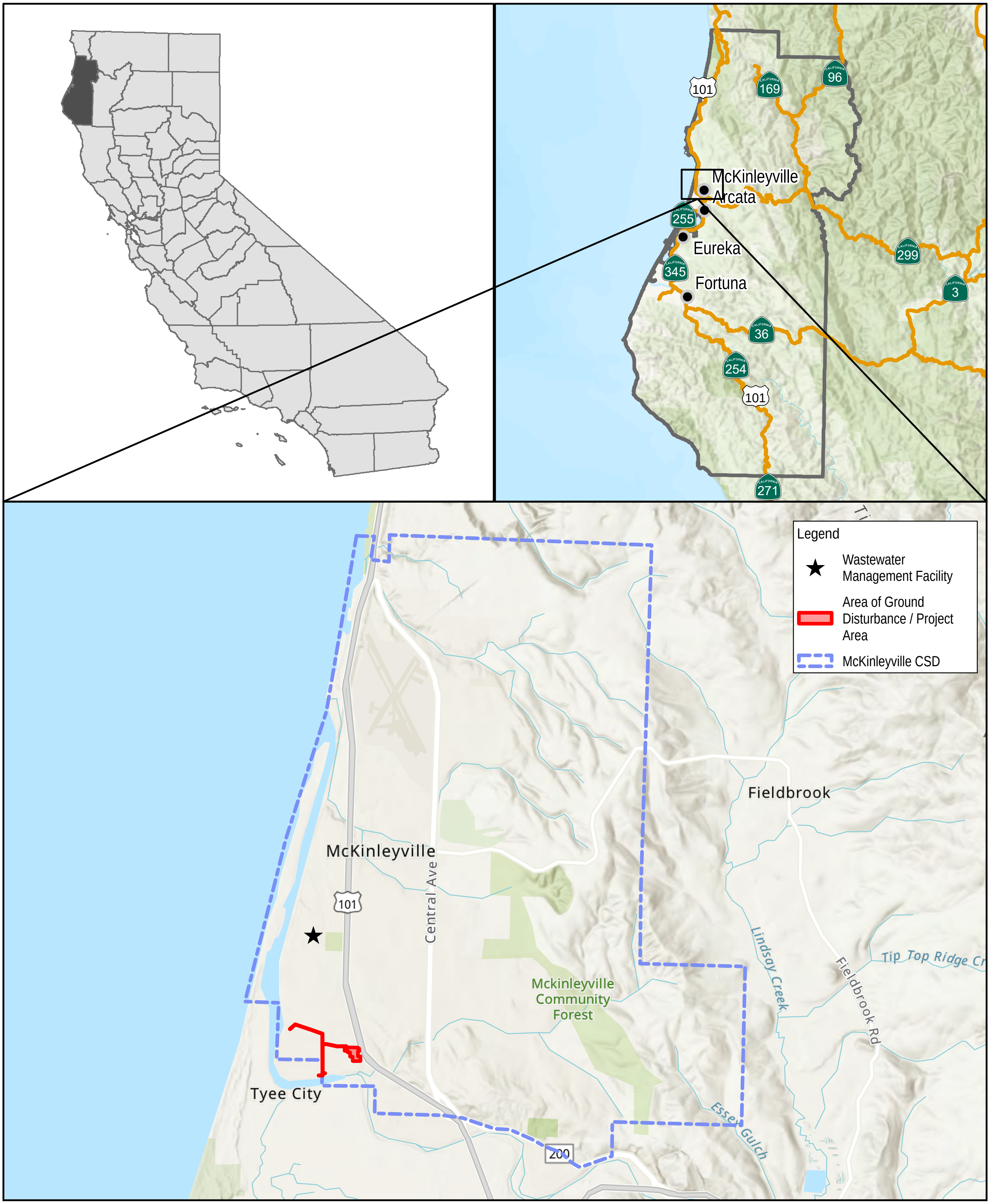
Appendix B Air Quality Modeling Results

Appendix C Biological Resources Technical Memorandum

Appendix D Wetland Delineation Report – Highway 101 Sewer Crossings Retrofit and Wastewater Recycling Expansion Project

Appendix A

Figures



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McKinleyville Community Services District
Wastewater Recycling Expansion Project

Project No. 12623402
Revision No. -
Date September 2024

Project Vicinity

FIGURE 1

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

Project No. 12623402
Revision No. -
Date Sep 2024

Project Area

FIGURE 2

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Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3

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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

McKinleyville Community Services District
Wastewater Recycling Expansion Project

Existing Recycled Water Irrigation Areas and Infrastructure

Project No. 12623402
Revision No. -
Date Nov 2024

FIGURE 3

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Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
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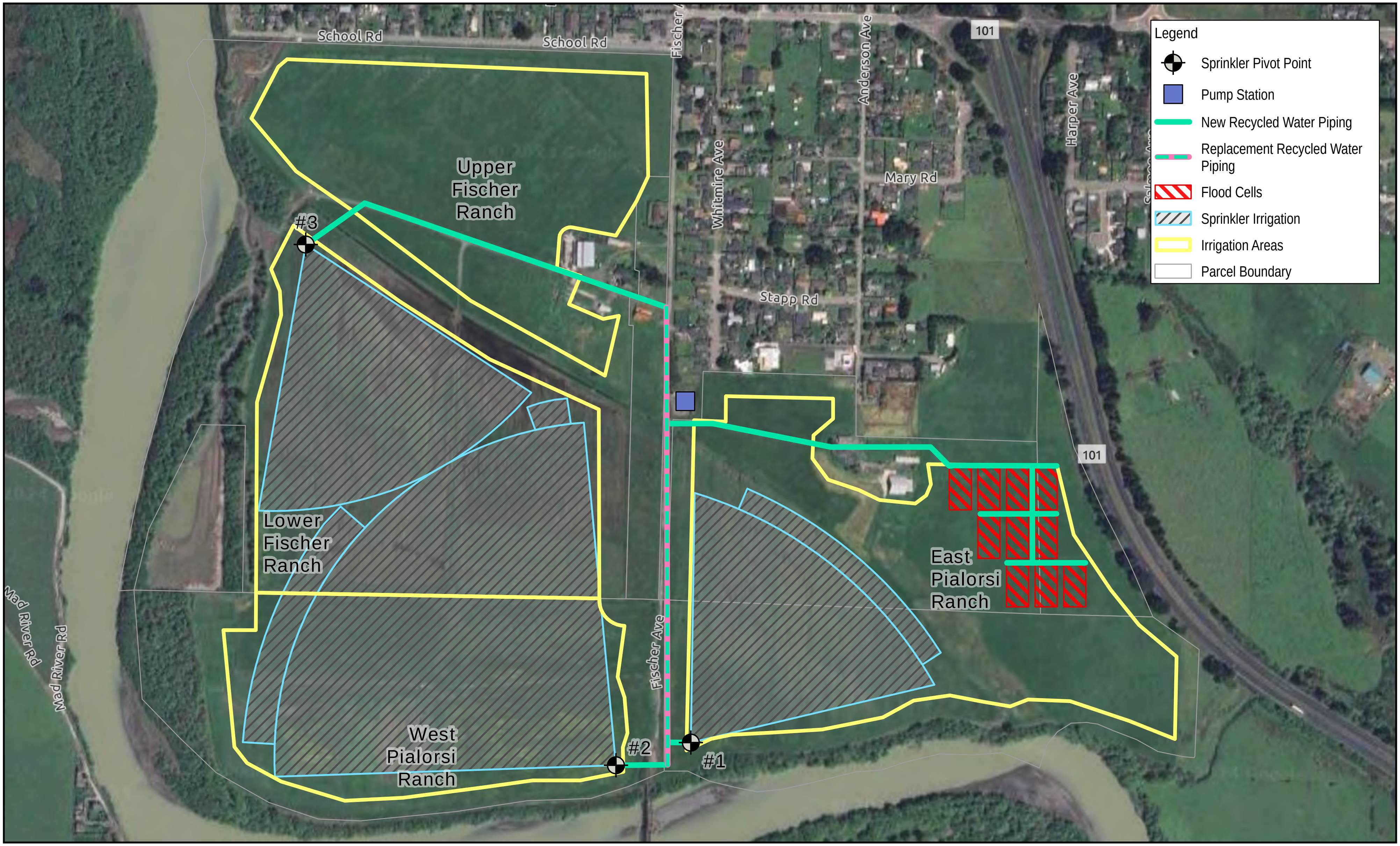

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GHD

McKinleyville Community Services District
Wastewater Recycling Expansion Project

Project No. 12623402
Revision No. -
Date Sep 2024

Project Components

FIGURE 4

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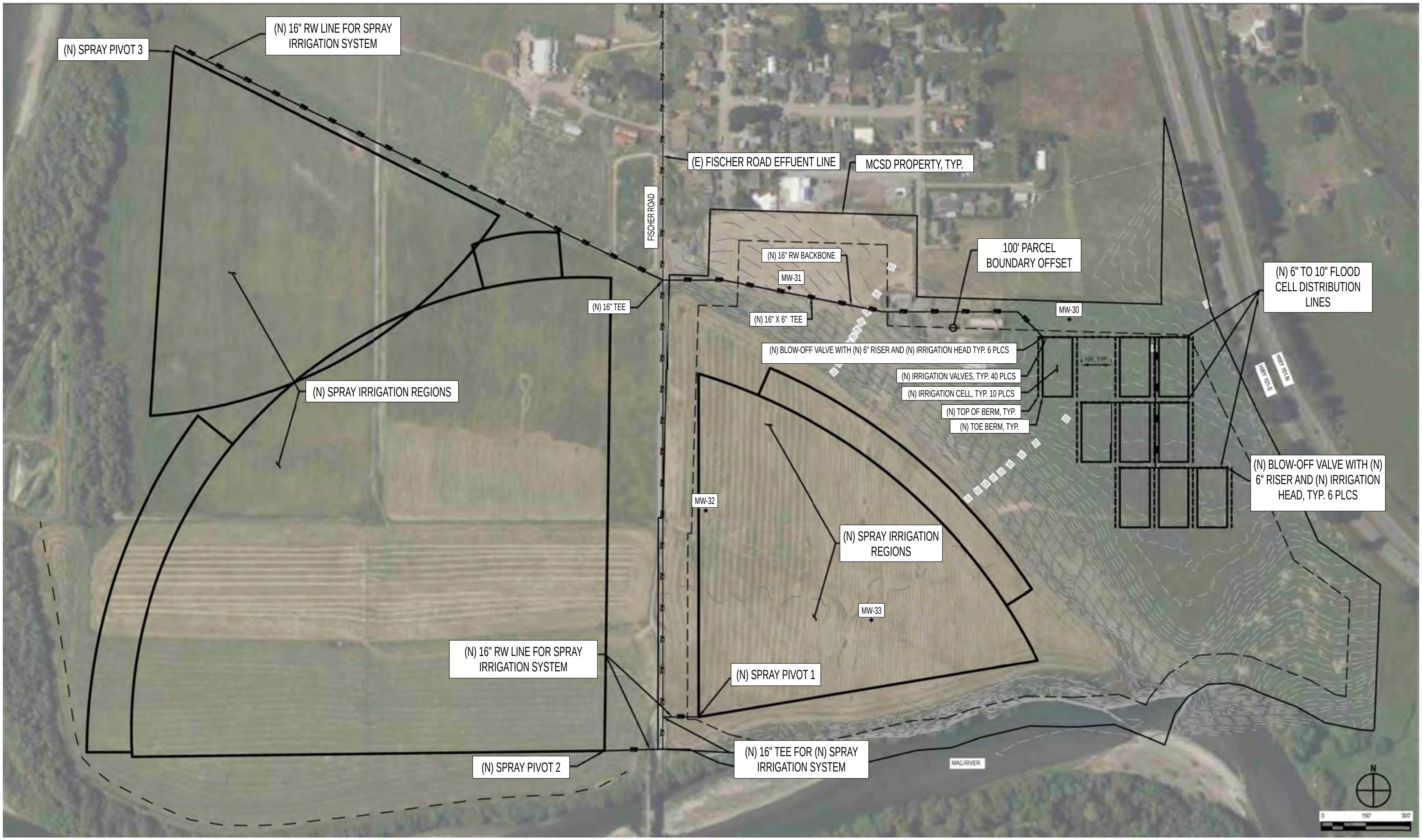

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

Conceptual Site Plan

Project No. 12623402
Revision No. -
Date Sep 2024

FIGURE 5

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Data source: . Created by: ethompson3

Appendix B

Air Quality Modeling Results

MCSD Wastewater Recycling Project Detailed Report

Table of Contents

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	MCSD Wastewater Recycling Project
Construction Start Date	6/3/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.90
Precipitation (days)	81.2
Location	40.92912709826089, -124.12047460626457
County	Humboldt
City	Unincorporated
Air District	North Coast Unified APCD
Air Basin	North Coast
TAZ	112
EDFZ	2
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.26

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Linear	0.39	Mile	0.19	0.00	—	—	—	Pipeline Replacement
User Defined Linear	0.96	Mile	0.46	0.00	0.00	—	—	New Pipeline

User Defined Industrial	1.00	User Defined Unit	4.60	0.00	0.00	0.00	—	Flood Cells

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.69	34.2	35.3	0.06	1.45	7.83	9.28	1.33	3.98	5.31	6,064	0.25	0.34	6,087
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	2.08	2.28	< 0.005	0.08	0.35	0.43	0.08	0.16	0.24	499	0.02	0.02	507
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.38	0.42	< 0.005	0.02	0.06	0.08	0.01	0.03	0.04	82.6	< 0.005	< 0.005	83.9

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.69	34.2	35.3	0.06	1.45	7.83	9.28	1.33	3.98	5.31	6,064	0.25	0.34	6,087
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.22	2.08	2.28	< 0.005	0.08	0.35	0.43	0.08	0.16	0.24	499	0.02	0.02	507
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.04	0.38	0.42	< 0.005	0.02	0.06	0.08	0.01	0.03	0.04	82.6	< 0.005	< 0.005	83.9

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	2.12	3.06	< 0.005	0.07	—	0.07	0.06	—	0.06	437	0.02	< 0.005	439
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	5.99	< 0.005	< 0.005	6.01
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.99	< 0.005	< 0.005	1.00
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.37	0.00	0.00	0.05	0.05	0.00	0.01	0.01	52.8	< 0.005	< 0.005	53.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.48	0.07	< 0.005	0.01	0.09	0.09	0.01	0.02	0.03	347	< 0.005	0.05	364
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.72	< 0.005	< 0.005	0.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	4.75	< 0.005	< 0.005	4.98
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.12	< 0.005	< 0.005	0.12
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.79	< 0.005	< 0.005	0.82

3.3. Linear, Drainage, Utilities, & Sub-Grade (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	1.69	2.56	< 0.005	0.06	—	0.06	0.05	—	0.05	378	0.02	< 0.005	379
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	14.5	< 0.005	< 0.005	14.6
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.40	< 0.005	< 0.005	2.41
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.24	0.00	0.00	0.03	0.03	0.00	0.01	0.01	35.2	< 0.005	< 0.005	35.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.61	0.09	0.01	0.01	0.11	0.12	0.01	0.03	0.04	439	< 0.005	0.07	460
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.35	< 0.005	< 0.005	1.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	16.8	< 0.005	< 0.005	17.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.22	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.79	< 0.005	< 0.005	2.92

3.5. Linear, RePaving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	2.84	4.23	0.01	0.12	—	0.12	0.11	—	0.11	639	0.03	0.01	641
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	12.3	< 0.005	< 0.005	12.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.03	< 0.005	< 0.005	2.04
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.37	0.00	0.00	0.05	0.05	0.00	0.01	0.01	52.8	< 0.005	< 0.005	53.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.01	< 0.005	< 0.005	1.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.17	< 0.005	< 0.005	0.17
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Linear, Grading & Excavation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.45	3.88	0.01	0.08	—	0.08	0.08	—	0.08	592	0.02	< 0.005	594
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.15	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	35.7	< 0.005	< 0.005	35.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	5.91	< 0.005	< 0.005	5.93
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.37	0.00	0.00	0.05	0.05	0.00	0.01	0.01	52.8	< 0.005	< 0.005	53.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.19	< 0.005	< 0.005	3.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.53	< 0.005	< 0.005	0.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	5,295	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.43	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	72.5	< 0.005	< 0.005	72.8
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	0.05	0.05	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	12.0	< 0.005	< 0.005	12.1
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.86	0.00	0.00	0.12	0.12	0.00	0.03	0.03	123	0.01	0.01	126
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.69	< 0.005	< 0.005	1.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.28	< 0.005	< 0.005	0.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	2,959	0.12	0.02	2,970
Dust From Material Movement	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.16	1.28	< 0.005	0.05	—	0.05	0.05	—	0.05	211	0.01	< 0.005	212
Dust From Material Movement	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.21	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	34.9	< 0.005	< 0.005	35.0
Dust From Material Movement	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.07	0.73	0.00	0.00	0.10	0.10	0.00	0.02	0.02	106	0.01	< 0.005	108
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	2.14	0.32	0.02	0.03	0.39	0.42	0.03	0.11	0.14	1,548	< 0.005	0.24	1,623
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.53	< 0.005	< 0.005	7.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.15	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	110	< 0.005	0.02	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.25	< 0.005	< 0.005	1.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	< 0.005	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	18.3	< 0.005	< 0.005	19.1

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	6/3/2025	6/10/2025	5.00	5.00	Demolition of Pavement over Existing Pipeline
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	7/12/2025	7/31/2025	5.00	14.0	Excavation and Utilties
Linear, RePaving	Linear, Paving	8/1/2025	8/10/2025	5.00	7.00	Repave Replacement Pipeline
Linear, Grading & Excavation	Linear, Trenching	6/11/2025	7/11/2025	5.00	22.0	Trenching
Site Preparation	Site Preparation	7/2/2025	7/9/2025	5.00	5.00	—
Grading	Grading	7/10/2025	8/14/2025	5.00	26.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Concrete/Industrial Saws	Diesel	Average	2.00	3.00	33.0	0.73
Linear, Grubbing & Land Clearing	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Excavators	Diesel	Average	1.00	7.00	36.0	0.38
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Linear, RePaving	Paving Equipment	Diesel	Average	1.00	7.00	89.0	0.36
Linear, RePaving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Linear, RePaving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37

Linear, Grading & Excavation	Excavators	Diesel	Average	1.00	7.00	36.0	0.38
Linear, Grading & Excavation	Skid Steer Loaders	Diesel	Average	1.00	7.00	71.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	9.53	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.16	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	9.53	LDA,LDT1,LDT2
Grading	Vendor	—	7.16	HHDT,MHDT
Grading	Hauling	21.4	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	7.50	9.53	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	7.16	HHDT,MHDT

Linear, Grubbing & Land Clearing	Hauling	4.80	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	7.50	9.53	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	—	7.16	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	5.00	9.53	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	7.16	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	6.07	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, RePaving	—	—	—	—
Linear, RePaving	Worker	7.50	9.53	LDA,LDT1,LDT2
Linear, RePaving	Vendor	0.00	7.16	HHDT,MHDT
Linear, RePaving	Hauling	0.00	20.0	HHDT
Linear, RePaving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	—	185	0.65	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	675	0.65	0.00	—
Site Preparation	—	—	7.50	0.00	—
Grading	—	4,453	26.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	0.19	100%
User Defined Linear	0.00	100%
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	4.12	annual days of extreme heat
Extreme Precipitation	17.2	annual days with precipitation above 20 mm
Sea Level Rise	< 0.005	meters of inundation depth
Wildfire	4.34	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	0.19
AQ-PM	4.37
AQ-DPM	27.6
Drinking Water	4.42
Lead Risk Housing	35.2
Pesticides	0.00
Toxic Releases	8.34
Traffic	11.0
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	17.2
Haz Waste Facilities/Generators	35.6
Impaired Water Bodies	43.8
Solid Waste	70.4

Sensitive Population	—
Asthma	67.0
Cardio-vascular	85.2
Low Birth Weights	12.4
Socioeconomic Factor Indicators	—
Education	22.8
Housing	43.9
Linguistic	0.00
Poverty	63.0
Unemployment	74.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	43.06428846
Employed	63.51854228
Median HI	32.08007186
Education	—
Bachelor's or higher	50.17323239
High school enrollment	100
Preschool enrollment	44.43731554
Transportation	—
Auto Access	59.70742974
Active commuting	17.07943026
Social	—
2-parent households	36.3403054
Voting	59.21981265

Neighborhood	—
Alcohol availability	68.02258437
Park access	39.25317593
Retail density	24.63749519
Supermarket access	32.2340562
Tree canopy	93.63531374
Housing	—
Homeownership	43.3465931
Housing habitability	47.56833055
Low-inc homeowner severe housing cost burden	35.2239189
Low-inc renter severe housing cost burden	55.24188374
Uncrowded housing	56.87155139
Health Outcomes	—
Insured adults	41.85807776
Arthritis	0.0
Asthma ER Admissions	20.1
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	9.2
Cognitively Disabled	2.9
Physically Disabled	16.6
Heart Attack ER Admissions	54.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0

Obesity	0.0
Pedestrian Injuries	61.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	51.4
Children	47.4
Elderly	48.7
English Speaking	92.6
Foreign-born	2.8
Outdoor Workers	45.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	87.5
Traffic Density	6.4
Traffic Access	0.0
Other Indices	—
Hardship	42.4
Other Decision Support	—
2016 Voting	52.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	16.0

Healthy Places Index Score for Project Location (b)	53.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Replacement Pipeline, New Pipeline, and Flood Cells, Construction Only
Construction: Construction Phases	Grading changed to Trenching, Auto-scheduler utilized.
Construction: Off-Road Equipment	For Linear, Similar Project Construction Equipment and Use utilized. For Flood Cells, Default Site Prep and Grading Equipment Used (Conservative Assumption)
Construction: Paving	New Pipeline largely under fields

Appendix C

Biological Resources Technical Memorandum

Technical Memorandum

July 31, 2024

To	Pat Kaspari, MCSD General Manager	Contact No.	707-267-2208
Copy to	Jordan King, GHD Project Manager; Kerry McNamee, GHD Environmental Planner	Email	Christian.hernandez@ghd.com
From	Christian Hernandez, GHD Environmental Scientist	Project No.	12623402
Project Name	McKinleyville Community Services District Wastewater Recycling Expansion Project		
Subject	Biological Resources Technical Memorandum		

1. Introduction and Purpose

This Biological Resources Technical Memorandum (Tech Memo) was prepared for the McKinleyville Community Services District (MCSD) to support the Wastewater Recycling Expansion Project (Project), located in McKinleyville, California (**Appendix A, Figures 1 and 2**). The Project includes the expansion of the MCSD's existing water recycling facilities to increase capacity, reduce operational costs, and offset groundwater extraction. The MCSD currently utilize treated wastewater for irrigation, and the proposed Project would expand this existing use. Existing and proposed recycled water irrigation would occur within the Irrigation Areas shown in **Appendix A, Figure 3**.

The Project includes the installation of flood cells, new and replacement recycled water (RW) pipe, three pivot irrigation sprinkler systems ("Pivot Sprinkler #1-3"), and electrical conduit from the adjacent Fischer Road Pump Station to power and automate the sprinkler system (see Section 2 for additional detail, and **Appendix A, Figure 4**).

This Tech Memo was drafted in support of the Project and evaluates sensitive biological resources that may be impacted by the proposed Project. Resources evaluated in this review include aquatic resources, Sensitive Natural Communities, and special status plant and wildlife species including but not limited to those listed under federal and state endangered species acts.

No impacts to evaluated sensitive biological resources are anticipated to occur as a result of the proposed Project.

2. Project Description

The Project is located in the community of McKinleyville, California and is bound by the Mad River to the west and south (**Appendix A, Figures 1 and 2)**. The Project includes the installation of ten flood cells of equal area (100-ft by 200-ft; 4.6 acres) on the northeast section of the Pialorsi Ranch – East upper bench, replacement of 2,075 linear feet (lf) of RW pipe along Fischer Road, installation of 5,060 lf of new RW pipe consisting of 1,775 lf to tee off of the replacement piping towards the northwest (towards Pivot Sprinkler 3), 2,945 lf to the east (towards the flood cells), and 340 lf to connect Pivot Sprinklers #1 and #2 to the recycled water main, and installation of three pivot sprinkler irrigation systems (Pivot Sprinklers #1-3). In total, Project implementation would result in approximately 5.25 acres of ground disturbance would occur. See **Appendix A, Figure 4** for an overview of Project components.

The proposed sizing and number of flood cells (ten) matches that of the existing flood cells at Upper Fischer Ranch, which would support similar irrigation capacity (approximately 76 Million Gallons [MG] annually) and operational approach that District staff are familiar with. Establishing the number of flood cells to be a multiple of five, allows for a weekly operational approach that includes irrigation of one flood cell per day for a five-day work week, and allows for a total two week cycling for operation of the flood cells, which is consistent with the current approach used for the Upper Fischer Ranch flood irrigation system. This operational approach also prevents the application of irrigation water and nutrients from going over agronomic rates. The orientation of the flood cells align with the natural contours of the upper bench in order to minimize grading, with three "rows" of flood cells sufficient to fully utilize the area available on the upper bench.

The flood cells would be served by approximately 2,945 lf of new 16-inch RW pipe that would tee off the existing RW pipeline on Fischer Road, and travel east along the path of an existing gravel access road. Additional tees and blow off valves are included in the conceptual layout to provide flexibility in future piping configurations to enable for irrigation of areas not directly covered by the flood irrigation and sprinkler irrigation systems.

Along Fischer Road, approximately 2,075 lf of asbestos cement RW pipe that is at the end of its useful life would be replaced with C900/C905 RW piping that would be up to 16-inches in diameter. This pipe would replace the segment of RW piping between the pump station and the southern extent of Fischer Road. At the southern end of Fischer Road, approximately 340 lf of new up to 16-inch piping would be installed to support new sprinkler heads (Pivot Sprinkler #1 and #2), and approximately 1,775 lf of new up to 16-inch piping would be installed from the tee to the northwest to support Pivot Sprinkler #3.

The proposed sprinklers would use a fully automated pivot irrigation system that would be optimized to cover the field with a quarter pivot. The pivot wheel system would be connected to the RW pipes and the pivot would be stationary but would move in direction from that pivot point to provide irrigation over the entirety of the southern Irrigation Areas as shown in **Appendix A, Figure 3**. A "Big Gun" sprinkler would be connected to the end of the pivot wheel structure to allow for irrigation of the adjacent hillside.

Electrical and communications conduit would be installed from the pump station to each pivot sprinkler in the same footprint as the proposed RW pipe. Electrical and communications panels to serve electrical loads and provide control functionality to the pivot sprinkler assemblies. The existing recycled water irrigation infrastructure in Pialorsi Ranch, i.e. 6-inch and 8-inch piping, would be abandoned in place. Surface level infrastructure, i.e. mobile sprinklers, would be removed. To note, there are no potable water pipelines within the existing Irrigation Areas. Existing interior fencing and additional equipment or infrastructure in the Project Area would be removed. Agricultural fencing would remain onsite to support seasonal grazing.

3. Methods

3.1 Database Scoping

A database search of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), National Marine Fisheries Service (NMFS) California West Coast Region Species List Tool, California Natural Diversity Database (CNDDB), and California Native Plant Society Inventory for Rare and Endangered Plants was conducted by GHD on July 9, 2024 (USFWS 2024, NMFS 2022, CNDDB 2024, CNPS 2024). In addition, citizen science databases such as eBird, and iNaturalist were reviewed for additional local wildlife information (eBird 2024, iNaturalist 2024). The USFWS and NMFS databases were searched at the Project level, and all other database searches encompassed eight USGS 7.5 Minute Quadrangles (hereafter quads) surrounding the Arcata North quad (Crannell, Panther Creek, Tyee City, Blue Lake, Eureka, Arcata South, and Korbel). **Appendix B** contains Database Search Results.

3.2 Sensitive Natural Communities

Sensitive Natural Communities (SNCs) include those identified on the California Sensitive Natural Communities List as well as those tracked by the CNDDB (CDFW 2024a, CNDDB 2024). SNCs identified on the California Sensitive Natural Communities List coincide with alliances described in *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009).

3.3 Special Status Plant Species

Special status plant species include plant species and subspecies tracked by the CNDDB and CNPS that meet at least one of the following criteria (CNDDB 2024):

- Officially listed by California or the Federal Government as Endangered, Threatened, or Rare;
- A candidate for state or federal listing as Endangered, Threatened, or Rare;
- Taxa listed in the California Native Plant Society's *Inventory of Rare and Endangered Plants of California*;
- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act (CEQA) Guidelines; these taxa may indicate "None" under listing status, but note that all California Rare Plant Rank 1 and 2 and some Rank 3 and 4 plants may fall under Section 15380 of CEQA;
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range but not currently threatened with extirpation;
- A Bureau of Land Management (BLM), USFWS, or U.S. Forest Service (USFS) Sensitive Species/Species of Conservation Concern;
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California; and
- Taxa closely associated with a habitat that is declining in California at a significant rate (e.g. wetlands, riparian, vernal pools, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, etc.).

GHD conducted special status plant surveys on April 18, 2024 and July 6, 2024 within the Project Study Boundary (PSB) which is shown as the Area of Ground Disturbance in **Figure 2**. The two surveys accounted for the two blooming periods of special status plant species that could potentially occur in the PSB.

3.4 Special Status Wildlife Species

Special status wildlife species include all wildlife species tracked by the CNDDB and include all species, subspecies, Distinct Population Segments (DPS), or Evolutionarily Significant Units (ESU) that meet at least one of the following criteria (CDFW 2024a):

- Officially listed or proposed for listing under the California endangered species act (CESA) and/or the federal endangered species act (ESA).
- Taxa considered by the California Department of Fish and Wildlife (CDFW) to be a Species of Special Concern (SSC) or Fully Protected (FC)
- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act Guidelines
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range, but not currently threatened with extirpation
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California

– Taxa closely associated with a habitat that is declining in California at a significant rate (e.g., wetlands, riparian, vernal pools, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, etc.)
– Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or a non-governmental organization (NGO), and determined by the CNDDB to be rare, restricted, declining, or threatened across their range in California

4. Results

4.1 Sensitive Natural Communities

A database query of CNDDB returned two terrestrial communities in the eight USGS quads surrounding the Project location: Northern Coastal Salt Marsh and Northern Foredune Grassland. GHD conducted a site visit on April 18, 2024, and July 6, 2024, to assess habitat communities. None of these communities are present in the PSB.

4.2 Special Status Plant Species

Table 1 summarizes the potential for special status plants documented in the surrounding 8-quad area to occur within the PSB. Protocol level surveys in April 18, 2024 and July 6, 2024, were conducted to determine rare plant presence. No rare plants were observed in the site visits. A list of all plants observed in the PSB is provided in **Appendix C**.

Table 1 Potential for Special Status Plants to Occur in the PSB

Scientific Name	Common Name	ESA	CESA	CRPR [2]	Habitat Requirements [1]	Potential to Occur in the PSB
Abronia umbellata var. breviflora	pink sand-verbena	None	None	1B.1	Coastal dunes	**No potential.** No suitable habitat is present within PSB.
Angelica lucida	sea-watch	None	None	4.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt)	**Moderate potential.** Moderately suitable habitat is present within PSB.
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	None	None	1B.2	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)	**Low potential.** Marginal ditch/stream habitat is present within PSB.
Astragalus rattanii var. rattanii	Rattan's milk-vetch	None	None	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest, gravelly streambanks	**No potential.** The PSB is outside of the elevational range for this species (100 - 2705 ft).
Calamagrostis bolanderi	Bolander's reed grass	None	None	4.2	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Marshes and swamps (freshwater), Meadows and seeps (mesic), North Coast coniferous forest, mesic	**Low potential.** Marginal marsh/wetland habitat is present within PSB.

Scientific Name	Common Name	ESA	CESA	CRPR [2]	Habitat Requirements [1]	Potential to Occur in the PSB
Cardamine angulata	seaside bittercress	None	None	2B.2	Lower montane coniferous forest, North Coast coniferous forest, wet areas, streambanks	**Low potential.** The PSB is generally outside of the elevational range for this species (50 - 3000 ft). Marginal ditch/stream habitat is present within PSB.
Carex arcta	northern clustered sedge	None	None	2B.2	Bogs and fens, North Coast coniferous forest (mesic)	**No potential.** The PSB is outside of the elevational range for this species (195 - 4595 ft).
Carex leptalea	bristle-stalked sedge	None	None	2B.2	Bogs and fens, Marshes and swamps, Meadows and seeps (mesic)	**Low potential.** Marginal marsh/wetland habitat is present within PSB.
Carex lyngbyei	Lyngbye's sedge	None	None	2B.2	Marshes and swamps (brackish, freshwater)	**Low potential.** Marginal marsh/wetland habitat is present within PSB.
Carex praticola	northern meadow sedge	None	None	2B.2	Meadows and seeps (mesic)	**No potential.** No suitable habitat is present within PSB.
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	None	None	1B.2	Marshes and swamps (coastal salt)	**No potential.** No suitable habitat is present within PSB.
Castilleja litoralis	Oregon coast paintbrush	None	None	2B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, sandy	**No potential.** The majority of the PSB is outside of the elevational range for this species (50 - 330 ft).
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	None	None	1B.2	Marshes and swamps (coastal salt)	**No potential.** No suitable habitat is present within PSB.
Chrysosplenium glechomifolium	Pacific golden saxifrage	None	None	4.3	North Coast coniferous forest, Riparian forest, roadsides (sometimes), seeps (sometimes), streambanks	**Low potential.** Marginal ditch/stream habitat is present within PSB.
Collinsia corymbosa	round-headed collinsia	None	None	1B.2	Coastal dunes	**No potential.** No suitable habitat is present within PSB.
Coptis laciniata	Oregon goldthread	None	None	4.2	Meadows and seeps, North Coast coniferous forest (streambanks), mesic	**No potential.** No suitable habitat is present within PSB.
Eleocharis parvula	small spikerush	None	None	4.3	Marshes and swamps	**Low potential.** Marginal marsh/wetland habitat is present within PSB.
Epilobium septentrionale	Humboldt County fuchsia	None	None	4.3	Broadleafed upland forest, North Coast coniferous forest, rocky (sometimes), sandy (sometimes)	**No potential.** The PSB is outside of the elevational range for this species (150 - 5905 ft).
Erysimum menziesii	Menzies' wallflower	FE	CE	1B.1	Coastal dunes	**No potential.** No suitable habitat is present within PSB.

Scientific Name	Common Name	ESA	CESA	CRPR [2]	Habitat Requirements [1]	Potential to Occur in the PSB
Erythronium oregonum	giant fawn lily	None	None	2B.2	Cismontane woodland, Meadows and seeps, openings, rocky, serpentine (sometimes)	**No potential.** The PSB is outside of the elevational range for this species (330 - 3775 ft).
Erythronium revolutum	coast fawn lily	None	None	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest, mesic, streambanks	**Low potential.** Marginal ditch/stream habitat is present within PSB.
Fissidens pauperculus	minute pocket moss	None	None	1B.2	North Coast coniferous forest (damp coastal soil)	**No potential.** No suitable habitat is present within PSB.
Fritillaria purdyi	Purdy's fritillary	None	None	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest, serpentine (usually)	**No potential.** The PSB is outside of the elevational range for this species (575 - 7400 ft).
Gilia capitata ssp. pacifica	Pacific gilia	None	None	1B.2	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	**Low potential.** Marginal suitable habitat is present within PSB.
Gilia millefoliata	dark-eyed gilia	None	None	1B.2	Coastal dunes	**No potential.** No suitable habitat is present within PSB.
Glehnia littoralis ssp. leiocarpa	American glehnia	None	None	4.2	Coastal dunes	**No potential.** No suitable habitat is present within PSB.
Hemizonia congesta ssp. tracyi	Tracy's tarplant	None	None	4.3	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest, openings, serpentine (sometimes)	**No potential.** The PSB is outside of the elevational range for this species (395 - 3935 ft).
Hesperevax sparsiflora var. brevifolia	short-leaved evax	None	None	1B.2	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie	**No potential.** No suitable sandy habitat is present within PSB.
Hosackia gracilis	harlequin lotus	None	None	4.2	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland, wetlands, roadsides	**Low potential.** Marginal suitable habitat is present within PSB.
Iliamna latibracteata	California globe mallow	None	None	1B.2	Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks), burned areas (often)	**No potential.** The PSB is outside of the elevational range for this species (195 - 6560 ft).
Lasthenia californica ssp. macrantha	perennial goldfields	None	None	1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub	**No potential.** No suitable habitat is present within PSB.
Lathyrus glandulosus	sticky pea	None	None	4.3	Cismontane woodland	**No potential.** The PSB is outside of the elevational range for this species (985 - 2625 ft).

Scientific Name	Common Name	ESA	CESA	CRPR 2	Habitat Requirements 1	Potential to Occur in the PSB
Lathyrus japonicus	seaside pea	None	None	2B.1	Coastal dunes	**No potential.** No suitable habitat is present within PSB.
Lathyrus palustris	marsh pea	None	None	2B.2	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest, mesic	**Low potential.** Marginal marsh/wetland habitat is present within PSB.
Layia carnosa	beach layia	FT	CE	1B.1	Coastal dunes, Coastal scrub (sandy)	**No potential.** No suitable habitat is present within PSB.
Lilium kelloggii	Kellogg's lily	None	None	4.3	Lower montane coniferous forest, North Coast coniferous forest, openings, roadsides	**No potential.** No suitable habitat is present within PSB.
Lilium occidentale	western lily	FE	CE	1B.1	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest (openings)	**Low potential.** Marginal marsh/wetland habitat is present within PSB.
Listera cordata	heart-leaved twayblade	None	None	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	**No potential.** No suitable habitat is present within PSB.
Lycopodium clavatum	running-pine	None	None	4.1	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic), edges (often), openings, roadsides	**No potential.** The PSB is outside of the elevational range for this species (150 - 4020 ft).
Mitellastra caulescens	leafy-stemmed mitrewort	None	None	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, mesic, roadsides (sometimes)	**Moderate potential.** Moderate habitat is present within the PSB.
Monotropa uniflora	ghost-pipe	None	None	2B.2	Broadleafed upland forest, North Coast coniferous forest	**No potential.** No suitable habitat is present within PSB.
Montia howellii	Howell's montia	None	None	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools, roadsides (sometimes), vernally mesic	**Moderate potential.** Moderate habitat is present within the PSB.
Oenothera wolfii	Wolf's evening-primrose	None	None	1B.1	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest, mesic (usually), sandy	**Low potential.** Species observed 3.2 miles north of the PSB in 1986 (CNDDB 2024).
Packera bolanderi var. bolanderi	seacoast ragwort	None	None	2B.2	Coastal scrub, North Coast coniferous forest, roadsides (sometimes)	**No potential.** The PSB is outside of the elevational range for this species (100 - 2135 ft).
Piperia candida	white-flowered rein orchid	None	None	1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, serpentine (sometimes)	**No potential.** The PSB is outside of the elevational range for this species (100 - 4300 ft).

Scientific Name	Common Name	ESA	CESA	CRPR [2]	Habitat Requirements [1]	Potential to Occur in the PSB
Pityopus californicus	California pinefoot	None	None	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest, mesic	**No potential.** No suitable habitat is present within the PSB.
Pleuropogon refractus	nodding semaphore grass	None	None	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest, mesic	**Low potential.** Marginal suitable habitat is present within PSB.
Ribes laxiflorum	trailing black currant	None	None	4.3	North Coast coniferous forest, roadsides (sometimes)	**Low potential.** Marginal roadside habitat is present within PSB.
Sidalcea malachroides	maple-leaved checkerbloom	None	None	4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland, disturbed areas (often)	**Moderate potential.** Moderately suitable habitat is present within the PSB.
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	None	None	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest, often roadcuts, roadsides	**Moderate potential.** Moderately suitable habitat is present within the PSB.
Sidalcea oregana ssp. eximia	coast checkerbloom	None	None	1B.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	**Moderate potential.** Moderately suitable habitat is present within the PSB.
Silene scouleri ssp. scouleri	Scouler's catchfly	None	None	2B.2	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	**Moderate potential.** Moderately suitable habitat is present within the PSB.
Spergularia canadensis var. occidentalis	western sand-spurrey	None	None	2B.1	Marshes and swamps (coastal salt)	**No potential.** No suitable habitat is present within PSB.
Sulcaria spiralifera	twisted horsehair lichen	None	None	1B.2	Coastal dunes (SLO Co.), North Coast coniferous forest (immediate coast), usually on conifers	**No potential.** No suitable habitat is present within PSB.
Tiarella trifoliata var. trifoliata	trifoliate laceflower	None	None	3.2	Lower montane coniferous forest, North Coast coniferous forest, moist shady banks, edges, streambanks	**No potential.** The PSB is outside of the elevational range for this species (560 - 4920 ft).
Trichodon cylindricus	cylindrical trichodon	None	None	2B.2	Broadleafed upland forest, Meadows and seeps, Upper montane coniferous forest, exposed soil, roadsides, sandy	**No potential.** The PSB is outside of the elevational range for this species (165 - 6570 ft).
Usnea longissima	Methuselah's beard lichen	None	None	4.2	Broadleafed upland forest, North Coast coniferous forest, on tree branches, usually old growth conifers and hardwoods.	**No potential.** The PSB is outside of the elevational range for this species (165 - 4790 ft).
Viola palustris	alpine marsh violet	None	None	2B.2	Bogs and fens (coastal), Coastal scrub (mesic)	**Low potential.** Marginal suitable habitat is present within PSB.

Footnotes:
1 General habitat, and microhabitat column information, reprinted from CNDDB (April 2024).
2 Rankings from CNDDB (April 2024).
Column Header Categories and Abbreviations:
ESA Listing status under the federal Endangered Species Act (ESA)

Scientific Name	Common Name	ESA	CESA	CRPR 2	Habitat Requirements 1	Potential to Occur in the PSB

FE Federal Endangered; FT = Federal Threatened; FC = Federal Candidate; FD = Federally Delisted
CESA Listing status under the California state Endangered Species Act (CESA)
SE State Endangered; SD = State Delisted; ST = State Threatened.

GRank: Global Rank from NatureServe's Heritage Methodology (NatureServe 2024) (ranking according to degree of global imperilment - G1 = Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors; G2 = Imperiled—At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors; G3 = Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors; G4 = Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors; G5 = Secure—Common; widespread and abundant. Subspecies/variety level: "Subspecies/varieties receive a T-rank attached to the G-rank. With the subspecies/varieties, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety" (CDFW 2024b); ? = " Denotes inexact numeric rank" (NatureServe 2024); Q = " Questionable taxonomy that may reduce conservation priority" (NatureServe 2024).

SRank: State Rank from NatureServe's Heritage Methodology (NatureServe 2024) (ranking according to degree of imperilment in the state (California) - S1 = Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state; S2 = Imperiled—Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state; S3 = Vulnerable—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state; S4 = Apparently Secure—Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors; S5 = Secure—Common, widespread, and abundant in the state; SNR = State Not Ranked.

CRPR: CNPS rankings for rare plants (CNPS 2024) - 1A = Plants presumed extinct in California; 1B = Plants rare, threatened or endangered in California and elsewhere; 2 = Plants rare, threatened, or endangered in California, but more common elsewhere; 3 = Plants about which more information is needed (a review list); 4 = Plants of limited distribution (a watch list); n/a = not applicable; Threat Code extensions and their meanings: ".1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat); .2 – Moderately threatened in California (20-80% of occurrences threatened / moderate degree and immediacy of threat); .3 – Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)" (CDFW 2024b).

No potential: Habitat in and adjacent to the PSB is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Low potential: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found in the PSB.
Moderate potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found in the PSB.
High potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found in the PSB.
Present: Detected or documented on-site.

4.3 Special Status Wildlife Species

Habitat availability and suitability was determined for each species reported by the databases mentioned above (**Appendix B**). Nomenclature for special-status animals conforms to CDFW guidelines (CDFW 2024a). The potential for each species to occur in the PSB was determined based on habitat evaluations during the site visits and available data (see **Table 2**)

Table 2 Potential for Special Status Wildlife to Occur in the PSB

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements 1	Potential to Occur in the PSB
Birds						
Accipiter cooperii	Cooper's hawk	None	None	SSC	Cismontane woodland; Riparian forest; Riparian woodland; Upper montane coniferous forest.	**Low potential.** No suitable forested nesting habitat is present within the PSB. Flyovers possible due to adjacent riparian forest.
Accipiter striatus	sharp-shinned hawk	None	None		Cismontane woodland; Lower montane coniferous forest; Riparian forest; Riparian woodland	**Low potential.** No suitable forested nesting habitat is present within the PSB. Flyovers possible due to adjacent riparian forest.
Ardea alba	great egret	None	None	SSC	Brackish marsh; Estuary; Freshwater	**Low potential.** Marginally suitable marsh nesting habitat is

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB
					marsh; Marsh & swamp; Riparian forest; Wetland	present within the northwestern PSB. Existing flood cells and riparian forest exist adjacent to the PSB which provides higher quality habitat therefore flyover potential exists.
Ardea herodias	great blue heron	None	None	SSC	Brackish marsh; Estuary; Freshwater marsh; Marsh & swamp; Riparian forest; Wetland	**Low potential.** Marginally suitable marsh nesting habitat is present within the northwestern PSB. Existing flood cells and riparian forest exist adjacent to the PSB which provides higher quality habitat therefore flyover potential exists.
Asio flammeus	short-eared owl	None	None	SSC	Great Basin grassland; Meadow & seep; Marsh & swamp; Valley & foothill grassland; Wetland	**Low potential.** Marginally suitable marsh nesting habitat is present within the northwestern PSB. Existing flood cells exist adjacent to the PSB which provides higher quality habitat therefore flyover potential exists.
Asio otus	long-eared owl	None	None		Cismontane woodland; Great Basin scrub; Riparian forest; Riparian woodland; Upper montane coniferous forest	**No potential.** No suitable habitat is present within the PSB.
Botaurus lentiginosus	American bittern	None	None		Brackish marsh; Freshwater marsh; Salt marsh	**Low potential.** Marginally suitable marsh habitat is present in the northwestern PSB. Freshwater wetlands exist adjacent to the PSB therefore flyover potential exists.
Brachyramphus marmoratus	marbled murrelet	Threatened	Endangered		Lower montane coniferous forest; Oldgrowth; Redwood	**No potential.** No suitable habitat is present within the PSB.
Cerorhinca monocerata	rhinoceros auklet	None	None		Off-shore islands and rocks along the California coast	**No potential.** No suitable habitat is present within the PSB.
Chaetura vauxi	Vauxs swift	None	None	SSC	Lower montane coniferous forest; North coast coniferous forest; Oldgrowth; Redwood	**No potential.** No suitable habitat is present within the PSB.
Charadrius montanus	mountain plover	None	None	SSC	Chenopod scrub; Valley & foothill grassland	**No potential.** No suitable habitat is present within the PSB.
Charadrius nivosus nivosus	western snowy plover	Threatened	None		Great Basin standing waters; Sand shore; Wetland	**Low potential.** Marginally suitable marsh nesting habitat is present within the northwestern PSB. Existing flood cells exist adjacent to the PSB which provides higher quality habitat.
Circus hudsonius	northern harrier	None	None		Coastal scrub; Great Basin grassland; Marsh & swamp; Riparian scrub; Valley & foothill grassland; Wetland	**Low potential.** Marginally suitable marsh habitat is present within the northwestern PSB. Existing flood cells and riparian scrub exist adjacent to the PSB which provides higher quality habitat therefore flyover potential exists.

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB
Coccyzus americanus	Yellow-billed Cuckoo	Threatened	Endangered		Riparian forest	**Low potential.** No suitable riparian habitat is present within the PSB, but riparian forest is adjacent to the PSB therefore flyover potential exists.
Contopus cooperi	olive-sided flycatcher	None	None	SSC	Lower montane coniferous forest; Redwood; Upper montane coniferous forest	**No potential.** No suitable habitat is present within the PSB.
Coturnicops noveboracensis	yellow rail	None	None	SSC	Freshwater marsh; Meadow & seep	**Low potential.** Marginally suitable marsh habitat is present within the northwestern PSB. Existing flood cells exist adjacent to the PSB which provides higher quality habitat therefore flyover potential exists.
Egretta thula	snowy egret	None	None	SSC	Meadow & seep; Marsh & swamp; Riparian forest; Riparian woodland; Wetland	**Low potential.** No suitable marsh nesting habitat is present within the PSB, but riparian forest is adjacent to the PSB therefore flyover potential exists.
Elanus leucurus	white-tailed kite	None	None	SSC	Cismontane woodland; Marsh & swamp; Riparian woodland; Valley & foothill grassland; Wetland	**Low potential.** No suitable woodland and marginally suitable marsh habitat is present within the PSB. However flyover potential exists due to existing flood cells (marsh habitat) and riparian forest adjacent to the PSB.
Empidonax traillii	willow flycatcher	None	Endangered		Meadow & seep; Riparian scrub; Riparian woodland; Wetland	**Low potential.** No suitable woodland and marginally suitable marsh habitat is present within the PSB. However flyover potential exists due to existing flood cells (marsh habitat) and riparian forest adjacent to the PSB.
Falco columbarius	merlin	None	None	SSC	Estuary; Great Basin grassland; Valley & foothill grassland	**No potential.** No suitable habitat is present within PSB.
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	SSC	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	**Low potential.** No suitable waters are present within PSB, but the Mad River is adjacent to the PSB therefore flyover potential exists. Minimal human-made structures are present in the PSB and vicinity.
Fratercula cirrhata	tufted puffin	None	None		Open-ocean bird; nests along the coast on islands, islets, or (rarely) mainland cliffs.	**No potential.** No suitable habitat is present within the PSB.
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	FP	Lower montane coniferous forest; Oldgrowth	**No potential.** No suitable habitat is present within the PSB.
Hydrobates furcatus	fork-tailed storm-petrel	None	None	SSC	Colonial nester on small, offshore islets. Forages over the open ocean, usually well off-shore	**No potential.** No suitable habitat is present within the PSB.
Icteria virens	yellow-breasted chat	None	None	SSC	Riparian forest; Riparian scrub; Riparian woodland	**Low potential.** No suitable marsh nesting habitat is present within PSB, but riparian forest is

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB
						adjacent to PSB therefore flyover potential exists.
Nannopterum auritum	double-crested cormorant	None	None		Riparian forest; Riparian scrub; Riparian woodland	**Low potential.** No suitable marsh nesting habitat is present within PSB, but riparian forest is adjacent to PSB therefore flyover potential exists.
Numenius americanus	long-billed curlew	None	None	SSC	Great Basin grassland; Meadow & seep	**Low potential.** No suitable nesting habitat is present within the PSB, but foraging habitat exists.
Nycticorax nycticorax	black-crowned night heron	None	None	FP	Marsh & swamp; Riparian forest; Riparian woodland; Wetland	**Low potential.** No suitable marsh nesting habitat is present within the PSB due to the lack of woody vegetation, but riparian forest is adjacent to the PSB therefore flyover potential exists.
Pandion haliaetus	osprey	None	None	SSC	Riparian forest	**Low potential.** No suitable marsh nesting habitat is present within PSB, but riparian forest is adjacent to PSB therefore flyover potential exists.
Passerculus sandwichensis alaudinus	Bryants savannah sparrow	None	None		Tidally influenced habitats, adjacent ruderal areas, moist grasslands within and just above the fog belt, and, infrequently, drier grasslands.	**Moderate potential.** Suitable moist grassland habitat is present within the PSB. Ruderal areas are adjacent to the PSB, increasing flyover potential.
Pelecanus occidentalis californicus	California brown pelican	Delisted	Delisted		Colonial nester on coastal islands just outside the surf line.	**No potential.** No suitable habitat is present within the PSB.
Poecile atricapillus	black-capped chickadee	None	None	FP, SSC	Riparian woodland	**Low potential.** No suitable nesting habitat is present within the PSB, but riparian forest is adjacent to the PSB therefore flyover potential exists.
Rallus obsoletus obsoletus	California Ridgway's rail	Endangered	Endangered		Brackish marsh; Marsh & swamp; Salt marsh; Wetland	**Low potential.** No suitable marsh nesting habitat is present within the PSB, but riparian forest is adjacent to the PSB therefore flyover potential exists. Known occurrence approximately 0.8 miles west (CNDDB 2024).
Riparia riparia	bank swallow	None	Threatened		Riparian scrub; Riparian woodland	**Low potential.** No suitable nesting habitat is present within the PSB, but riparian forest is adjacent to the PSB therefore flyover potential exists.
Strix nebulosa	great gray owl	None	Endangered	SSC	Lower montane coniferous forest; Oldgrowth; Subalpine coniferous forest; Upper montane coniferous forest	**No potential.** No suitable habitat is present within the PSB.
Strix occidentalis caurina	Northern Spotted Owl	Threatened	Threatened		North coast coniferous forest; Oldgrowth; Redwood	**No potential.** No suitable habitat is present within the PSB.

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB
Mammals						
Aplodontia rufa humboldtiana	Humboldt mountain beaver	None	None		Coastal scrub; Redwood; Riparian forest	**Low potential.** No suitable habitat is present within the PSB but riparian forest is adjacent to the PSB.
Arborimus albipes	white-footed vole	None	None	SSC	North coast coniferous forest; Redwood; Riparian forest	**Low potential.** No riparian habitat is present within PSB, but riparian forest is adjacent to the PSB.
Arborimus pomo	Sonoma tree vole	None	None	SSC	North coast coniferous forest; Oldgrowth; Redwood	**No potential.** No suitable habitat is present within the PSB.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	Broadleaved upland forest; Chaparral; Chenopod scrub; Great Basin grassland; Great Basin scrub; Joshua tree woodland; Lower montane coniferous forest; Mojavean desert scrub; Meadow & seep; Riparian forest; Riparian woodland; Sonoran desert scrub; Sonoran thorn woodland; Upper montane coniferous forest; Valley & foothill grassland	**Low potential.** No suitable habitat is present within the PSB, but riparian forest is adjacent to the PSB.
Enhydra lutris nereis	southern sea otter	Threatened	None	SSC	Aquatic; Protected deepwater coastal communities	**No potential.** No suitable habitat is present within the PSB.
Erethizon dorsatum	North American porcupine	None	None		Broadleaved upland forest; Closed-cone coniferous forest; Cismontane woodland; Lower montane coniferous forest; North coast coniferous forest; Upper montane coniferous forest	**No potential.** No suitable habitat is present within the PSB.
Lasionycteris noctivagans	silver-haired bat	None	None	SSC	Lower montane coniferous forest; Oldgrowth; Riparian forest	**Low potential.** No suitable habitat is present within the PSB, but riparian forest is adjacent to the PSB.
Lasiurus cinereus	hoary bat	None	None		Broadleaved upland forest; Cismontane woodland; Lower montane coniferous forest; North coast coniferous forest	**No potential.** No suitable habitat is present within the PSB.
Martes caurina humboldtensis	Humboldt marten	Threatened	Endangered		North coast coniferous forest; Oldgrowth; Redwood	**No potential.** No suitable habitat is present within the PSB.
Myotis evotis	long-eared myotis	None	None		Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests	**Low potential.** No suitable habitat is present within the PSB, but riparian forest is adjacent to the PSB.

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB
Myotis yumanensis	Yuma myotis	None	None		Lower montane coniferous forest; Riparian forest; Riparian woodland; Upper montane coniferous forest	**Low potential.** No suitable habitat is present within the PSB, but riparian forest is adjacent to the PSB.
Pekania pennanti	Fisher	None	None	SSC	North coast coniferous forest; Oldgrowth; Riparian forest	**No potential.** No suitable habitat is present within the PSB but riparian forest is adjacent to the PSB.
Taxidea taxus	American badger	None	None		Alkali marsh; Alpine dwarf scrub; Alpine; Alkali playa; Bog & fen; Brackish marsh; Broadleaved upland forest; Coastal bluff scrub; Closed-cone coniferous forest; Chaparral; Chenopod scrub; Cismontane woodland; Coastal dunes; Coastal prairie; Coastal scrub; Desert dunes; Desert wash; Freshwater marsh; Great Basin grassland; Great Basin scrub; Interior dunes; Ione formation; Joshua tree woodland	**Low potential.** No suitable habitat is present within the PSB, but riparian forest is adjacent to the PSB.
Reptiles						
Actinemys marmorata	northwestern pond turtle	Proposed Threatened	None	SSC	Aquatic	**Low potential.** Marginally suitable habitat is present within the northwestern PSB which is adjacent Mad River. The drainage in the northwest PSB is hydrologically connected to the Mad River however wildlife access is partially blocked via a tidegate.
Chelonia mydas	Green Sea Turtle	Threatened	None		Marine bay	**No potential.** No suitable habitat is present within the PSB.
Amphibians						
Ascaphus truei	Pacific tailed frog	None	None	SSC	Aquatic; Klamath/North coast flowing waters; Lower montane coniferous forest; North coast coniferous forest; Redwood; Riparian forest	**Low potential.** No suitable habitat is present within the PSB, but riparian forest is adjacent to the PSB.
Plethodon elongatus	Del Norte salamander	None	None		Oldgrowth	**No potential.** No suitable habitat is present within the PSB.
Rana aurora	northern red-legged frog	None	None	SSC	Klamath/North coast flowing waters; Riparian forest; Riparian woodland	**Low potential.** No suitable habitat is present within the PSB, but riparian forest is adjacent to the PSB.
Rana boylii pop. 1	foothill yellow-legged frog -	None	None	SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or	**Low potential.** No suitable habitat is present within the PSB, but riparian forest is adjacent to the PSB.

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB
	north coast DPS				emergent riparian vegetation.	
Rhyacotriton variegatus	southern torrent salamander	None	None	SSC	Lower montane coniferous forest; Oldgrowth; Redwood; Riparian forest	**Low potential.** No suitable habitat is present within the PSB, but riparian forest is adjacent to the PSB.
Fish						
Acipenser medirostris pop. 1	green sturgeon - southern DPS	Threatened	None	SSC	Aquatic; Estuary; Marine bay; Sacramento/San Joaquin flowing waters	**No potential.** PSB is outside of DPS range.
Acipenser medirostris pop. 2	green sturgeon - northern DPS	None	None		Aquatic; Estuary; Klamath/North coast flowing waters; Marine bay	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Acipenser transmontanus	white sturgeon	None	None	SSC	Aquatic; Estuary; Klamath/North coast flowing waters; Sacramento/San Joaquin flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Entosphenus folletti	northern California brook lamprey	None	None		Aquatic	**No potential.** PSB is outside of species range.
Entosphenus tridentatus	Pacific lamprey	None	None	SSC	Aquatic; Klamath/North coast flowing waters; South coast flowing waters; Sacramento/San Joaquin flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Eucyclogobius newberryi	tidewater goby	Endangered	None	SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River.	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB
Lampetra richardsoni	western brook lamprey	None	None	SSC	Aquatic	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Oncorhynchus clarkii clarkii	coast cutthroat trout	None	None	SSC	Aquatic; Klamath/North coast flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Oncorhynchus gorbuscha	pink salmon	None	None		Aquatic	**No potential.** PSB is outside of species range.
Oncorhynchus keta	chum salmon	None	None		Aquatic; Klamath/North coast flowing waters; Sacramento/San Joaquin flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened		Aquatic; Klamath/North coast flowing waters; Sacramento/San Joaquin flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	None	None		Aquatic; Klamath/North coast flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Oncorhynchus mykiss irideus pop. 48	steelhead - northern California	Threatened	Endangered		Aquatic; Estuary; Klamath/North coast flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB
	DPS summer-run					tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	Threatened	None	SSC	Aquatic; Estuary; Klamath/North coast flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	Threatened	None	SSC	Aquatic; Sacramento/San Joaquin flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal.
Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	Candidate	Threatened	SSC	Aquatic; Klamath/North coast flowing waters	**No potential.** PSB is outside of species range.
Spirinchus thaleichthys	longfin smelt	Proposed Endangered	Threatened		Aquatic; Estuary	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Thaleichthys pacificus	eulachon	Threatened	None	SSC	Aquatic; Klamath/North coast flowing waters	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Mollusks						
Anodonta californiensis	California floater	None	None		Aquatic	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB
						during the summers unless the Upper Fischer flood cells are in use.
Littorina subrotunda ta	Newcombs littorine snail	None	None	SSC	Aquatic; Brackish marsh	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Margaritifer a falcata	western pearlshell	None	None		Aquatic	**Low potential.** Aquatic habitat is present via the drainage ditch in the northwestern PSB that connects to the Mad River. A tidegate is present which limits access into the PSB. Drainage ditch is seasonal and not anticipated to contain water during the summers unless the Upper Fischer flood cells are in use.
Insects						
Bombus caliginosus	obscure bumble bee	None	None		Coastal areas from Santa Barbara County north to Washington State.	**Low potential.** Species was observed approximately 0.8 miles west in 1976 (CNDDB 2024). PSB includes low-habitat value agricultural fodder that is regularly cut.
Bombus crotchii	Crotch's bumble bee	None	Candidate Endangered		Coastal California east to the Sierra-Cascade crest and south into Mexico.	**Low potential.** Species was observed approximately 0.8 miles west in 1976 (CNDDB 2024). PSB includes low-habitat value agricultural fodder that is regularly cut.
Bombus occidentalis	western bumble bee	None	Candidate Endangered		Once common and widespread, species has declined precipitously from Central CA to Southern B.C., perhaps from disease	**Low potential.** Species was observed approximately 0.8 miles west in 1976 (CNDDB 2024). PSB includes low-habitat value agricultural fodder that is regularly cut.
Cicindela hirticollis gravida	sandy beach tiger beetle	None	None		Coastal dunes	**No potential.** No suitable habitat is present within the PSB.
Danaus plexippus plexippus pop. 1	monarch - California overwinterin g	Candidate	None		Fields, roadside areas, open areas, wet areas or urban gardens. This species only lays eggs on milkweed. Overwintering tree habitat includes eucalyptus, Monterey pine, Monterey cypress, western sycamore, coast redwood, and coast live oak trees.	**No potential.** No trees or milkweed exist within the PSB. No suitable habitat is present within the PSB.
Scaphinotu s behrensi	Behrens' snail-eating beetle	None	None		North coast coniferous forest	**No potential.** No suitable habitat is present within the PSB.

Scientific Name	Common Name	ESA	CESA	Other Status	Habitat Requirements [1]	Potential to Occur in the PSB

Footnotes:
*1 General habitat, and microhabitat column information, reprinted from CNDDB (April 2023).
Potential to Occur:
No potential: Habitat in and adjacent to the PSB is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Low potential: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found in the PSB.
Moderate potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found in the PSB.
High potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found in the PSB.
Present: Detected or documented on-site.

5. Conclusion and Recommendations

GHD conducted site visits on April 18, 2024, and July 6, 2024, to survey for special status plant species and to assess existing habitat. As mentioned in Section 4.1, no SNCs occur within the PSB. Based on surveys, suitable habitat, and nearby occurrence records, six special status plants have moderate potential to occur within the PSB. The protocol level special status plant surveys determined that no endangered, threatened, candidate, or special status plant species are present in the PSB. Additionally, based on surveys, suitable habitat, and nearby occurrence records, no endangered, threatened, candidate, or special status wildlife species have moderate or high potential to occur within the PSB. Based upon current Project design, no impacts to sensitive biological resources evaluated in this memo are anticipated to occur as a result of the proposed Project. Thus, no avoidance and minimization measures related to SNCs are recommended for Project implementation. Standard avoidance and minimization measures to protect nesting birds and wetlands are included in the Project's ISMND.

6. References

California Department of Fish and Wildlife (CDFW). 2024a. Natural Communities. State of California, Natural Resources Agency, Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, California, USA. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities

California Department of Fish and Wildlife (CDFW). 2024b. Metadata – Description of CNDDB fields. State of California, Natural Resources Agency, Department of Fish and Wildlife Biogeographic Data Branch, Sacramento, California, USA. https://map.dfg.ca.gov/bios/docs/CNDDB_QuickView_FieldDescriptions.htm

California Native Plant Society (CNPS). 2024. CNPS Inventory of Rare Plants. California Native Plant Society, Sacramento, California, USA. https://www.cnps.org/rare-plants/cnps-inventory-of-rareplants

eBird. 2024. eBird: an online database of bird distribution and abundance. Cornell Lab of Ornithology, Ithaca, New York, USA. http://www.ebird.org

iNaturalist. 2024. Observations. iNaturalist Department, California Academy of Sciences and National Geographic Society, San Francisco, California, USA. https://www.inaturalist.org

National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS). 2022. Endangered Species Act Species List.

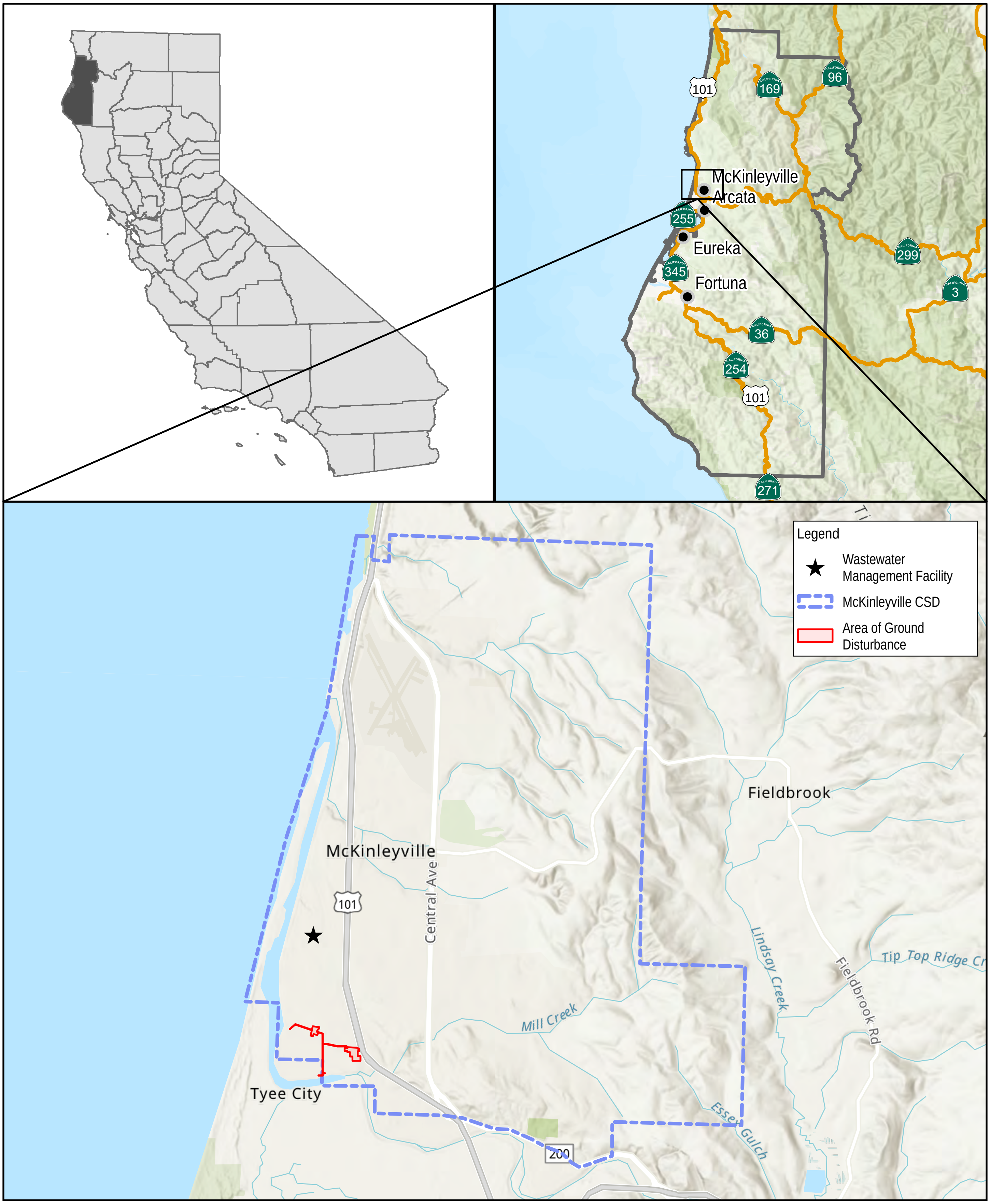
NatureServe. 2022. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. http://explorer.natureserve.org

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evans. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society. Sacramento, California, USA.

U.S. Fish and Wildlife Service (USFWS). 2024. IPaC - Information for Planning and Consultation. Department of the Interior, U.S. Fish and Wildlife Service. https://ecos.fws.gov/ipac/

Appendix A

Figures



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Map Projection: Lambert Conformal Conic
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Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

Project Vicinity

Project No.	12623402
Revision No.	-
Date	July 2024

FIGURE 1

\\ghdnet\ghd\US\Eureka\Projects\561\12623402\GIS\Maps\Deliverables\1262340_ProjComponents_20240401.aprx - 12623402_01_Vicinity_RevC Print date: 09 Jul 2024 - 10:27

Data source: World Topographic Map: California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, USFWS; TIGERweb/Transportation: Source: U.S. Census Bureau; World Topographic Map - labelless: California State Parks, Esri, TomTom, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS, USFWS; World Hillshade: Esri, NASA, NGA, USGS, FEMA; World Hillshade: Esri, CGIAR, USGS. Created by: ethompson3

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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

Project No. 12623402
Revision No. -
Date Sep 2024

Project Area

FIGURE 2

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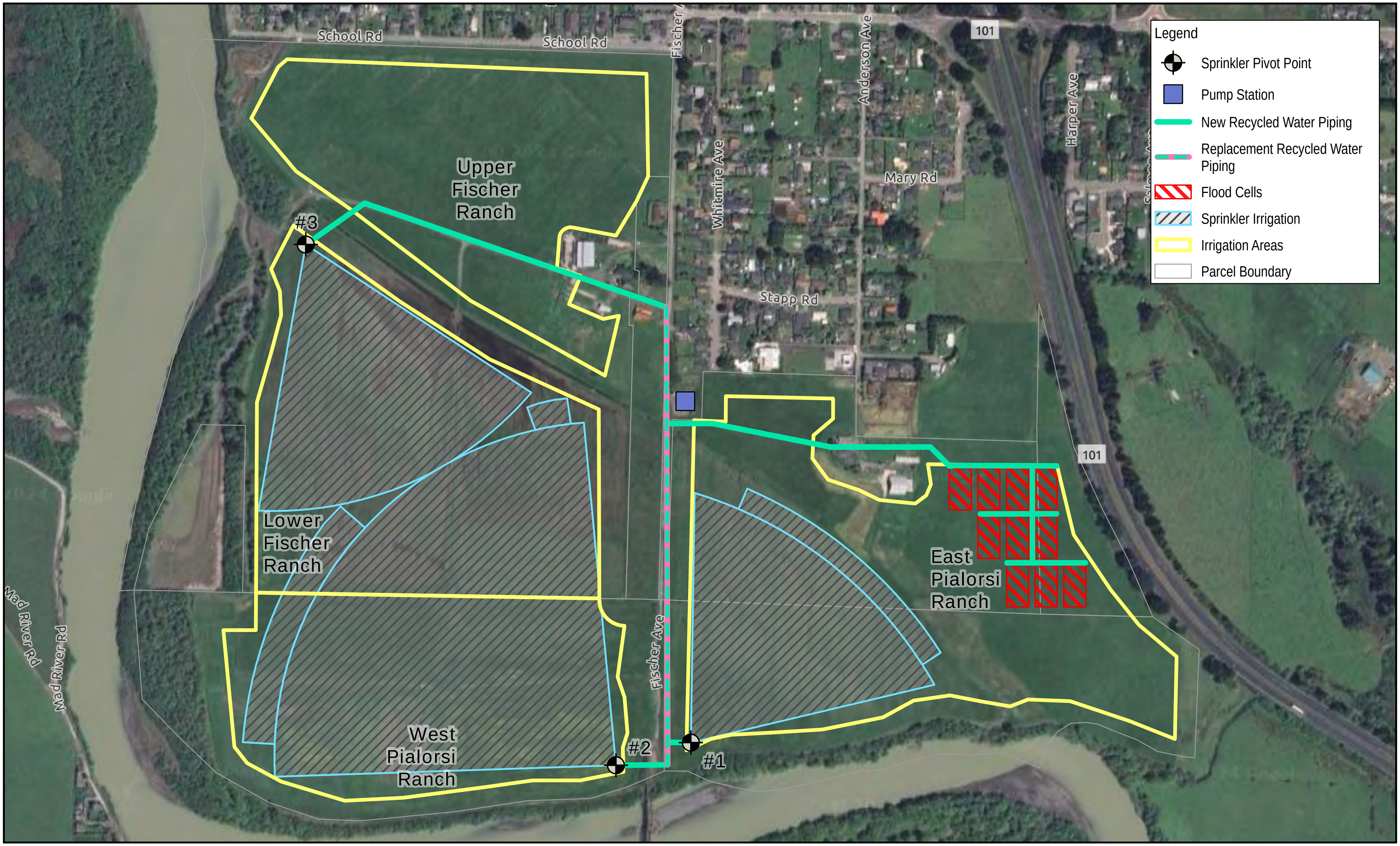
Print date: 25 Sep 2024 - 09:51

Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3



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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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GHD

McKinleyville Community Services District
Wastewater Recycling Expansion Project

Project Components

Project No. 12623402
Revision No. -
Date Sep 2024

FIGURE 3

\\ghdnet\ghd\US\Eureka\Projects\561\12623402\GIS\Maps\Deliverables\1262340_ProjComponents_20240401.aprx - 12623402_04_ProjComp_RevE
Print date: 24 Sep 2024 - 13:25

Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3

Paper Size ANSI A

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

Wetland Delineation

Project No. 12623402
Revision No. -
Date Jul 2024

FIGURE 4

\\ghdnet\ghd\US\Eureka\Projects\561\12623402\GIS\Maps\Deliverables\1262340_ProjComponents_20240401.aprx - 12623402_03_03_Wetlands_RevB
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McKinleyville Community Services District
Wastewater Recycling Expansion Project

NRCS Soils

Project No. 12623402
Revision No. -
Date Jul 2024

FIGURE 5

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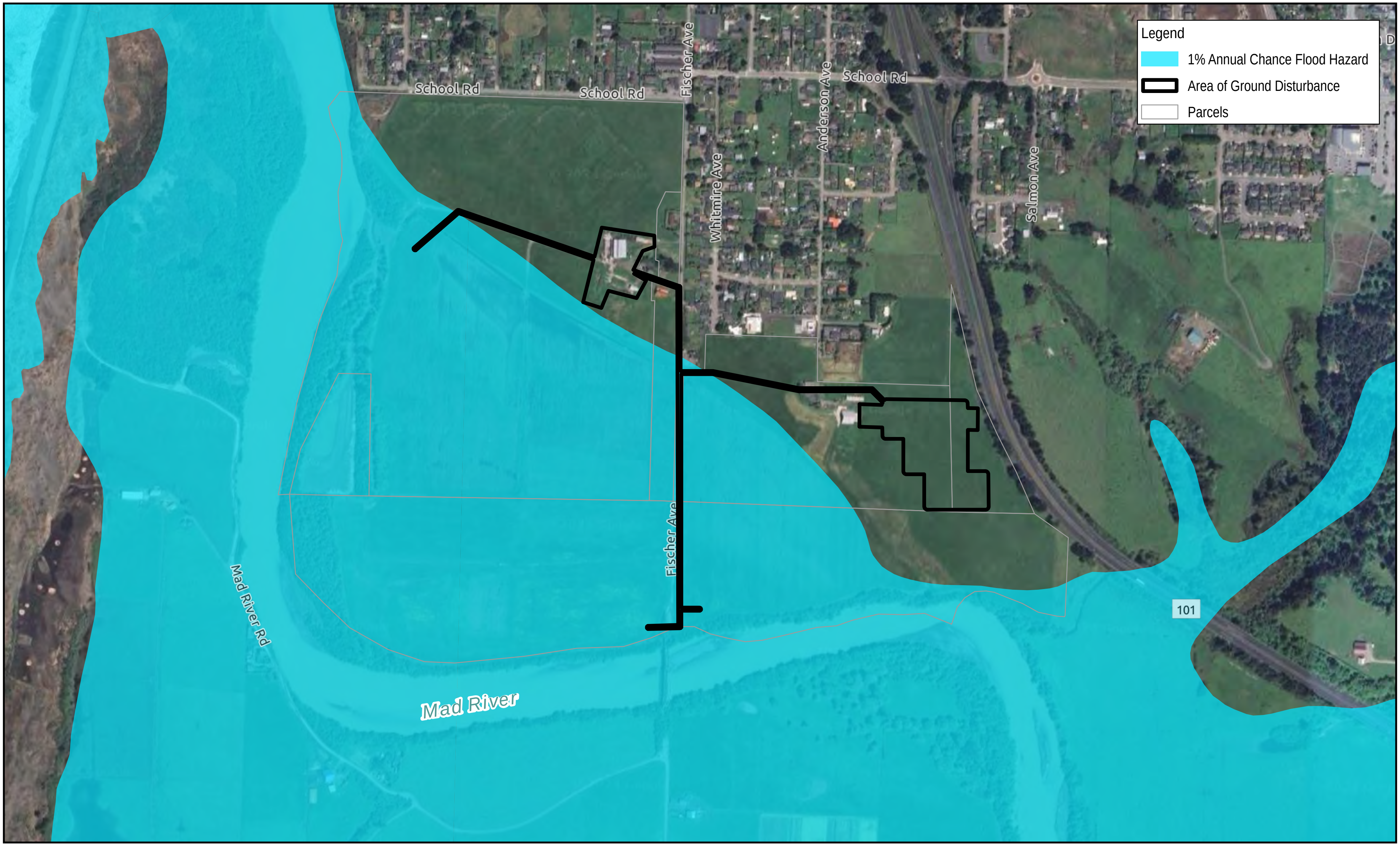
Print date: 08 Jul 2024 - 14:25

Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3



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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

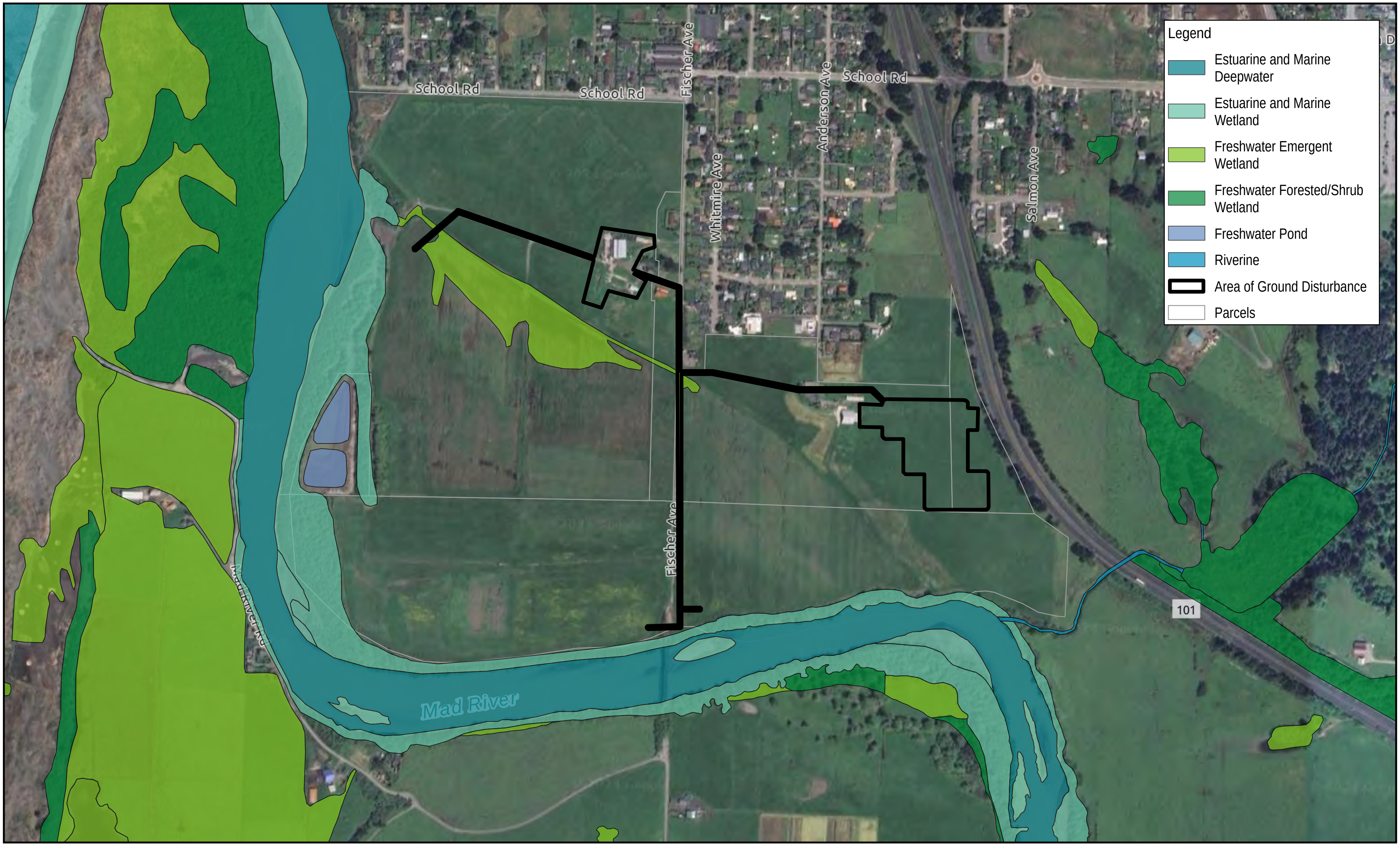
FEMA Flood Hazard

Project No. 12623402
Revision No. -
Date Jul 2024

FIGURE 6

\\ghdnet\ghd\US\Eureka\Projects\561\12623402\GIS\Maps\Deliverables\1262340_ProjComponents_20240401.aprx - 12623402_07_04_FEMA
Print date: 08 Jul 2024 - 14:34

Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3



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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

National Wetlands Inventory

Project No. 12623402
Revision No. -
Date Jul 2024

FIGURE 7

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Print date: 10 Jul 2024 - 12:02

Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3

Appendix B

Database Search Results

Element_Type	Scientific_N	Common_Name	Element_Code	Federal_St	State_Statu	CDFW_Sta	CA_Rare_I	Quad_Cod	Quad_Nam	Data_Statu	Taxonomic_Sort
Animals - Amphi	Ascaphus t	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112411	CRANNEL	Mapped an	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphi	Ascaphus t	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112318	PANTHER	Mapped an	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphi	Ascaphus t	Pacific tailed frog	AAABA01010	None	None	SSC	-	4012481	ARCATA N	Mapped an	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphi	Ascaphus t	Pacific tailed frog	AAABA01010	None	None	SSC	-	4012388	BLUE LAK	Mapped an	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphi	Ascaphus t	Pacific tailed frog	AAABA01010	None	None	SSC	-	4012471	ARCATA S	Mapped an	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphi	Ascaphus t	Pacific tailed frog	AAABA01010	None	None	SSC	-	4012378	KORBEL	Mapped an	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphi	Plethodon (	Del Norte salaman	AAAAD12050	None	None	WL	-	4012378	KORBEL	Mapped an	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphi	Plethodon (	Del Norte salaman	AAAAD12050	None	None	WL	-	4012388	BLUE LAK	Mapped an	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphi	Plethodon (	Del Norte salaman	AAAAD12050	None	None	WL	-	4112318	PANTHER	Mapped an	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphi	Plethodon (	Del Norte salaman	AAAAD12050	None	None	WL	-	4112411	CRANNEL	Unprocess	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphi	Rana auror	northern red-legge	AAABH01021	None	None	SSC	-	4112411	CRANNEL	Mapped an	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphi	Rana auror	northern red-legge	AAABH01021	None	None	SSC	-	4112318	PANTHER	Mapped	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphi	Rana auror	northern red-legge	AAABH01021	None	None	SSC	-	4012481	ARCATA N	Mapped an	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphi	Rana auror	northern red-legge	AAABH01021	None	None	SSC	-	4012482	TYEE CITY	Mapped	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphi	Rana auror	northern red-legge	AAABH01021	None	None	SSC	-	4012388	BLUE LAK	Mapped an	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphi	Rana auror	northern red-legge	AAABH01021	None	None	SSC	-	4012472	EUREKA	Mapped an	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphi	Rana auror	northern red-legge	AAABH01021	None	None	SSC	-	4012471	ARCATA S	Mapped an	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphi	Rana auror	northern red-legge	AAABH01021	None	None	SSC	-	4012378	KORBEL	Mapped an	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphi	Rana boylii	foothill yellow-legg	AAABH01051	None	None	SSC	-	4012378	KORBEL	Mapped an	Animals - Amphibians - Ranidae - Rana boylii pop. 1
Animals - Amphi	Rana boylii	foothill yellow-legg	AAABH01051	None	None	SSC	-	4012471	ARCATA S	Mapped	Animals - Amphibians - Ranidae - Rana boylii pop. 1
Animals - Amphi	Rana boylii	foothill yellow-legg	AAABH01051	None	None	SSC	-	4012388	BLUE LAK	Mapped an	Animals - Amphibians - Ranidae - Rana boylii pop. 1
Animals - Amphi	Rana boylii	foothill yellow-legg	AAABH01051	None	None	SSC	-	4012481	ARCATA N	Mapped an	Animals - Amphibians - Ranidae - Rana boylii pop. 1
Animals - Amphi	Rana boylii	foothill yellow-legg	AAABH01051	None	None	SSC	-	4112318	PANTHER	Mapped	Animals - Amphibians - Ranidae - Rana boylii pop. 1
Animals - Amphi	Rana boylii	foothill yellow-legg	AAABH01051	None	None	SSC	-	4112411	CRANNEL	Mapped	Animals - Amphibians - Ranidae - Rana boylii pop. 1
Animals - Amphi	Rhyacotrito	southern torrent sa	AAAAJ01020	None	None	SSC	-	4112411	CRANNEL	Mapped an	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphi	Rhyacotrito	southern torrent sa	AAAAJ01020	None	None	SSC	-	4112318	PANTHER	Mapped an	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphi	Rhyacotrito	southern torrent sa	AAAAJ01020	None	None	SSC	-	4012481	ARCATA N	Mapped an	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphi	Rhyacotrito	southern torrent sa	AAAAJ01020	None	None	SSC	-	4012388	BLUE LAK	Mapped an	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphi	Rhyacotrito	southern torrent sa	AAAAJ01020	None	None	SSC	-	4012471	ARCATA S	Mapped an	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphi	Rhyacotrito	southern torrent sa	AAAAJ01020	None	None	SSC	-	4012378	KORBEL	Mapped an	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Birds	Accipiter co	Coopers hawk	ABNKC12040	None	None	WL	-	4012378	KORBEL	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter co	Coopers hawk	ABNKC12040	None	None	WL	-	4012471	ARCATA S	Unprocess	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter co	Coopers hawk	ABNKC12040	None	None	WL	-	4012472	EUREKA	Unprocess	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter co	Coopers hawk	ABNKC12040	None	None	WL	-	4012482	TYEE CITY	Unprocess	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter st	sharp-shinned hav	ABNKC12020	None	None	WL	-	4012481	ARCATA N	Unprocess	Animals - Birds - Accipitridae - Accipiter striatus
Animals - Birds	Circus hud	northern harrier	ABNKC11011	None	None	SSC	-	4012481	ARCATA N	Unprocess	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Circus hud	northern harrier	ABNKC11011	None	None	SSC	-	4012482	TYEE CITY	Unprocess	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Circus hud	northern harrier	ABNKC11011	None	None	SSC	-	4012472	EUREKA	Mapped an	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Circus hud	northern harrier	ABNKC11011	None	None	SSC	-	4012471	ARCATA S	Unprocess	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Elanus leu	white-tailed kite	ABNKC06010	None	None	FP	-	4012471	ARCATA S	Unprocess	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leu	white-tailed kite	ABNKC06010	None	None	FP	-	4012472	EUREKA	Mapped	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leu	white-tailed kite	ABNKC06010	None	None	FP	-	4012481	ARCATA N	Mapped an	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Haliaeetus	bald eagle	ABNKC10010	Delisted	Endangere	FP	-	4112411	CRANNEL	Unprocess	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus	bald eagle	ABNKC10010	Delisted	Endangere	FP	-	4012471	ARCATA S	Mapped an	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus	bald eagle	ABNKC10010	Delisted	Endangere	FP	-	4012378	KORBEL	Mapped an	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Brachyram	marbled murrelet	ABNNN06010	Threatened	Endangere	-	-	4012472	EUREKA	Unprocess	Animals - Birds - Alcidae - Brachyramphus marmoratus
Animals - Birds	Cerorhinca	rhinoceros auklet	ABNNN11010	None	None	WL	-	4112411	CRANNEL	Mapped	Animals - Birds - Alcidae - Cerorhinca monocerata
Animals - Birds	Fratercula	tufted puffin	ABNNN12010	None	None	SSC	-	4112411	CRANNEL	Mapped	Animals - Birds - Alcidae - Fratercula cirrhata
Animals - Birds	Chaetura v	Vauxs swift	ABNUA03020	None	None	SSC	-	4012472	EUREKA	Unprocess	Animals - Birds - Apodidae - Chaetura vauxi
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	4012472	EUREKA	Mapped an	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea hero	great blue heron	ABNGA04010	None	None	-	-	4012472	EUREKA	Mapped an	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea hero	great blue heron	ABNGA04010	None	None	-	-	4012481	ARCATA N	Mapped an	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea hero	great blue heron	ABNGA04010	None	None	-	-	4012482	TYEE CITY	Unprocess	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea hero	great blue heron	ABNGA04010	None	None	-	-	4012378	KORBEL	Unprocess	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea hero	great blue heron	ABNGA04010	None	None	-	-	4012471	ARCATA S	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Botaurus le	American bittern	ABNGA01020	None	None	-	-	4012481	ARCATA N	Unprocess	Animals - Birds - Ardeidae - Botaurus lentiginosus
Animals - Birds	Botaurus le	American bittern	ABNGA01020	None	None	-	-	4012471	ARCATA S	Unprocess	Animals - Birds - Ardeidae - Botaurus lentiginosus
Animals - Birds	Egretta thu	snowy egret	ABNGA06030	None	None	-	-	4012472	EUREKA	Mapped an	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Egretta thu	snowy egret	ABNGA06030	None	None	-	-	4012482	TYEE CITY	Unprocess	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Nycticorax	black-crowned nig	ABNGA11010	None	None	-	-	4012482	TYEE CITY	Unprocess	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax	black-crowned nig	ABNGA11010	None	None	-	-	4012472	EUREKA	Mapped an	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax	black-crowned nig	ABNGA11010	None	None	-	-	4012388	BLUE LAK	Mapped an	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax	black-crowned nig	ABNGA11010	None	None	-	-	4012471	ARCATA S	Mapped	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax	black-crowned nig	ABNGA11010	None	None	-	-	4012378	KORBEL	Unprocess	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Charadrius	mountain plover	ABNNB03100	None	None	SSC	-	4012471	ARCATA S	Mapped an	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius	mountain plover	ABNNB03100	None	None	SSC	-	4012472	EUREKA	Mapped an	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius	mountain plover	ABNNB03100	None	None	SSC	-	4012482	TYEE CITY	Unprocess	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius	mountain plover	ABNNB03100	None	None	SSC	-	4012481	ARCATA N	Unprocess	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius	mountain plover	ABNNB03100	None	None	SSC	-	4112411	CRANNEL	Unprocess	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius	western snowy plo	ABNNB03031	Threatened	None	SSC	-	4112411	CRANNEL	Unprocess	Animals - Birds - Charadriidae - Charadrius nivosus nivosus
Animals - Birds	Charadrius	western snowy plo	ABNNB03031	Threatened	None	SSC	-	4012481	ARCATA N	Mapped an	Animals - Birds - Charadriidae - Charadrius nivosus nivosus
Animals - Birds	Charadrius	western snowy plo	ABNNB03031	Threatened	None	SSC	-	4012482	TYEE CITY	Mapped an	Animals - Birds - Charadriidae - Charadrius nivosus nivosus
Animals - Birds	Charadrius	western snowy plo	ABNNB03031	Threatened	None	SSC	-	4012472	EUREKA	Mapped an	Animals - Birds - Charadriidae - Charadrius nivosus nivosus
Animals - Birds	Falco colur	merlin	ABNKD06030	None	None	WL	-	4012472	EUREKA	Unprocess	Animals - Birds - Falconidae - Falco columbarius
Animals - Birds	Falco pere	American peregrin	ABNKD06071	Delisted	Delisted	-	-	4012472	EUREKA	Mapped an	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco pere	American peregrin	ABNKD06071	Delisted	Delisted	-	-	4012481	ARCATA N	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco pere	American peregrin	ABNKD06071	Delisted	Delisted	-	-	4112411	CRANNEL	Unprocess	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco pere	American peregrin	ABNKD06071	Delisted	Delisted	-	-	4012471	ARCATA S	Mapped an	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Riparia ripa	bank swallow	ABPAU08010	None	Threatened	-	-	4012378	KORBEL	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia ripa	bank swallow	ABPAU08010	None	Threatened	-	-	4112411	CRANNEL	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia ripa	bank swallow	ABPAU08010	None	Threatened	-	-	4012481	ARCATA N	Mapped an	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia ripa	bank swallow	ABPAU08010	None	Threatened	-	-	4012472	EUREKA	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Hydrobates	fork-tailed storm-p	ABNDC04010	None	None	SSC	-	4112411	CRANNEL	Mapped an	Animals - Birds - Hydrobatidae - Hydrobates furcatus
Animals - Birds	Icteria virer	yellow-breasted ch	ABPBX24010	None	None	SSC	-	4012378	KORBEL	Unprocess	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Pandion ha	osprey	ABNKC01010	None	None	WL	-	4012378	KORBEL	Mapped an	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion ha	osprey	ABNKC01010	None	None	WL	-	4012471	ARCATA S	Mapped an	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion ha	osprey	ABNKC01010	None	None	WL	-	4112411	CRANNEL	Mapped	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion ha	osprey	ABNKC01010	None	None	WL	-	4012481	ARCATA N	Mapped an	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion ha	osprey	ABNKC01010	None	None	WL	-	4012482	TYEE CITY	Unprocess	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion ha	osprey	ABNKC01010	None	None	WL	-	4012472	EUREKA	Mapped an	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion ha	osprey	ABNKC01010	None	None	WL	-	4012388	BLUE LAK	Unprocess	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Poecile atri	black-capped chic	ABPAW01010	None	None	WL	-	4012472	EUREKA	Unprocess	Animals - Birds - Paridae - Poecile atricapillus
Animals - Birds	Poecile atri	black-capped chic	ABPAW01010	None	None	WL	-	4012481	ARCATA N	Unprocess	Animals - Birds - Paridae - Poecile atricapillus
Animals - Birds	Poecile atri	black-capped chic	ABPAW01010	None	None	WL	-	4012471	ARCATA S	Unprocess	Animals - Birds - Paridae - Poecile atricapillus
Animals - Birds	Poecile atri	black-capped chic	ABPAW01010	None	None	WL	-	4012378	KORBEL	Unprocess	Animals - Birds - Paridae - Poecile atricapillus

Animals - Birds	Passerculu	Bryants savannah	ABPBX99011	None	None	SSC	-		4012471	ARCATA S	Unprocess	Animals - Birds - Passerellidae - Passerculus sandwichensis alaudinus
Animals - Birds	Passerculu	Bryants savannah	ABPBX99011	None	None	SSC	-		4012481	ARCATA N	Unprocess	Animals - Birds - Passerellidae - Passerculus sandwichensis alaudinus
Animals - Birds	Passerculu	Bryants savannah	ABPBX99011	None	None	SSC	-		4012472	EUREKA	Unprocess	Animals - Birds - Passerellidae - Passerculus sandwichensis alaudinus
Animals - Birds	Pelecanus	California brown p	ABNFC01021	Delisted	Delisted	-	-		4012471	ARCATA S	Unprocess	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Pelecanus	California brown p	ABNFC01021	Delisted	Delisted	-	-		4012472	EUREKA	Unprocess	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Pelecanus	California brown p	ABNFC01021	Delisted	Delisted	-	-		4012482	TYEE CITY	Unprocess	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Pelecanus	California brown p	ABNFC01021	Delisted	Delisted	-	-		4112411	CRANNEL	Unprocess	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Nannopteru	double-crested cor	ABNFD01020	None	None	WL	-		4112411	CRANNEL	Mapped an	Animals - Birds - Phalacrocoracidae - Nannopterum auritum
Animals - Birds	Nannopteru	double-crested cor	ABNFD01020	None	None	WL	-		4012472	EUREKA	Unprocess	Animals - Birds - Phalacrocoracidae - Nannopterum auritum
Animals - Birds	Nannopteru	double-crested cor	ABNFD01020	None	None	WL	-		4012471	ARCATA S	Mapped	Animals - Birds - Phalacrocoracidae - Nannopterum auritum
Animals - Birds	Nannopteru	double-crested cor	ABNFD01020	None	None	WL	-		4012378	KORBEL	Unprocess	Animals - Birds - Phalacrocoracidae - Nannopterum auritum
Animals - Birds	Coturnicop	yellow rail	ABNME01010	None	None	SSC	-		4012471	ARCATA S	Mapped an	Animals - Birds - Rallidae - Coturnicops noveboracensis
Animals - Birds	Coturnicop	yellow rail	ABNME01010	None	None	SSC	-		4012472	EUREKA	Mapped an	Animals - Birds - Rallidae - Coturnicops noveboracensis
Animals - Birds	Rallus obso	California Ridgway	ABNME05011	Endangere	Endangere	FP	-		4012472	EUREKA	Mapped an	Animals - Birds - Rallidae - Rallus obsoletus obsoletus
Animals - Birds	Rallus obso	California Ridgway	ABNME05011	Endangere	Endangere	FP	-		4012482	TYEE CITY	Mapped	Animals - Birds - Rallidae - Rallus obsoletus obsoletus
Animals - Birds	Numenius	long-billed curlew	ABNNF07070	None	None	WL	-		4012471	ARCATA S	Unprocess	Animals - Birds - Scolopacidae - Numenius americanus
Animals - Birds	Asio flamm	short-eared owl	ABNSB13040	None	None	SSC	-		4012471	ARCATA S	Unprocess	Animals - Birds - Strigidae - Asio flammeus
Animals - Birds	Asio flamm	short-eared owl	ABNSB13040	None	None	SSC	-		4012481	ARCATA N	Unprocess	Animals - Birds - Strigidae - Asio flammeus
Animals - Birds	Asio flamm	short-eared owl	ABNSB13040	None	None	SSC	-		4012472	EUREKA	Unprocess	Animals - Birds - Strigidae - Asio flammeus
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-		4012388	BLUE LAK	Unprocess	Animals - Birds - Strigidae - Asio otus
Animals - Birds	Strix nebul	great gray owl	ABNSB12040	None	Endangere	-	-		4012471	ARCATA S	Unprocess	Animals - Birds - Strigidae - Strix nebulosa
Animals - Birds	Strix occide	Northern Spotted (	ABNSB12011	Threatened	Threatened	-	-		4012378	KORBEL	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occide	Northern Spotted (	ABNSB12011	Threatened	Threatened	-	-		4012388	BLUE LAK	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occide	Northern Spotted (	ABNSB12011	Threatened	Threatened	-	-		4012471	ARCATA S	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occide	Northern Spotted (	ABNSB12011	Threatened	Threatened	-	-		4012472	EUREKA	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occide	Northern Spotted (	ABNSB12011	Threatened	Threatened	-	-		4012481	ARCATA N	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occide	Northern Spotted (	ABNSB12011	Threatened	Threatened	-	-		4112318	PANTHER	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occide	Northern Spotted (	ABNSB12011	Threatened	Threatened	-	-		4112411	CRANNEL	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Contopus c	olive-sided flycatch	ABPAE32010	None	None	SSC	-		4012481	ARCATA N	Unprocess	Animals - Birds - Tyrannidae - Contopus cooperi
Animals - Birds	Empidonax	willow flycatcher	ABPAE33040	None	Endangere	-	-		4012378	KORBEL	Unprocess	Animals - Birds - Tyrannidae - Empidonax traillii
Animals - Fish	Acipenser (	green sturgeon - s	AFCAA01031	Threatened	None	SSC	-		4012471	ARCATA S	Mapped	Animals - Fish - Acipenseridae - Acipenser medirostris pop. 1
Animals - Fish	Acipenser (	green sturgeon - s	AFCAA01031	Threatened	None	SSC	-		4012472	EUREKA	Mapped	Animals - Fish - Acipenseridae - Acipenser medirostris pop. 1
Animals - Fish	Acipenser (	green sturgeon - n	AFCAA01032	None	None	SSC	-		4012472	EUREKA	Unprocess	Animals - Fish - Acipenseridae - Acipenser medirostris pop. 2
Animals - Fish	Acipenser (	green sturgeon - n	AFCAA01032	None	None	SSC	-		4012378	KORBEL	Unprocess	Animals - Fish - Acipenseridae - Acipenser medirostris pop. 2
Animals - Fish	Acipenser t	white sturgeon	AFCAA01050	None	None	SSC	-		4012472	EUREKA	Unprocess	Animals - Fish - Acipenseridae - Acipenser transmontanus
Animals - Fish	Eucyclogob	tidewater goby	AFCQN04010	Endangere	None	SSC	-		4012472	EUREKA	Mapped an	Animals - Fish - Gobiidae - Eucyclogobius newberryi
Animals - Fish	Eucyclogob	tidewater goby	AFCQN04010	Endangere	None	SSC	-		4012471	ARCATA S	Mapped an	Animals - Fish - Gobiidae - Eucyclogobius newberryi
Animals - Fish	Spirinchus	longfin smelt	AFCHB03010	Proposed E	Threatened	-	-		4012471	ARCATA S	Mapped an	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus	longfin smelt	AFCHB03010	Proposed E	Threatened	-	-		4012472	EUREKA	Mapped an	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus	longfin smelt	AFCHB03010	Proposed E	Threatened	-	-		4012482	TYEE CITY	Unprocess	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Thaleichthy	eulachon	AFCHB04010	Threatened	None	SSC	-		4012482	TYEE CITY	Mapped	Animals - Fish - Osmeridae - Thaleichthys pacificus
Animals - Fish	Thaleichthy	eulachon	AFCHB04010	Threatened	None	SSC	-		4012481	ARCATA N	Mapped an	Animals - Fish - Osmeridae - Thaleichthys pacificus
Animals - Fish	Thaleichthy	eulachon	AFCHB04010	Threatened	None	SSC	-		4112411	CRANNEL	Unprocess	Animals - Fish - Osmeridae - Thaleichthys pacificus
Animals - Fish	Thaleichthy	eulachon	AFCHB04010	Threatened	None	SSC	-		4012472	EUREKA	Mapped	Animals - Fish - Osmeridae - Thaleichthys pacificus
Animals - Fish	Thaleichthy	eulachon	AFCHB04010	Threatened	None	SSC	-		4012388	BLUE LAK	Mapped	Animals - Fish - Osmeridae - Thaleichthys pacificus
Animals - Fish	Thaleichthy	eulachon	AFCHB04010	Threatened	None	SSC	-		4012471	ARCATA S	Mapped	Animals - Fish - Osmeridae - Thaleichthys pacificus
Animals - Fish	Thaleichthy	eulachon	AFCHB04010	Threatened	None	SSC	-		4012378	KORBEL	Mapped	Animals - Fish - Osmeridae - Thaleichthys pacificus
Animals - Fish	Entosphen	northern California	AFBAA02110	None	None	SSC	-		4012472	EUREKA	Unprocess	Animals - Fish - Petromyzontidae - Entosphenus folletti
Animals - Fish	Entosphen	Pacific lamprey	AFBAA02100	None	None	SSC	-		4012472	EUREKA	Mapped an	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphen	Pacific lamprey	AFBAA02100	None	None	SSC	-		4112411	CRANNEL	Unprocess	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphen	Pacific lamprey	AFBAA02100	None	None	SSC	-		4112318	PANTHER	Unprocess	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphen	Pacific lamprey	AFBAA02100	None	None	SSC	-		4012481	ARCATA N	Mapped an	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphen	Pacific lamprey	AFBAA02100	None	None	SSC	-		4012471	ARCATA S	Mapped an	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphen	Pacific lamprey	AFBAA02100	None	None	SSC	-		4012378	KORBEL	Unprocess	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Lampetra r	western brook lam	AFBAA02180	None	None	SSC	-		4012378	KORBEL	Unprocess	Animals - Fish - Petromyzontidae - Lampetra richardsoni
Animals - Fish	Lampetra r	western brook lam	AFBAA02180	None	None	SSC	-		4012471	ARCATA S	Mapped	Animals - Fish - Petromyzontidae - Lampetra richardsoni
Animals - Fish	Lampetra r	western brook lam	AFBAA02180	None	None	SSC	-		4012481	ARCATA N	Mapped an	Animals - Fish - Petromyzontidae - Lampetra richardsoni
Animals - Fish	Lampetra r	western brook lam	AFBAA02180	None	None	SSC	-		4112318	PANTHER	Unprocess	Animals - Fish - Petromyzontidae - Lampetra richardsoni
Animals - Fish	Lampetra r	western brook lam	AFBAA02180	None	None	SSC	-		4112411	CRANNEL	Unprocess	Animals - Fish - Petromyzontidae - Lampetra richardsoni
Animals - Fish	Lampetra r	western brook lam	AFBAA02180	None	None	SSC	-		4012472	EUREKA	Mapped an	Animals - Fish - Petromyzontidae - Lampetra richardsoni
Animals - Fish	Oncorhync	coast cutthroat tro	AFCHA0208A	None	None	SSC	-		4012472	EUREKA	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhync	coast cutthroat tro	AFCHA0208A	None	None	SSC	-		4012388	BLUE LAK	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhync	coast cutthroat tro	AFCHA0208A	None	None	SSC	-		4112411	CRANNEL	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhync	coast cutthroat tro	AFCHA0208A	None	None	SSC	-		4112318	PANTHER	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhync	coast cutthroat tro	AFCHA0208A	None	None	SSC	-		4012481	ARCATA N	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhync	coast cutthroat tro	AFCHA0208A	None	None	SSC	-		4012471	ARCATA S	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhync	coast cutthroat tro	AFCHA0208A	None	None	SSC	-		4012378	KORBEL	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhync	pink salmon	AFCHA02010	None	None	-	-		4012481	ARCATA N	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus gorbuscha
Animals - Fish	Oncorhync	chum salmon	AFCHA02020	None	None	-	-		4012481	ARCATA N	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus keta
Animals - Fish	Oncorhync	coho salmon - sou	AFCHA02032	Threatened	Threatened	-	-		4012481	ARCATA N	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhync	coho salmon - sou	AFCHA02032	Threatened	Threatened	-	-		4112318	PANTHER	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhync	coho salmon - sou	AFCHA02032	Threatened	Threatened	-	-		4112411	CRANNEL	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhync	coho salmon - sou	AFCHA02032	Threatened	Threatened	-	-		4012388	BLUE LAK	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhync	coho salmon - sou	AFCHA02032	Threatened	Threatened	-	-		4012472	EUREKA	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhync	coho salmon - sou	AFCHA02032	Threatened	Threatened	-	-		4012378	KORBEL	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhync	coho salmon - sou	AFCHA02032	Threatened	Threatened	-	-		4012471	ARCATA S	Mapped an	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhync	steelhead - Klama	AFCHA0209D	None	None	SSC	-		4112318	PANTHER	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 1
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213P	Threatened	Endangere	-	-		4112318	PANTHER	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213P	Threatened	Endangere	-	-		4012481	ARCATA N	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213P	Threatened	Endangere	-	-		4012482	TYEE CITY	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213P	Threatened	Endangere	-	-		4012388	BLUE LAK	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213P	Threatened	Endangere	-	-		4012378	KORBEL	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213Q	Threatened	None	SSC	-		4012378	KORBEL	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213Q	Threatened	None	SSC	-		4012471	ARCATA S	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213Q	Threatened	None	SSC	-		4012388	BLUE LAK	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213Q	Threatened	None	SSC	-		4012472	EUREKA	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213Q	Threatened	None	SSC	-		4012482	TYEE CITY	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213Q	Threatened	None	SSC	-		4012481	ARCATA N	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213Q	Threatened	None	SSC	-		4112318	PANTHER	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhync	steelhead - northe	AFCHA0213Q	Threatened	None	SSC	-		4112411	CRANNEL	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhync	chinook salmon - (	AFCHA0205S	Threatened	None	SSC	-		4112411	CRANNEL	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 17
Animals - Fish	Oncorhync	chinook salmon - (	AFCHA0205S	Threatened	None	SSC	-		4112318	PANTHER	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 17
Animals - Fish	Oncorhync	chinook salmon - (	AFCHA0205S	Threatened	None	SSC	-		4012481	ARCATA N	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 17
Animals - Fish	Oncorhync	chinook salmon - (	AFCHA0205S	Threatened	None	SSC	-		4012472	EUREKA	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 17
Animals - Fish	Oncorhync	chinook salmon - (	AFCHA0205S	Threatened	None	SSC	-		4012388	BLUE LAK	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 17
Animals - Fish	Oncorhync	chinook salmon - (	AFCHA0205S	Threatened	None	SSC	-		4012471	ARCATA S	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 17

Animals - Fish	Oncorhync	chinook salmon - (	AFCHA0205S	Threatened	None	SSC	-	4012378	KORBEL	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 17
Animals - Fish	Oncorhync	chinook salmon - u	AFCHA02056	Candidate	Threatened	SSC	-	4012378	KORBEL	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 30
Animals - Fish	Oncorhync	chinook salmon - u	AFCHA02056	Candidate	Threatened	SSC	-	4112318	PANTHER	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 30
Animals - Fish	Oncorhync	chinook salmon - u	AFCHA02056	Candidate	Threatened	SSC	-	4112411	CRANNEL	Unprocess	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 30
Animals - Insect	Bombus ca	obscure bumble be	IIHYM24380	None	None	-	-	4112411	CRANNEL	Mapped an	Animals - Insects - Apidae - Bombus caliginosus
Animals - Insect	Bombus ca	obscure bumble be	IIHYM24380	None	None	-	-	4012481	ARCATA N	Mapped an	Animals - Insects - Apidae - Bombus caliginosus
Animals - Insect	Bombus ca	obscure bumble be	IIHYM24380	None	None	-	-	4012482	TYEE CITY	Mapped an	Animals - Insects - Apidae - Bombus caliginosus
Animals - Insect	Bombus ca	obscure bumble be	IIHYM24380	None	None	-	-	4012472	EUREKA	Mapped an	Animals - Insects - Apidae - Bombus caliginosus
Animals - Insect	Bombus ca	obscure bumble be	IIHYM24380	None	None	-	-	4012378	KORBEL	Mapped an	Animals - Insects - Apidae - Bombus caliginosus
Animals - Insect	Bombus ca	obscure bumble be	IIHYM24380	None	None	-	-	4012471	ARCATA S	Mapped an	Animals - Insects - Apidae - Bombus caliginosus
Animals - Insect	Bombus cr	Crotchs bumble be	IIHYM24480	None	Candidate	-	-	4012482	TYEE CITY	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insect	Bombus cr	Crotchs bumble be	IIHYM24480	None	Candidate	-	-	4012481	ARCATA N	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insect	Bombus oc	western bumble be	IIHYM24252	None	Candidate	-	-	4012482	TYEE CITY	Mapped an	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insect	Bombus oc	western bumble be	IIHYM24252	None	Candidate	-	-	4112411	CRANNEL	Mapped	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insect	Bombus oc	western bumble be	IIHYM24252	None	Candidate	-	-	4012472	EUREKA	Mapped an	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insect	Bombus oc	western bumble be	IIHYM24252	None	Candidate	-	-	4012481	ARCATA N	Mapped an	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insect	Bombus oc	western bumble be	IIHYM24252	None	Candidate	-	-	4012471	ARCATA S	Mapped an	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insect	Bombus oc	western bumble be	IIHYM24252	None	Candidate	-	-	4012378	KORBEL	Mapped an	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insect	Cicindela h	sandy beach tiger	IICOL02101	None	None	-	-	4012471	ARCATA S	Mapped	Animals - Insects - Carabidae - Cicindela hirticollis gravida
Animals - Insect	Cicindela h	sandy beach tiger	IICOL02101	None	None	-	-	4012472	EUREKA	Mapped	Animals - Insects - Carabidae - Cicindela hirticollis gravida
Animals - Insect	Scaphinotu	Behrens snail-eati	IICOL4L070	None	None	-	-	4012481	ARCATA N	Mapped	Animals - Insects - Carabidae - Scaphinotus behrensi
Animals - Insect	Scaphinotu	Behrens snail-eati	IICOL4L070	None	None	-	-	4012471	ARCATA S	Mapped	Animals - Insects - Carabidae - Scaphinotus behrensi
Animals - Mamn	Aplodontia	Humboldt mountai	AMAFA01017	None	None	-	-	4012471	ARCATA S	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mamn	Aplodontia	Humboldt mountai	AMAFA01017	None	None	-	-	4012378	KORBEL	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mamn	Aplodontia	Humboldt mountai	AMAFA01017	None	None	-	-	4012388	BLUE LAK	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mamn	Aplodontia	Humboldt mountai	AMAFA01017	None	None	-	-	4012472	EUREKA	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mamn	Aplodontia	Humboldt mountai	AMAFA01017	None	None	-	-	4112411	CRANNEL	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mamn	Aplodontia	Humboldt mountai	AMAFA01017	None	None	-	-	4012481	ARCATA N	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mamn	Arborimus	white-footed vole	AMAFF23010	None	None	SSC	-	4012482	TYEE CITY	Mapped	Animals - Mammals - Cricetidae - Arborimus albipes
Animals - Mamn	Arborimus	white-footed vole	AMAFF23010	None	None	SSC	-	4012378	KORBEL	Mapped	Animals - Mammals - Cricetidae - Arborimus albipes
Animals - Mamn	Arborimus	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4012378	KORBEL	Mapped an	Animals - Mammals - Cricetidae - Arborimus pomo
Animals - Mamn	Arborimus	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4012471	ARCATA S	Mapped an	Animals - Mammals - Cricetidae - Arborimus pomo
Animals - Mamn	Arborimus	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4012481	ARCATA N	Mapped	Animals - Mammals - Cricetidae - Arborimus pomo
Animals - Mamn	Arborimus	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112411	CRANNEL	Mapped an	Animals - Mammals - Cricetidae - Arborimus pomo
Animals - Mamn	Arborimus	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112318	PANTHER	Unprocess	Animals - Mammals - Cricetidae - Arborimus pomo
Animals - Mamn	Arborimus	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4012388	BLUE LAK	Mapped an	Animals - Mammals - Cricetidae - Arborimus pomo
Animals - Mamn	Erethizon c	North American pc	AMAFJ01010	None	None	-	-	4012388	BLUE LAK	Unprocess	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mamn	Erethizon c	North American pc	AMAFJ01010	None	None	-	-	4012472	EUREKA	Mapped an	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mamn	Erethizon c	North American pc	AMAFJ01010	None	None	-	-	4112411	CRANNEL	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mamn	Erethizon c	North American pc	AMAFJ01010	None	None	-	-	4012481	ARCATA N	Mapped an	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mamn	Erethizon c	North American pc	AMAFJ01010	None	None	-	-	4012482	TYEE CITY	Unprocess	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mamn	Erethizon c	North American pc	AMAFJ01010	None	None	-	-	4012471	ARCATA S	Mapped	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mamn	Erethizon c	North American pc	AMAFJ01010	None	None	-	-	4012378	KORBEL	Mapped an	Animals - Mammals - Erethizontidae - Erethizon dorsatum
Animals - Mamn	Enhydra lu	southern sea otter	AMAJF09012	Threatened	None	FP	-	4112411	CRANNEL	Unprocess	Animals - Mammals - Mustelidae - Enhydra lutris nereis
Animals - Mamn	Enhydra lu	southern sea otter	AMAJF09012	Threatened	None	FP	-	4012472	EUREKA	Unprocess	Animals - Mammals - Mustelidae - Enhydra lutris nereis
Animals - Mamn	Martes cau	Humboldt marten	AMAJF01012	Threatened	Endangere	SSC	-	4112411	CRANNEL	Unprocess	Animals - Mammals - Mustelidae - Martes caurina humboldtensis
Animals - Mamn	Martes cau	Humboldt marten	AMAJF01012	Threatened	Endangere	SSC	-	4112318	PANTHER	Unprocess	Animals - Mammals - Mustelidae - Martes caurina humboldtensis
Animals - Mamn	Pekania pe	Fisher	AMAJF01020	None	None	SSC	-	4112318	PANTHER	Mapped an	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mamn	Pekania pe	Fisher	AMAJF01020	None	None	SSC	-	4112411	CRANNEL	Unprocess	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mamn	Pekania pe	Fisher	AMAJF01020	None	None	SSC	-	4012481	ARCATA N	Mapped an	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mamn	Pekania pe	Fisher	AMAJF01020	None	None	SSC	-	4012388	BLUE LAK	Mapped an	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mamn	Pekania pe	Fisher	AMAJF01020	None	None	SSC	-	4012378	KORBEL	Mapped an	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mamn	Pekania pe	Fisher	AMAJF01020	None	None	SSC	-	4012471	ARCATA S	Mapped an	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mamn	Taxidea ta	American badger	AMAJF04010	None	None	SSC	-	4012472	EUREKA	Unprocess	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mamn	Corynorhin	Townsends big-ea	AMACC08010	None	None	SSC	-	4012471	ARCATA S	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
Animals - Mamn	Corynorhin	Townsends big-ea	AMACC08010	None	None	SSC	-	4012378	KORBEL	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
Animals - Mamn	Lasionycte	silver-haired bat	AMACC02010	None	None	-	-	4012472	EUREKA	Unprocess	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
Animals - Mamn	Lasiurus ci	hoary bat	AMACC05032	None	None	-	-	4012472	EUREKA	Unprocess	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mamn	Lasiurus ci	hoary bat	AMACC05032	None	None	-	-	4012471	ARCATA S	Unprocess	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mamn	Myotis evo	long-eared myotis	AMACC01070	None	None	-	-	4012471	ARCATA S	Mapped	Animals - Mammals - Vespertilionidae - Myotis evotis
Animals - Mamn	Myotis evo	long-eared myotis	AMACC01070	None	None	-	-	4012481	ARCATA N	Mapped	Animals - Mammals - Vespertilionidae - Myotis evotis
Animals - Mamn	Myotis evo	long-eared myotis	AMACC01070	None	None	-	-	4112411	CRANNEL	Mapped	Animals - Mammals - Vespertilionidae - Myotis evotis
Animals - Mamn	Myotis yum	Yuma myotis	AMACC01020	None	None	-	-	4012472	EUREKA	Unprocess	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mollus	Littorina su	Newcombs littorine	IMGASR3010	None	None	-	-	4012472	EUREKA	Unprocess	Animals - Mollusks - Littorinidae - Littorina subrotundata
Animals - Mollus	Littorina su	Newcombs littorine	IMGASR3010	None	None	-	-	4012471	ARCATA S	Unprocess	Animals - Mollusks - Littorinidae - Littorina subrotundata
Animals - Mollus	Margaritifer	western pearlshell	IMBIV27020	None	None	-	-	4012471	ARCATA S	Unprocess	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
Animals - Mollus	Margaritifer	western pearlshell	IMBIV27020	None	None	-	-	4012388	BLUE LAK	Mapped	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
Animals - Mollus	Margaritifer	western pearlshell	IMBIV27020	None	None	-	-	4112411	CRANNEL	Mapped	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
Animals - Mollus	Margaritifer	western pearlshell	IMBIV27020	None	None	-	-	4112318	PANTHER	Mapped	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
Animals - Mollus	Margaritifer	western pearlshell	IMBIV27020	None	None	-	-	4012481	ARCATA N	Mapped	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
Animals - Mollus	Anodonta c	California floater	IMBIV04220	None	None	-	-	4012472	EUREKA	Mapped an	Animals - Mollusks - Unionidae - Anodonta californiensis
Animals - Reptile	Actinemys	northwestern ponc	ARAAD02031	Proposed T	None	SSC	-	4012472	EUREKA	Mapped an	Animals - Reptiles - Emydidae - Actinemys marmorata
Animals - Reptile	Actinemys	northwestern ponc	ARAAD02031	Proposed T	None	SSC	-	4012388	BLUE LAK	Mapped	Animals - Reptiles - Emydidae - Actinemys marmorata
Animals - Reptile	Actinemys	northwestern ponc	ARAAD02031	Proposed T	None	SSC	-	4012481	ARCATA N	Mapped an	Animals - Reptiles - Emydidae - Actinemys marmorata
Animals - Reptile	Actinemys	northwestern ponc	ARAAD02031	Proposed T	None	SSC	-	4012482	TYEE CITY	Unprocess	Animals - Reptiles - Emydidae - Actinemys marmorata
Animals - Reptile	Actinemys	northwestern ponc	ARAAD02031	Proposed T	None	SSC	-	4112411	CRANNEL	Mapped an	Animals - Reptiles - Emydidae - Actinemys marmorata
Animals - Reptile	Actinemys	northwestern ponc	ARAAD02031	Proposed T	None	SSC	-	4012471	ARCATA S	Mapped an	Animals - Reptiles - Emydidae - Actinemys marmorata
Animals - Reptile	Actinemys	northwestern ponc	ARAAD02031	Proposed T	None	SSC	-	4012378	KORBEL	Mapped an	Animals - Reptiles - Emydidae - Actinemys marmorata
Community - Te	Northern C	Northern Coastal S	CTT52110CA	None	None	-	-	4012471	ARCATA S	Mapped	Community - Terrestrial - Northern Coastal Salt Marsh
Community - Te	Northern C	Northern Coastal S	CTT52110CA	None	None	-	-	4012482	TYEE CITY	Mapped	Community - Terrestrial - Northern Coastal Salt Marsh
Community - Te	Northern C	Northern Coastal S	CTT52110CA	None	None	-	-	4012472	EUREKA	Mapped	Community - Terrestrial - Northern Coastal Salt Marsh
Community - Te	Northern F	Northern Foredune	CTT21211CA	None	None	-	-	4012482	TYEE CITY	Mapped	Community - Terrestrial - Northern Foredune Grassland
Plants - Bryophy	Trichodon	cylindrical trichodo	NBMUS7N020	None	None	-	2B.2	4012481	ARCATA N	Mapped	Plants - Bryophytes - Ditrichaceae - Trichodon cylindricus
Plants - Bryophy	Fissidens p	minute pocket mos	NBMUS2W0U	None	None	-	1B.2	4012481	ARCATA N	Mapped	Plants - Bryophytes - Fissidentaceae - Fissidens pauperculus
Plants - Bryophy	Fissidens p	minute pocket mos	NBMUS2W0U	None	None	-	1B.2	4012471	ARCATA S	Mapped	Plants - Bryophytes - Fissidentaceae - Fissidens pauperculus
Plants - Lichens	Sulcaria sp	twisted horsehair l	NLT0042560	None	None	-	1B.2	4012482	TYEE CITY	Mapped	Plants - Lichens - Alectoriaceae - Sulcaria spiralifera
Plants - Lichens	Sulcaria sp	twisted horsehair l	NLT0042560	None	None	-	1B.2	4112411	CRANNEL	Mapped	Plants - Lichens - Alectoriaceae - Sulcaria spiralifera
Plants - Lichens	Sulcaria sp	twisted horsehair l	NLT0042560	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Lichens - Alectoriaceae - Sulcaria spiralifera
Plants - Lichens	Usnea long	Methuselahs beard	NLLEC5P420	None	None	-	4.2	4012388	BLUE LAK	Unprocess	Plants - Lichens - Parmeliaceae - Usnea longissima
Plants - Lichens	Usnea long	Methuselahs beard	NLLEC5P420	None	None	-	4.2	4112318	PANTHER	Unprocess	Plants - Lichens - Parmeliaceae - Usnea longissima
Plants - Lichens	Usnea long	Methuselahs beard	NLLEC5P420	None	None	-	4.2	4112411	CRANNEL	Unprocess	Plants - Lichens - Parmeliaceae - Usnea longissima
Plants - Lichens	Usnea long	Methuselahs beard	NLLEC5P420	None	None	-	4.2	4012471	ARCATA S	Mapped	Plants - Lichens - Parmeliaceae - Usnea longissima
Plants - Lichens	Usnea long	Methuselahs beard	NLLEC5P420	None	None	-	4.2	4012378	KORBEL	Mapped an	Plants - Lichens - Parmeliaceae - Usnea longissima
Plants - Vascula	Angelica lu	sea-watch	PDAPI070G0	None	None	-	4.2	4012471	ARCATA S	Unprocess	Plants - Vascular - Apiaceae - Angelica lucida
Plants - Vascula	Angelica lu	sea-watch	PDAPI070G0	None	None	-	4.2	4112411	CRANNEL	Unprocess	Plants - Vascular - Apiaceae - Angelica lucida
Plants - Vascula	Angelica lu	sea-watch	PDAPI070G0	None	None	-	4.2	4012482	TYEE CITY	Unprocess	Plants - Vascular - Apiaceae - Angelica lucida

Plants - Vascula	Angelica lu	sea-watch	PDAPI070G0	None	None	-	4.2	4012481	ARCATA N	Unprocess	Plants - Vascular - Apiaceae - Angelica lucida		
Plants - Vascula	Angelica lu	sea-watch	PDAPI070G0	None	None	-	4.2	4012472	EUREKA	Unprocess	Plants - Vascular - Apiaceae - Angelica lucida		
Plants - Vascula	Glehnia litt	American glehnia	PDAPI13011	None	None	-	4.2	4012472	EUREKA	Unprocess	Plants - Vascular - Apiaceae - Glehnia littoralis ssp. leiocarpa		
Plants - Vascula	Glehnia litt	American glehnia	PDAPI13011	None	None	-	4.2	4012481	ARCATA N	Unprocess	Plants - Vascular - Apiaceae - Glehnia littoralis ssp. leiocarpa		
Plants - Vascula	Glehnia litt	American glehnia	PDAPI13011	None	None	-	4.2	4012482	TYEE CITY	Unprocess	Plants - Vascular - Apiaceae - Glehnia littoralis ssp. leiocarpa		
Plants - Vascula	Glehnia litt	American glehnia	PDAPI13011	None	None	-	4.2	4112411	CRANNEL	Unprocess	Plants - Vascular - Apiaceae - Glehnia littoralis ssp. leiocarpa		
Plants - Vascula	Hemizonia	Tracys tarplant	PDAST4R067	None	None	-	4.3	4012378	KORBEL	Unprocess	Plants - Vascular - Asteraceae - Hemizonia congesta ssp. tracyi		
Plants - Vascula	Hespereva	short-leaved evax	PDASTE5011	None	None	-	1B.2	4012472	EUREKA	Mapped an	Plants - Vascular - Asteraceae - Hesperevax sparsiflora var. brevifolia		
Plants - Vascula	Lasthenia c	perennial goldfield	PDAST5L0C5	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Asteraceae - Lasthenia californica ssp. macrantha		
Plants - Vascula	Layia carno	beach layia	PDAST5N010	Threatened	Endangere	-	1B.1	4012472	EUREKA	Mapped an	Plants - Vascular - Asteraceae - Layia carnosa		
Plants - Vascula	Layia carno	beach layia	PDAST5N010	Threatened	Endangere	-	1B.1	4112411	CRANNEL	Mapped	Plants - Vascular - Asteraceae - Layia carnosa		
Plants - Vascula	Layia carno	beach layia	PDAST5N010	Threatened	Endangere	-	1B.1	4012482	TYEE CITY	Mapped an	Plants - Vascular - Asteraceae - Layia carnosa		
Plants - Vascula	Packera bo	seacoast ragwort	PDAST8H0H1	None	None	-	2B.2	4112411	CRANNEL	Mapped an	Plants - Vascular - Asteraceae - Packera bolanderi var. bolanderi		
Plants - Vascula	Packera bo	seacoast ragwort	PDAST8H0H1	None	None	-	2B.2	4112318	PANTHER	Mapped	Plants - Vascular - Asteraceae - Packera bolanderi var. bolanderi		
Plants - Vascula	Cardamine	seaside bittercress	PDBRA0K010	None	None	-	2B.1	4012471	ARCATA S	Mapped	Plants - Vascular - Brassicaceae - Cardamine angulata		
Plants - Vascula	Erysimum	Menzies wallflowe	PDBRA160R0	Endangere	Endangere	-	1B.1	4012482	TYEE CITY	Mapped an	Plants - Vascular - Brassicaceae - Erysimum menziesii		
Plants - Vascula	Erysimum	Menzies wallflowe	PDBRA160R0	Endangere	Endangere	-	1B.1	4012472	EUREKA	Mapped an	Plants - Vascular - Brassicaceae - Erysimum menziesii		
Plants - Vascula	Silene scou	Scoulers catchfly	PDCAR0U1MC	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Caryophyllaceae - Silene scouleri ssp. scouleri		
Plants - Vascula	Spergularia	western sand-spur	PDCAR0W032	None	None	-	2B.1	4012472	EUREKA	Mapped an	Plants - Vascular - Caryophyllaceae - Spergularia canadensis var. occidentalis		
Plants - Vascula	Spergularia	western sand-spur	PDCAR0W032	None	None	-	2B.1	4012471	ARCATA S	Mapped	Plants - Vascular - Caryophyllaceae - Spergularia canadensis var. occidentalis		
Plants - Vascula	Carex arcta	northern clustered	PMCYP030X0	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Cyperaceae - Carex arcta		
Plants - Vascula	Carex arcta	northern clustered	PMCYP030X0	None	None	-	2B.2	4012481	ARCATA N	Mapped	Plants - Vascular - Cyperaceae - Carex arcta		
Plants - Vascula	Carex lepta	bristle-stalked sed	PMCYP037E0	None	None	-	2B.2	4112411	CRANNEL	Mapped an	Plants - Vascular - Cyperaceae - Carex leptalea		
Plants - Vascula	Carex lyngl	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4112411	CRANNEL	Mapped	Plants - Vascular - Cyperaceae - Carex lyngbyei		
Plants - Vascula	Carex lyngl	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4012482	TYEE CITY	Mapped	Plants - Vascular - Cyperaceae - Carex lyngbyei		
Plants - Vascula	Carex lyngl	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4012481	ARCATA N	Mapped	Plants - Vascular - Cyperaceae - Carex lyngbyei		
Plants - Vascula	Carex lyngl	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4012472	EUREKA	Mapped an	Plants - Vascular - Cyperaceae - Carex lyngbyei		
Plants - Vascula	Carex lyngl	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4012471	ARCATA S	Mapped an	Plants - Vascular - Cyperaceae - Carex lyngbyei		
Plants - Vascula	Carex prati	northern meadow	PMCYP03B20	None	None	-	2B.2	4012471	ARCATA S	Mapped	Plants - Vascular - Cyperaceae - Carex praticola		
Plants - Vascula	Carex prati	northern meadow	PMCYP03B20	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Cyperaceae - Carex praticola		
Plants - Vascula	Eleocharis	small spikerush	PMCYP091G0	None	None	-	4.3	4012471	ARCATA S	Unprocess	Plants - Vascular - Cyperaceae - Eleocharis parvula		
Plants - Vascula	Astragalus	coastal marsh milk	PDFAB0F7B2	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Fabaceae - Astragalus pycnostachyus var. pycnostachyus		
Plants - Vascula	Astragalus	Rattans milk-vetch	PDFAB0F7E2	None	None	-	4.3	4012481	ARCATA N	Unprocess	Plants - Vascular - Fabaceae - Astragalus rattanii var. rattanii		
Plants - Vascula	Hosackia g	harlequin lotus	PDFAB2A0D0	None	None	-	4.2	4012472	EUREKA	Unprocess	Plants - Vascular - Fabaceae - Hosackia gracilis		
Plants - Vascula	Hosackia g	harlequin lotus	PDFAB2A0D0	None	None	-	4.2	4012471	ARCATA S	Unprocess	Plants - Vascular - Fabaceae - Hosackia gracilis		
Plants - Vascula	Hosackia g	harlequin lotus	PDFAB2A0D0	None	None	-	4.2	4012378	KORBEL	Unprocess	Plants - Vascular - Fabaceae - Hosackia gracilis		
Plants - Vascula	Lathyrus gl	sticky pea	PDFAB251A0	None	None	-	4.3	4012378	KORBEL	Unprocess	Plants - Vascular - Fabaceae - Lathyrus glandulosus		
Plants - Vascula	Lathyrus gl	sticky pea	PDFAB251A0	None	None	-	4.3	4012471	ARCATA S	Unprocess	Plants - Vascular - Fabaceae - Lathyrus glandulosus		
Plants - Vascula	Lathyrus gl	sticky pea	PDFAB251A0	None	None	-	4.3	4012481	ARCATA N	Unprocess	Plants - Vascular - Fabaceae - Lathyrus glandulosus		
Plants - Vascula	Lathyrus gl	sticky pea	PDFAB251A0	None	None	-	4.3	4012388	BLUE LAK	Unprocess	Plants - Vascular - Fabaceae - Lathyrus glandulosus		
Plants - Vascula	Lathyrus ja	seaside pea	PDFAB250C0	None	None	-	2B.1	4012481	ARCATA N	Mapped	Plants - Vascular - Fabaceae - Lathyrus japonicus		
Plants - Vascula	Lathyrus ja	seaside pea	PDFAB250C0	None	None	-	2B.1	4012472	EUREKA	Mapped	Plants - Vascular - Fabaceae - Lathyrus japonicus		
Plants - Vascula	Lathyrus ja	seaside pea	PDFAB250C0	None	None	-	2B.1	4112411	CRANNEL	Mapped	Plants - Vascular - Fabaceae - Lathyrus japonicus		
Plants - Vascula	Lathyrus ja	seaside pea	PDFAB250C0	None	None	-	2B.1	4012471	ARCATA S	Mapped	Plants - Vascular - Fabaceae - Lathyrus japonicus		
Plants - Vascula	Lathyrus pa	marsh pea	PDFAB250P0	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Fabaceae - Lathyrus palustris		
Plants - Vascula	Ribes laxifl	trailing black curra	PDGRO020V0	None	None	-	4.3	4012472	EUREKA	Unprocess	Plants - Vascular - Grossulariaceae - Ribes laxiflorum		
Plants - Vascula	Ribes laxifl	trailing black curra	PDGRO020V0	None	None	-	4.3	4012481	ARCATA N	Unprocess	Plants - Vascular - Grossulariaceae - Ribes laxiflorum		
Plants - Vascula	Ribes laxifl	trailing black curra	PDGRO020V0	None	None	-	4.3	4012388	BLUE LAK	Unprocess	Plants - Vascular - Grossulariaceae - Ribes laxiflorum		
Plants - Vascula	Ribes laxifl	trailing black curra	PDGRO020V0	None	None	-	4.3	4112411	CRANNEL	Unprocess	Plants - Vascular - Grossulariaceae - Ribes laxiflorum		
Plants - Vascula	Ribes laxifl	trailing black curra	PDGRO020V0	None	None	-	4.3	4112318	PANTHER	Unprocess	Plants - Vascular - Grossulariaceae - Ribes laxiflorum		
Plants - Vascula	Ribes laxifl	trailing black curra	PDGRO020V0	None	None	-	4.3	4012471	ARCATA S	Unprocess	Plants - Vascular - Grossulariaceae - Ribes laxiflorum		
Plants - Vascula	Ribes laxifl	trailing black curra	PDGRO020V0	None	None	-	4.3	4012378	KORBEL	Unprocess	Plants - Vascular - Grossulariaceae - Ribes laxiflorum		
Plants - Vascula	Erythroniur	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4112318	PANTHER	Mapped	Plants - Vascular - Liliaceae - Erythronium oregonum		
Plants - Vascula	Erythroniur	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4012388	BLUE LAK	Mapped	Plants - Vascular - Liliaceae - Erythronium oregonum		
Plants - Vascula	Erythroniur	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4012388	BLUE LAK	Mapped an	Plants - Vascular - Liliaceae - Erythronium revolutum		
Plants - Vascula	Erythroniur	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Liliaceae - Erythronium revolutum		
Plants - Vascula	Erythroniur	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4012378	KORBEL	Mapped an	Plants - Vascular - Liliaceae - Erythronium revolutum		
Plants - Vascula	Fritillaria pu	Purdys fritillary	PMLIL0V0H0	None	None	-	4.3	4012378	KORBEL	Unprocess	Plants - Vascular - Liliaceae - Fritillaria purdyi		
Plants - Vascula	Lilium kello	Kelloggs lily	PMLIL1A0A0	None	None	-	4.3	4012378	KORBEL	Unprocess	Plants - Vascular - Liliaceae - Lilium kelloggii		
Plants - Vascula	Lilium kello	Kelloggs lily	PMLIL1A0A0	None	None	-	4.3	4012471	ARCATA S	Unprocess	Plants - Vascular - Liliaceae - Lilium kelloggii		
Plants - Vascula	Lilium occi	western lily	PMLIL1A0G0	Endangere	Endangere	-	1B.1	4012471	ARCATA S	Mapped	Plants - Vascular - Liliaceae - Lilium occidentale		
Plants - Vascula	Lilium occi	western lily	PMLIL1A0G0	Endangere	Endangere	-	1B.1	4012472	EUREKA	Mapped	Plants - Vascular - Liliaceae - Lilium occidentale		
Plants - Vascula	Lilium occi	western lily	PMLIL1A0G0	Endangere	Endangere	-	1B.1	4012481	ARCATA N	Mapped	Plants - Vascular - Liliaceae - Lilium occidentale		
Plants - Vascula	Lycopodiur	running-pine	PPLYC01080	None	None	-	4.1	4012481	ARCATA N	Mapped an	Plants - Vascular - Lycopodiaceae - Lycopodium clavatum		
Plants - Vascula	Lycopodiur	running-pine	PPLYC01080	None	None	-	4.1	4012388	BLUE LAK	Mapped an	Plants - Vascular - Lycopodiaceae - Lycopodium clavatum		
Plants - Vascula	Lycopodiur	running-pine	PPLYC01080	None	None	-	4.1	4012472	EUREKA	Unprocess	Plants - Vascular - Lycopodiaceae - Lycopodium clavatum		
Plants - Vascula	Lycopodiur	running-pine	PPLYC01080	None	None	-	4.1	4112411	CRANNEL	Mapped an	Plants - Vascular - Lycopodiaceae - Lycopodium clavatum		
Plants - Vascula	Lycopodiur	running-pine	PPLYC01080	None	None	-	4.1	4112318	PANTHER	Mapped an	Plants - Vascular - Lycopodiaceae - Lycopodium clavatum		
Plants - Vascula	Lycopodiur	running-pine	PPLYC01080	None	None	-	4.1	4012471	ARCATA S	Mapped an	Plants - Vascular - Lycopodiaceae - Lycopodium clavatum		
Plants - Vascula	Lycopodiur	running-pine	PPLYC01080	None	None	-	4.1	4012378	KORBEL	Mapped an	Plants - Vascular - Lycopodiaceae - Lycopodium clavatum		
Plants - Vascula	Iliamna lati	California globe m	PDMAL0K040	None	None	-	1B.2	4012378	KORBEL	Mapped	Plants - Vascular - Malvaceae - Iliamna latibracteata		
Plants - Vascula	Iliamna lati	California globe m	PDMAL0K040	None	None	-	1B.2	4012388	BLUE LAK	Mapped	Plants - Vascular - Malvaceae - Iliamna latibracteata		
Plants - Vascula	Sidalcea m	maple-leaved chec	PDMAL110E0	None	None	-	4.2	4012388	BLUE LAK	Mapped an	Plants - Vascular - Malvaceae - Sidalcea malachroides		
Plants - Vascula	Sidalcea m	maple-leaved chec	PDMAL110E0	None	None	-	4.2	4012481	ARCATA N	Mapped an	Plants - Vascular - Malvaceae - Sidalcea malachroides		
Plants - Vascula	Sidalcea m	maple-leaved chec	PDMAL110E0	None	None	-	4.2	4012472	EUREKA	Mapped an	Plants - Vascular - Malvaceae - Sidalcea malachroides		
Plants - Vascula	Sidalcea m	maple-leaved chec	PDMAL110E0	None	None	-	4.2	4012378	KORBEL	Mapped an	Plants - Vascular - Malvaceae - Sidalcea malachroides		
Plants - Vascula	Sidalcea m	maple-leaved chec	PDMAL110E0	None	None	-	4.2	4012471	ARCATA S	Mapped an	Plants - Vascular - Malvaceae - Sidalcea malachroides		
Plants - Vascula	Sidalcea m	Siskiyou checkerb	PDMAL110F9	None	None	-	1B.2	4012378	KORBEL	Mapped an	Plants - Vascular - Malvaceae - Sidalcea malviflora ssp. patula		
Plants - Vascula	Sidalcea m	Siskiyou checkerb	PDMAL110F9	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Malvaceae - Sidalcea malviflora ssp. patula		
Plants - Vascula	Sidalcea m	Siskiyou checkerb	PDMAL110F9	None	None	-	1B.2	4012481	ARCATA N	Mapped	Plants - Vascular - Malvaceae - Sidalcea malviflora ssp. patula		
Plants - Vascula	Sidalcea m	Siskiyou checkerb	PDMAL110F9	None	None	-	1B.2	4112411	CRANNEL	Unprocess	Plants - Vascular - Malvaceae - Sidalcea malviflora ssp. patula		
Plants - Vascula	Sidalcea or	coast checkerbloo	PDMAL110K9	None	None	-	1B.2	4012481	ARCATA N	Mapped	Plants - Vascular - Malvaceae - Sidalcea oregana ssp. eximia		
Plants - Vascula	Sidalcea or	coast checkerbloo	PDMAL110K9	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Malvaceae - Sidalcea oregana ssp. eximia		
Plants - Vascula	Monotropa	ghost-pipe	PDMON03030	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Monotropaceae - Monotropa uniflora		
Plants - Vascula	Monotropa	ghost-pipe	PDMON03030	None	None	-	2B.2	4012471	ARCATA S	Mapped	Plants - Vascular - Monotropaceae - Monotropa uniflora		
Plants - Vascula	Pityopus ca	California pinefoot	PDMON05010	None	None	-	4.2	4012378	KORBEL	Unprocess	Plants - Vascular - Monotropaceae - Pityopus californicus		
Plants - Vascula	Pityopus ca	California pinefoot	PDMON05010	None	None	-	4.2	4012481	ARCATA N	Unprocess	Plants - Vascular - Monotropaceae - Pityopus californicus		
Plants - Vascula	Pityopus ca	California pinefoot	PDMON05010	None	None	-	4.2	4012388	BLUE LAK	Unprocess	Plants - Vascular - Monotropaceae - Pityopus californicus		
Plants - Vascula	Pityopus ca	California pinefoot	PDMON05010	None	None	-	4.2	4112411	CRANNEL	Unprocess	Plants - Vascular - Monotropaceae - Pityopus californicus		
Plants - Vascula	Pityopus ca	California pinefoot	PDMON05010	None	None	-	4.2	4112318	PANTHER	Unprocess	Plants - Vascular - Monotropaceae - Pityopus californicus		
Plants - Vascula	Montia how	Howells montia	PDPOR05070	None	None	-	2B.2	4112318	PANTHER	Mapped an	Plants - Vascular - Montiaceae - Montia howellii		
Plants - Vascula	Montia how	Howells montia	PDPOR05070	None	None	-	2B.2	4012481	ARCATA N	Mapped	Plants - Vascular - Montiaceae - Montia howellii		
Plants - Vascula	Montia how	Howells montia	PDPOR05070	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Montiaceae - Montia howellii		
Plants - Vascula	Montia how	Howells montia	PDPOR05070	None	None	-	2B.2	4012378	KORBEL	Mapped an	Plants - Vascular - Montiaceae - Montia howellii		
Plants - Vascula	Montia how	Howells montia	PDPOR05070	None	None	-	2B.2	4012471	ARCATA S	Mapped	Plants - Vascular - Montiaceae - Montia howellii		
Plants - Vascula	Abronia um	pink sand-verbena	PDNYC010N4	None	None	-	1B.1	4012472	EUREKA	Mapped an	Plants - Vascular - Nyctaginaceae - Abronia umbellata var. breviflora		

Plants - Vascula	Abronia un	pink sand-verbena	PDNYC010N4	None	None	-	1B.1	4012481	ARCATA N	Mapped	Plants - Vascular - Nyctaginaceae - Abronia umbellata var. breviflora			
Plants - Vascula	Abronia un	pink sand-verbena	PDNYC010N4	None	None	-	1B.1	4112411	CRANNEL	Mapped	Plants - Vascular - Nyctaginaceae - Abronia umbellata var. breviflora			
Plants - Vascula	Abronia un	pink sand-verbena	PDNYC010N4	None	None	-	1B.1	4012482	TYEE CITY	Mapped	Plants - Vascular - Nyctaginaceae - Abronia umbellata var. breviflora			
Plants - Vascula	Epilobium s	Humboldt County f	PDONA06110	None	None	-	4.3	4012378	KORBEL	Unprocess	Plants - Vascular - Onagraceae - Epilobium septentrionale			
Plants - Vascula	Oenothera	Wolfs evening-prim	PDONA0C1K0	None	None	-	1B.1	4112411	CRANNEL	Mapped	Plants - Vascular - Onagraceae - Oenothera wolfii			
Plants - Vascula	Oenothera	Wolfs evening-prim	PDONA0C1K0	None	None	-	1B.1	4012481	ARCATA N	Mapped	Plants - Vascular - Onagraceae - Oenothera wolfii			
Plants - Vascula	Oenothera	Wolfs evening-prim	PDONA0C1K0	None	None	-	1B.1	4012472	EUREKA	Mapped	Plants - Vascular - Onagraceae - Oenothera wolfii			
Plants - Vascula	Listera cor	heart-leaved twayb	PMORC1N060	None	None	-	4.2	4012481	ARCATA N	Unprocess	Plants - Vascular - Orchidaceae - Listera cordata			
Plants - Vascula	Listera cor	heart-leaved twayb	PMORC1N060	None	None	-	4.2	4012388	BLUE LAK	Unprocess	Plants - Vascular - Orchidaceae - Listera cordata			
Plants - Vascula	Listera cor	heart-leaved twayb	PMORC1N060	None	None	-	4.2	4112411	CRANNEL	Unprocess	Plants - Vascular - Orchidaceae - Listera cordata			
Plants - Vascula	Listera cor	heart-leaved twayb	PMORC1N060	None	None	-	4.2	4112318	PANTHER	Unprocess	Plants - Vascular - Orchidaceae - Listera cordata			
Plants - Vascula	Listera cor	heart-leaved twayb	PMORC1N060	None	None	-	4.2	4012378	KORBEL	Unprocess	Plants - Vascular - Orchidaceae - Listera cordata			
Plants - Vascula	Listera cor	heart-leaved twayb	PMORC1N060	None	None	-	4.2	4012471	ARCATA S	Unprocess	Plants - Vascular - Orchidaceae - Listera cordata			
Plants - Vascula	Piperia can	white-flowered rein	PMORC1X050	None	None	-	1B.2	4112411	CRANNEL	Mapped	Plants - Vascular - Orchidaceae - Piperia candida			
Plants - Vascula	Castilleja a	Humboldt Bay owl	PDSCR0D402	None	None	-	1B.2	4012482	TYEE CITY	Mapped	Plants - Vascular - Orobanchaceae - Castilleja ambigua var. humboldtiensis			
Plants - Vascula	Castilleja a	Humboldt Bay owl	PDSCR0D402	None	None	-	1B.2	4012481	ARCATA N	Mapped	Plants - Vascular - Orobanchaceae - Castilleja ambigua var. humboldtiensis			
Plants - Vascula	Castilleja a	Humboldt Bay owl	PDSCR0D402	None	None	-	1B.2	4012472	EUREKA	Mapped an	Plants - Vascular - Orobanchaceae - Castilleja ambigua var. humboldtiensis			
Plants - Vascula	Castilleja a	Humboldt Bay owl	PDSCR0D402	None	None	-	1B.2	4012471	ARCATA S	Mapped an	Plants - Vascular - Orobanchaceae - Castilleja ambigua var. humboldtiensis			
Plants - Vascula	Castilleja li	Oregon coast pain	PDSCR0D012	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Orobanchaceae - Castilleja litoralis			
Plants - Vascula	Castilleja li	Oregon coast pain	PDSCR0D012	None	None	-	2B.2	4112411	CRANNEL	Mapped	Plants - Vascular - Orobanchaceae - Castilleja litoralis			
Plants - Vascula	Chloropyro	Point Reyes salty	PDSCR0J0C3	None	None	-	1B.2	4012482	TYEE CITY	Mapped	Plants - Vascular - Orobanchaceae - Chloropyron maritimum ssp. palustre			
Plants - Vascula	Chloropyro	Point Reyes salty	PDSCR0J0C3	None	None	-	1B.2	4012472	EUREKA	Mapped an	Plants - Vascular - Orobanchaceae - Chloropyron maritimum ssp. palustre			
Plants - Vascula	Chloropyro	Point Reyes salty	PDSCR0J0C3	None	None	-	1B.2	4012471	ARCATA S	Mapped	Plants - Vascular - Orobanchaceae - Chloropyron maritimum ssp. palustre			
Plants - Vascula	Collinsia co	round-headed colli	PDSCR0H060	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Plantaginaceae - Collinsia corymbosa			
Plants - Vascula	Calamagro	Bolanders reed gra	PMPOA17010	None	None	-	4.2	4112411	CRANNEL	Unprocess	Plants - Vascular - Poaceae - Calamagrostis bolanderi			
Plants - Vascula	Pleuropogo	nodding semaphor	PMPOA4Y080	None	None	-	4.2	4112411	CRANNEL	Unprocess	Plants - Vascular - Poaceae - Pleuropogon refractus			
Plants - Vascula	Pleuropogo	nodding semaphor	PMPOA4Y080	None	None	-	4.2	4112318	PANTHER	Unprocess	Plants - Vascular - Poaceae - Pleuropogon refractus			
Plants - Vascula	Pleuropogo	nodding semaphor	PMPOA4Y080	None	None	-	4.2	4012472	EUREKA	Unprocess	Plants - Vascular - Poaceae - Pleuropogon refractus			
Plants - Vascula	Pleuropogo	nodding semaphor	PMPOA4Y080	None	None	-	4.2	4012481	ARCATA N	Unprocess	Plants - Vascular - Poaceae - Pleuropogon refractus			
Plants - Vascula	Pleuropogo	nodding semaphor	PMPOA4Y080	None	None	-	4.2	4012388	BLUE LAK	Unprocess	Plants - Vascular - Poaceae - Pleuropogon refractus			
Plants - Vascula	Pleuropogo	nodding semaphor	PMPOA4Y080	None	None	-	4.2	4012471	ARCATA S	Unprocess	Plants - Vascular - Poaceae - Pleuropogon refractus			
Plants - Vascula	Pleuropogo	nodding semaphor	PMPOA4Y080	None	None	-	4.2	4012378	KORBEL	Unprocess	Plants - Vascular - Poaceae - Pleuropogon refractus			
Plants - Vascula	Gilia capita	Pacific gilia	PDPLM040B6	None	None	-	1B.2	4012388	BLUE LAK	Unprocess	Plants - Vascular - Polemoniaceae - Gilia capitata ssp. pacifica			
Plants - Vascula	Gilia capita	Pacific gilia	PDPLM040B6	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Polemoniaceae - Gilia capitata ssp. pacifica			
Plants - Vascula	Gilia capita	Pacific gilia	PDPLM040B6	None	None	-	1B.2	4112411	CRANNEL	Mapped	Plants - Vascular - Polemoniaceae - Gilia capitata ssp. pacifica			
Plants - Vascula	Gilia millefo	dark-eyed gilia	PDPLM04130	None	None	-	1B.2	4112411	CRANNEL	Mapped an	Plants - Vascular - Polemoniaceae - Gilia millefoliata			
Plants - Vascula	Gilia millefo	dark-eyed gilia	PDPLM04130	None	None	-	1B.2	4012482	TYEE CITY	Mapped	Plants - Vascular - Polemoniaceae - Gilia millefoliata			
Plants - Vascula	Gilia millefo	dark-eyed gilia	PDPLM04130	None	None	-	1B.2	4012472	EUREKA	Mapped an	Plants - Vascular - Polemoniaceae - Gilia millefoliata			
Plants - Vascula	Coptis lacin	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4012388	BLUE LAK	Mapped an	Plants - Vascular - Ranunculaceae - Coptis laciniata			
Plants - Vascula	Coptis lacin	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112318	PANTHER	Unprocess	Plants - Vascular - Ranunculaceae - Coptis laciniata			
Plants - Vascula	Coptis lacin	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4012378	KORBEL	Unprocess	Plants - Vascular - Ranunculaceae - Coptis laciniata			
Plants - Vascula	Chrysosple	Pacific golden sax	PDSAX07020	None	None	-	4.3	4012378	KORBEL	Unprocess	Plants - Vascular - Saxifragaceae - Chrysosplenium glechomifolium			
Plants - Vascula	Chrysosple	Pacific golden sax	PDSAX07020	None	None	-	4.3	4012471	ARCATA S	Unprocess	Plants - Vascular - Saxifragaceae - Chrysosplenium glechomifolium			
Plants - Vascula	Chrysosple	Pacific golden sax	PDSAX07020	None	None	-	4.3	4112411	CRANNEL	Unprocess	Plants - Vascular - Saxifragaceae - Chrysosplenium glechomifolium			
Plants - Vascula	Chrysosple	Pacific golden sax	PDSAX07020	None	None	-	4.3	4012388	BLUE LAK	Unprocess	Plants - Vascular - Saxifragaceae - Chrysosplenium glechomifolium			
Plants - Vascula	Chrysosple	Pacific golden sax	PDSAX07020	None	None	-	4.3	4012481	ARCATA N	Unprocess	Plants - Vascular - Saxifragaceae - Chrysosplenium glechomifolium			
Plants - Vascula	Chrysosple	Pacific golden sax	PDSAX07020	None	None	-	4.3	4012472	EUREKA	Unprocess	Plants - Vascular - Saxifragaceae - Chrysosplenium glechomifolium			
Plants - Vascula	Mitellastra	leafy-stemmed mit	PDSAX0N020	None	None	-	4.2	4012481	ARCATA N	Unprocess	Plants - Vascular - Saxifragaceae - Mitellastra caulescens			
Plants - Vascula	Mitellastra	leafy-stemmed mit	PDSAX0N020	None	None	-	4.2	4012388	BLUE LAK	Unprocess	Plants - Vascular - Saxifragaceae - Mitellastra caulescens			
Plants - Vascula	Mitellastra	leafy-stemmed mit	PDSAX0N020	None	None	-	4.2	4112411	CRANNEL	Unprocess	Plants - Vascular - Saxifragaceae - Mitellastra caulescens			
Plants - Vascula	Mitellastra	leafy-stemmed mit	PDSAX0N020	None	None	-	4.2	4112318	PANTHER	Unprocess	Plants - Vascular - Saxifragaceae - Mitellastra caulescens			
Plants - Vascula	Mitellastra	leafy-stemmed mit	PDSAX0N020	None	None	-	4.2	4012471	ARCATA S	Mapped an	Plants - Vascular - Saxifragaceae - Mitellastra caulescens			
Plants - Vascula	Mitellastra	leafy-stemmed mit	PDSAX0N020	None	None	-	4.2	4012378	KORBEL	Mapped an	Plants - Vascular - Saxifragaceae - Mitellastra caulescens			
Plants - Vascula	Tiarella trif	trifoliate laceflower	PDSAX10031	None	None	-	3.2	4012378	KORBEL	Unprocess	Plants - Vascular - Saxifragaceae - Tiarella trifoliata var. trifoliata			
Plants - Vascula	Tiarella trif	trifoliate laceflower	PDSAX10031	None	None	-	3.2	4012388	BLUE LAK	Unprocess	Plants - Vascular - Saxifragaceae - Tiarella trifoliata var. trifoliata			
Plants - Vascula	Viola palus	alpine marsh viole	PDVIO041G0	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Violaceae - Viola palustris			
Plants - Vascula	Viola palus	alpine marsh viole	PDVIO041G0	None	None	-	2B.2	4012471	ARCATA S	Mapped	Plants - Vascular - Violaceae - Viola palustris			

SciNar	ComNa	Taxon(	ElmCo	FedLis	CalList	GRank	SRank	RPlant	OthrSt	OccNu	EOndx	Mapnd	ElmDa	SiteDa	Sensiti	OccRa	Presen	Accura	Accura	Trend	OccTy	County	Quad	Elevati	Latitud	Longitu	UTM	PLSS	Locatio	LocDet	Ecolog	Threat	Threat	Genera	Owner	LastUp	KeyQu	UTMZ	UTME	UTMN
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		24	3	35120	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknov	Natura	Humbo	Iaqua E	2500	40.76	-124	Zone-1	T04N,	KNEEL	COLLE	IN REDWOODS AND			VICINI	UNKN(	#####	Korbel	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		23	4	35121	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Maple	800	40.8	-124	Zone-1	T05N,	8 MILE	MAPPED ALONG ROAD IN '				ONLY	UNKN(	#####	Korbel	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		22	5	35122	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Korbel	700	40.84	-124	Zone-1	T05N,	CANOI	TWO (	GROWING IN DISTU			TWO (	UNKN(	#####	Korbel	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		20	6	35123	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Korbel	1700	40.85	-124	Zone-1	T05N,	ABOU'	COLLE	HIGH MEADOW WIT			ONLY	UNKN(	#####	Korbel	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		21	7	35124	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Korbel	950	40.86	-124	Zone-1	T06N,	3 MILE	MAPPI	AT EDGE OF MEAD(			VICINI	UNKN(	#####	Korbel	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		30	149	35016	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknov	Natura	Humbo	Arcata	100	40.92	-124	Zone-1	T06N,	HILLSI	MAPPED ALONG HIGHWAY				MAIN S	UNKN(	#####	Arcata	10	4E+05	5E+06
Sidalce	coast c	Dicots	PDMAI	None	None	G5T1	S1	1B.2		5	357	13165	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknov	Natura	Humbo	Arcata	200	40.97	-124	Zone-1	T07N,	DOWS	THREE	ROADS	Grazin	ROAD	APPR(	HUM C	#####	Arcata	10	4E+05	5E+06
Sidalce	Siskiyo	Dicots	PDMAI	None	None	G4G5T	S2	1B.2	SB_UC	5	358	A6719	20XXX	20XXX	N	U-Unkr	Presun	Circula	80	Unknov	Natura	Humbo	Arcata	200	40.98	-124	Zone-1	T07N,	DOWS	EXACT	COASTAL PRAIRIE.			MAIN S	UNKN(	#####	Arcata	10	4E+05	5E+06
Sidalce	Siskiyo	Dicots	PDMAI	None	None	G4G5T	S2	1B.2	SB_UC	4	363	35011	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Decrea	Natura	Humbo	Eureka	50	40.77	-124	Zone-1	T05N,	BLUFF	EXACT	BLUFF.			SITE IS	UNKN(	#####	Eureka	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	134	1164	33331	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Cranne	1300	41.06	-124	Zone-1	T08N,	NEAR THE JU		HABIT.	Loggin	NO IMI	2 ADU	PVT-L(	#####	Cranne	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	133	1165	33330	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Cranne	950	41.07	-124	Zone-1	T08N,	NORTH SIDE		HABIT.	Loggin	NO IMI	3 INDI	PVT-L(	#####	Cranne	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	135	1166	33332	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	1000	41.08	-124	Zone-1	T08N,	FIRST	2 INDI	HABIT.	Loggin	NO IMI	4 INDI	PVT-L(	#####	Cranne	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	125	1185	33320	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	1500	41.07	-124	Zone-1	T08N,	EAST SIDE O		HABIT.	Loggin	NO IMI	3 INDI	PVT-L(	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	128	1187	33323	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	1200	41.04	-124	Zone-1	T08N,	JUST WEST (		CASCA	Loggin	NO IMI	2 INDI	PVT-L(	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	132	1188	33327	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	1200	41.07	-124	Zone-1	T08N,	NORTH AND !		HABIT.	Loggin	NO IMI	4 INDI	PVT-L(	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	126	1189	33321	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknov	Natura	Humbo	Panthe	900	41.01	-124	Zone-1	T07N,	1.0 AIF	ALON(	<1 METER WIDE RIF			1 ADU	PVT-L(	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	118	1190	33325	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknov	Natura	Humbo	Panthe	1600	41.05	-124	Zone-1	T08N,	ALONG ROAD		HABIT.	Loggin	NO IMI	1 TAIL	PVT-L(	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	130	1191	33325	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknov	Natura	Humbo	Panthe	1600	41.05	-124	Zone-1	T08N,	ALONG ROAD		HABIT.	Loggin	NO IMI	1 JUVE	PVT-L(	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	127	1192	33322	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	1200	41.05	-124	Zone-1	T08N,	WEST SIDE C		HABIT.	Loggin	NO IMI	1 ADU	PVT-L(	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	117	1193	33322	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	1200	41.05	-124	Zone-1	T08N,	WEST SIDE C		HABIT.	Loggin	NO IMI	2 MAL	PVT-L(	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	129	1194	33324	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	900	41.06	-124	Zone-1	T08N,	SOUTH SIDE		HABIT.	Loggin	NO IMI	1 JUVE	PVT-L(	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	116	1195	33324	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	900	41.06	-124	Zone-1	T08N,	SOUTH SIDE		HABIT.	Loggin	NO IMI	ONE C	PVT-L(	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	115	1196	33326	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknov	Natura	Humbo	Panthe	1500	41.08	-124	Zone-1	T08N,	ROAD	FOUNI	HABIT.	Loggin	NO IMI	2 ADU	PVT-L(	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	131	1197	33326	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknov	Natura	Humbo	Panthe	1500	41.08	-124	Zone-1	T08N,	ROAD	LOCAT	HABIT.	Loggin	NO IMI	2 INDI	PVT-L(	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	114	1198	33327	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	1200	41.07	-124	Zone-1	T08N,	NORTH AND !		HABIT.	Loggin	NO IMI	1 MAL	PVT-L(	#####	Panthe	10	4E+05	5E+06
Sidalce	coast c	Dicots	PDMAI	None	None	G5T1	S1	1B.2		3	1305	26633	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknov	Natura	Humbo	Fields I	100	40.74	-124	Zone-1	T04N,	ELK PI	EXACT	ALONG DITCH IN VA			TYPE I	UNKN(	#####	Fields I	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	113	1323	A0588	2E+07	2E+07	N	A-Exce	Presun	Specifi	20	Unknov	Natura	Humbo	Panthe	1210	41.07	-124	Zone-1	T08N,	PANTH	MAPPI	COMMERCIAL TIMBI			1 FOU	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	121	1324	33314	2E+07	2E+07	N	A-Exce	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	1200	41.07	-124	Zone-1	T08N,	UNNAI	LOCAT	HABITAT CONSISTS			1 JUVE	PVT-L(	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	120	1325	33313	2E+07	2E+07	N	A-Exce	Presun	Specifi	10	Unknov	Natura	Humbo	Panthe	1300	41.08	-124	Zone-1	T08N,	1.4 AIF	ALON(	DRAINAGE WITH AN			1 JUVE	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	119	1417	33310	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknov	Natura	Humbo	Panthe	1700	41.07	-124	Zone-1	T08N,	HEAD\	MAPPI	DRAINAGES WITHIN			9 FOU	PVT-G	#####	Panthe	10	4E+05	5E+06
Actiner	northw	Reptile	ARAAD	Propos	None	G2	SNR		BLM_S	29	1922	32691	1994X	1994X	N	U-Unkr	Presun	Circula	50	Unknov	Natura	Humbo	Blue La	1640	40.91	-124	Zone-1	T06N,	NE OF	COMM	SEVEF	Develo	POTEI	AN OC	PVT	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	58	2608	23989	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Korbel	800	40.81	-124	Zone-1	T05N,	MAD R	TWO S	3/29/90	Loggin	SITE T	TWO J	PVT-G	#####	Korbel	10	4E+05	5E+06
Pandio	osprey	Birds	ABNK(	None	None	G5	S4		CDF_S	175	2609	33266	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Eureka	120	40.76	-124	Zone-1	T04N,	WEST	LOCAT	NEST	Develo	THREA	1 ADU	PVT	#####	Eureka	10	4E+05	5E+06
Pandio	osprey	Birds	ABNK(	None	None	G5	S4		CDF_S	174	2610	33265	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknov	Natura	Humbo	Eureka	150	40.75	-124	Zone-1	T04N,	ALON(	LOCAT	NEST	Develo	THREA	1 ADU	PVT	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	9	3293	31207	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Blue La	700	40.92	-124	Zone-1	T06N,	NORTH FORK		DOMIN	Loggin	SITE M	ONE F	PVT-G	#####	Blue La	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	37	3524	06954	1995X	1995X	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Korbel	40	40.93	-124	Zone-1	T06N,	MAD R	MAD &	1984 S	Develo	LOGGI	SURVE	PVT, U	#####	Blue La	10	4E+05	5E+06
Egretta	snowy	Birds	ABNGA	None	None	G5	S4		IUCN_	5	3635	A6406	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Fluctua	Natura	Humbo	Eureka	4	40.81	-124	Zone-1	T05N,	INDIAN	ROOK	ROOKERY IS LOCAT			NOT N	CITY C	#####	Eureka	10	4E+05	5E+06
Ardea l	great b	Birds	ABNGA	None	None	G5	S4		CDF_S	49	4089	26357	199306	199306	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Arcata	300	40.89	-124	Zone-1	T06N,	SOUTH AND \		AREA SURROUNDE			ROOK	PVT	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNK(	None	None	G5	S4		CDF_S	169	4138	30713	1994X	1994X	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbo	Cranne	700	41.09	-124	Zone-1	T08N,	JUST NE OF THE CC			Loggin	POSSI	RAILR	PVT-L(	#####	Cranne	10	4E+05	5E+06
Pandio	osprey	Birds	ABNK(	None	None	G5	S4		CDF_S	170	4139	30712	1994X	1994X	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbo	Cranne	400	41.11	-124	Zone-1	T08N,	EAST (	LOCATED 100 METERS AB(				MAPLE	PVT-L(	#####	Cranne	10	4E+05	5E+06
Layia c	beach	Dicots	PDAST	Threate	Endang	G2	S2	1B.1	SB_Ca	27	4539	30346	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknov	Natura	Humbo	Fields I	10	40.73	-124	Zone-1	T04N,	SOUTH	SCATT	GROW	ORV a	BEACH	MORE	DFG-S	#####	Fields I	10	4E+05	5E+06
Layia c	beach	Dicots	PDAST	Threate	Endang	G2	S2	1B.1	SB_Ca	12	4540	06781	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknov	Natura	Humbo	Eureka	20	40.79	-124	Zone-1	T05N,	SAMO.	SCATT	IN REI	Develo	SEVEF	ABUNI	BLM, D	#####	Eureka	10	4E+05	5E+06
Layia c	beach	Dicots	PDAST	Threate	Endang	G2	S2	1B.1	SB_Ca	11	4542	15950	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknov	Natura	Humbo	Eureka	40	40.87	-124	Zone-1	T06N,	SAND	MANY	GROW	ORV a	ORVS,	POP #	USFW	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	12	4994	A3835	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknov	Natura	Humbo	Korbel	150	40.87	-124	Zone-1	T06N,	ALON(	VICINI	RIPAR	Road/t	NEAR	3 JUVE	HUM C	#####	Korbel	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	33	5084	A6055	1994X	1994X	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Blue La	317	41.03	-124	Zone-1	T08N,	LITTLE	LITTLE	MEASI	Grazin	LOGGI	TOTAL	PVT	#####	Cranne	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	58	5152	06937	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbo	Arcata	40	40.82	-124	Zone-1	T05N,	WASH	SECTI	1984: I	Loggin	LOGGI	1 OBS	PVT	#####	Arcata	10	4E+05	5E+06
Charac	westeri	Birds	ABNNE	Threate	None	G3T3	S3		CDFW	80	5678	06786	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Eureka	23	40.81	-124	Zone-1	T05N,	NORTI	EGG SET LOCALITIE			PRED.	TWEN	PVT, C	#####	Eureka	10	4E+05	5E+06
Erysim	Menzie	Dicots	PDBRA	Endang	Endang	G1	S1	1B.1	SB_Ca	13	5679	88348	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknov	Natura	Humbo	Eureka	20	40.8	-124	Zone-1	T05N,	SAND	FROM	GROW	Develo	ORV A	FORM	PVT, B	#####	Eureka	10	4E+05	5E+06
Pandio	osprey	Birds	ABNK(	None	None	G5	S4		CDF_S	110	5958	25262	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Stable	Natura	Humbo	Eureka	170	40.76	-124	Zone-1	T04N,	JUST E	2 NES	1989-1	Develo	THREA	ACTIV	PVT	#####	Eureka	10	4E+05	5E+06
Pandio	osprey	Birds	ABNK(	None	None	G5	S4		CDF_S	109	5959	25263	2E+07	2E+07	N	A-Exce	Presun	Specifi	10	Unknov	Natura	Humbo	Eureka	150	40.76	-124	Zone-1	T04N,	WEST	NEST	NEST	Develo	POTEI	N HUM	PVT	#####	Eureka	10	4E+05	5E+06
Pandio	osprey	Birds	ABNK(	None	None	G5	S4		CDF_S	108	5960	25264	1998X	1998X	N	A-Exce	Presun	Specifi	10	Unknov	Natura	Humbo	Eureka	90	40.77	-124	Zone-1	T05N,	JUST NORTH		NEST TREE IS A REI			EUREI	UNKN(	#####	Eureka	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	21	6316	24924	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbo	Blue La	2000	40.92	-124	Zone-1	T06N,	LISCOM HILL		HABIT.	Loggin	SITE M	ONE N	PVT-G	#####	Blue La	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	22	6317	24923	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbo	Blue La	1100	40.94	-124	Zone-1	T06N,	ALONG TRIBU		HABIT.	Loggin	SITE M	ONE N	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	69	6344	24085	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknov	Natura	Humbo	Panthe	2400	41	-124	Zone-1	T07N,	REDWOOD C		SITE C	Loggin	SITE IS	ONE A	PVT-G	#####	Panthe	10	4E+05	5E+06
Pletho	Del No	Amphit	AAAAD	None	None	G4	S3		CDFW	59	6345	24085	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknov	Natura	Humbo	Panthe	2400	41	-124	Zone-1	T07N,	REDWOOD C		LOCAT	Loggin	SITE IS	SEVEN	PVT-G	#####	Panthe	10	4E+05	5E+06
Pandio	osprey	Birds	ABNK(	None	None	G5	S4		CDF_S	68	6348	24915	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbo	Cranne	900	41.07	-124	Zone-1	T08N,	VICINITY OF I		NEST TREE IS A SN.			KNOW	PVT-L(	#####	Cranne	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	3	6349	24914	1993X	1993X	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Cranne	700	41.07	-124	Zone-1	T08N,	M-LINE	RED-LEGGED FROGS ARE				OBSEF	PVT-L(	#####	Cranne	10	4E+05	5E+06
Arborin	white-f	Mamm	AMAFF	None	None	G3G4	S2		CDFW	3	6386	24823	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbo	Tyee C	15	40.89	-124	Zone-1	T06N,	JUST \	TRANS	HABITAT IS BEACH I			ONE IN	USFW	#####	Tyee C	10	4E+05	5E+06
Pandio	osprey	Birds	ABNK(	None	None	G5	S4		CDF_S	107	6918	25269	1998X	1998X	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbo	Arcata	70	40.78	-124	Zone-1	T05N,	NEAR	LET LA	NEST IS LOCATED II			EUREI	PVT	#####	Arcata	10	4E+05	5E+06
Pletho	Del No	Amphit	AAAAD	None	None	G4	S3		CDFW	54	7091	23993	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknov	Natura	Humbo	Blue La	1000	40.89	-124	Zone-1	T06N,	SOUTH FORK		SPECI	Loggin	SITE T	ONE A	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	85	7097	24055	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Arcata	400	40.88	-124	Zone-1	T06N,	JOLLY GIANT		CREEK THROUGH R			COLLE	CITY C	#####	Arcata	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	59	7108	23990	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknov	Natura	Humbo	Korbel	1600	40.81	-124	Zone-1	T05N,	TWO S	TWO S	BOTH	Loggin	SITE T	ONE A	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	57	7110	23988	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Korbel	800	40.83	-124	Zone-1	T05N,	BLACK DOG (		SOME LOCATIONS S			MANY	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	56	7111	23987	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Korbel	400	40.85	-124	Zone-1	T05N,	ALONG PUTE		SPECI	Loggin	SITE T	TWEL	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	68	7112	24005	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbo	Korbel	1700	40.86	-124	Zone-1	T06N,	ALONG AN UI		SPECI	Loggin	SPECI	1 GRA	PVT-G	#####	Korbel	10	4E+05	5E+06
Pletho	Del No	Amphit	AAAAD	None	None	G4	S3		CDFW	52	7114	24003	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknov	Natura	Humbo	Korbel	2400	40.87	-124	Zone-1	T06N,	NORTH OF HI		SPECI	Loggin	SITE T	ONE S	PVT-G	#####	Korbel	10	4E+05	5E+06
Pletho	Del No	Amphit	AAAAD	None	None	G4	S3		CDFW	58	7115	24004	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknov	Natura	Humbo	Korbel	400	40.87	-124	Zone-1	T06N,	NORTH FORK		TWO S	Develo	4/24/90	SPECI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	67	7147	23999	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Blue La	1000	40.9	-124	Zone-1	T06N,	DRAINAGE NW OF HIGHWAY 299,					COLLE	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	62	7148	24043	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknov	Natura	Humbo	Lord-E	2000	40.95	-124	Zone-1	T07N,	NEAR HIGHW		SPECIES FOUND IN			COLLE	PVT-G	#####	Lord-E	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	65	7155	23991	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknov	Natura	Humbo	Blue La	2200	40.96	-124	Zone-1	T07N,	NORTH OF HI		SPECI	Loggin	SITE T	TWO A	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	66	7156	23998	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbo	Blue La	848	40.89	-124	Zone-1	T06N,	DRAIN	MAPPED WITH RESPECT T				MULTI	PVT-G	#####	Blue La	10	4E+05	5E+06

Plethod	Del No	Amphib	AAAAD	None	None	G4	S3		CDFW	56	7157	23997	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Blue La	400	40.9	-124	Zone-1	T06N,	NORTH FORK		SPECI	Loggin	SITE T	ONE A	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphib	AAAAJ	None	None	G3?	S2S3		CDFW	64	7159	23996	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Blue La	1200	40.9	-124	Zone-1	T06N,	0.5 MILE WNW		SPECIES FOUND IN			COLLE	PVT-G	#####	Blue La	10	4E+05	5E+06
Plethod	Del No	Amphib	AAAAD	None	None	G4	S3		CDFW	57	7160	23995	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Blue La	800	40.9	-124	Zone-1	T06N,	ONE-QUARTE		SPECI	Loggin	AREA	ONE A	PVT-G	#####	Blue La	10	4E+05	5E+06
Plethod	Del No	Amphib	AAAAD	None	None	G4	S3		CDFW	55	7161	23994	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Blue La	1000	40.92	-124	Zone-1	T06N,	THREE-TENT		SPECI	Loggin	SITE IS	ONE A	PVT-G	#####	Blue La	10	4E+05	5E+06
Plethod	Del No	Amphib	AAAAD	None	None	G4	S3		CDFW	53	7162	23992	2E+07	2E+07	N	U-Unkn	Presun	Circula	70	Unknow	Natura	Humbo	Blue La	800	40.93	-124	Zone-1	T06N,	NEAR	TWO S	BOTH	Loggin	SITE IS	ONE A	PVT-G	#####	Blue La	10	4E+05	5E+06
Erysim	Menzie	Dicots	PDBRA	Endang	Endang	G1	S1	1B.1	SB_Ca	11	7254	23680	2E+07	2E+07	N	A-Exce	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	30	40.87	-124	Zone-1	T06N,	SAND	MAPPE	GROW	ORV a	ORV U	FORM	USFW	#####	Eureka	10	4E+05	5E+06
Erysim	Menzie	Dicots	PDBRA	Endang	Endang	G1	S1	1B.1	SB_Ca	12	7255	06821	2009X	2009X	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	30	40.86	-124	Zone-1	T06N,	SAND	MAPPE	IN NOF	ORV a	ORV T	FORM	PVT, M	#####	Eureka	10	4E+05	5E+06
Erysim	Menzie	Dicots	PDBRA	Endang	Endang	G1	S1	1B.1	SB_Ca	10	7256	06841	2E+07	2E+07	N	A-Exce	Presun	Specifi	20	Unknow	Natura	Humbo	Tyee C	30	40.9	-124	Zone-1	T06N,	LANPH	MAPPE	GROW	ORV a	ORV A	FORM	USFW	#####	Tyee C	10	4E+05	5E+06
Chloro	Point R	Dicots	PDSCF	None	None	G4?T2	S2	1B.2	BLM_S	32	7797	06919	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	7	40.85	-124	Zone-1	T05N,	NE SID	PARAL	IN CLA	Develo	DEVEL	10,000	CITY C	#####	Arcata	10	4E+05	5E+06
Chloro	Point R	Dicots	PDSCF	None	None	G4?T2	S2	1B.2	BLM_S	38	8193	23572	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	7	40.82	-124	Zone-1	T05N,	INDIAN	INDIAN	IN MIX	Road/t	POTEN	WEST	CITY C	#####	Eureka	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	24	8366	24927	XXXXX	XXXXX	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Blue La	1200	40.89	-124	Zone-1	T06N,	BALD I	SIGHT	HABIT	Loggin	SITE M	ONE N	PVT-G	#####	Blue La	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	42	9469	06801	1980X	1980X	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	20	40.76	-124	Zone-1	T04N,	MARTI	2 MILE	POPUL	Develo	CHANN	ELECT	PVT	#####	Eureka	10	4E+05	5E+06
Viola p	alpine	Dicots	PDVIO	None	None	G5	S1S2	2B.2		3	9720	32648	2E+07	2E+07	N	U-Unkn	Presun	Circula	90	Unknow	Natura	Humbo	Eureka	100	40.8	-124	Zone-1	T05N,	EUREKA.		CARPETING THE GR			SITE R	UNKN	#####	Eureka	10	4E+05	5E+06
Montia	Howell	Dicots	PDPOR	None	None	G3G4	S2	2B.2		1	9830	32648	2E+07	2E+07	N	U-Unkn	Presun	Circula	90	Unknow	Natura	Humbo	Eureka	50	40.8	-124	Zone-1	T05N,	EUREK	EXACT	WET SHADY PLACE			OCCU	UNKN	#####	Eureka	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAL	None	None	G3	S3	4.2		29	9831	32648	2E+07	2E+07	N	U-Unkn	Presun	Circula	90	Unknow	Natura	Humbo	Eureka	100	40.8	-124	Zone-1	T05N,	EUREKA.					SITE R	UNKN	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	5	10136	23989	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Korbel	400	40.81	-124	Zone-1	T05N,	MAD RIVER, F		HABIT	Loggin	SITE M	ONE A	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphib	AAABH	None	None	G3T4	S4		BLM_S	334	12024	23989	1993X	1993X	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Korbel	700	40.81	-124	Zone-1	T05N,	SOUTH	1991, F	1991, S	Loggin	MAIN T	COLLE	PVT-G	#####	Korbel	10	4E+05	5E+06
Accipit	Cooper	Birds	ABNKC	None	None	G5	S4		CDFW	49	12051	17178	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Maple	880	40.8	-124	Zone-1	T05N,	MAPLE	NEST	HABITAT IS A		NEST	TWO A	PVT-G	#####	Korbel	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	3	12528	21524	2E+07	2E+07	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Blue La	1100	40.88	-124	Zone-1	T06N,	1.4 AIR	MAPPED ACCORDING TO (				ONE A	PVT-G	#####	Blue La	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	105	12569	25271	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	228	40.76	-124	Zone-1	T04N,	0.6 MIL	UP TO	NESTS	Other	POSSI	AT LE	PVT	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	104	12571	25268	2E+07	2E+07	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	280	40.82	-124	Zone-1	T05N,	0.3 MILE SW OF THE JUNCTION O					N HUM	PVT	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	103	12930	25267	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	480	40.82	-124	Zone-1	T05N,	ALONG THE S		NEST	Develo	THREA	N HUM	UNKN	#####	Arcata	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	64	13088	06876	1984X	1984X	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Cranne	240	41.07	-124	Zone-1	T08N,	MILL C	1.5 MIL	25-JUN	Loggin	LOGGI	FISH D	PVT, D	#####	Trinida	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	30	13723	34738	1994X	1994X	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Cranne	600	41.13	-124	Zone-1	T09N,	VICINI	INFOR	TIMBE	Loggin	LOGGI	SEVER	PVT-L	#####	Rodger	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	14	14023	24933	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Korbel	1400	40.79	-124	Zone-1	T05N,	TRIBUTARY T		HABIT	Loggin	SITE M	ONE V	PVT-G	#####	Korbel	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	2	14115	21636	2E+07	2E+07	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	235	40.84	-124	Zone-1	T05N,	ALONG	MAPPED ACCORDING TO (				2 LARV	PVT-G	#####	Korbel	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	24	14147	06785	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	5	40.78	-124	Zone-1	T05N,	SOUTH	ALONG	IN NAR	Develo	CURRI	100-15	PVT, C	#####	Eureka	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	12	14149	06907	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	10	41.03	-124	Zone-1	T07N,	MOUTH	ADJAC	OPEN,	Non-na	NORTH	ABOUT	DPR, H	#####	Cranne	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	16	14400	24929	2E+07	2E+07	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	600	40.84	-124	Zone-1	T05N,	BOUNI	SPECI	HABIT	Loggin	SITE M	ONE N	UNKN	#####	Korbel	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	13	14401	24930	2E+07	2E+07	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	400	40.84	-124	Zone-1	T05N,	MAD RIVER, 2		HABIT	Loggin	SITE M	TWO V	PVT-G	#####	Korbel	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	60	14891	06925	197307	1973X	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	5	40.85	-124	Zone-1	T05N,	BEITH CRK, TRIB TC			Develo	CREEK	1 STRE	PVT	#####	Arcata	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	62	14893	06931	196904	196904	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	220	40.98	-124	Zone-1	T07N,	STRAW	1 STREAM MILE OF HABITAT.					UNKN	#####	Arcata	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	63	14894	06881	XXXXX	XXXXX	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	180	41.06	-124	Zone-1	T08N,	MCCO	1.5 MILES OF OCCUPIED OR ACC					PVT	#####	Cranne	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	57	14895	06929	2E+07	2E+07	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	80	40.82	-124	Zone-1	T05N,	ROCKY	2 MILES OF OCCUPIED OR				PRESE	PVT	#####	Arcata	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	59	14896	A6268	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Korbel	117	40.82	-124	Zone-1	T05N,	JACOB	JOCOBY CREEK HU12. "JA				PRESE	PVT, U	#####	Arcata	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	56	14897	A6839	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Iaqua B	41	40.7	-124	Zone-1	T04N,	ELK RI	ELK RI	1984: (	Develo	WATE	PRESE	PVT	#####	Fields	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	40	14903	06927	1987X	1987X	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	20	40.88	-124	Zone-1	T06N,	JANES	6 MILES OF OCCUPPIED O				SURVE	PVT	#####	Arcata	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	39	14905	06903	1980X	1980X	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	20	41	-124	Zone-1	T07N,	PATRI	1 MILE OF STREAM HABITA				SURVE	PVT	#####	Arcata	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	32	14906	06923	1974X	1974X	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	40	41.05	-124	Zone-1	T08N,	LUFFE	2 MILES OF OCCUPIED OR				SURVE	PVT	#####	Cranne	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	31	14907	06946	1984X	1984X	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Panthe	20	41.1	-124	Zone-1	T08N,	MAPLE	MAPLE	7/12/84	Loggin	LOGGI	TRIBS	PVT	#####	Cranne	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	15	14910	A6264	2E+07	2E+07	N	C-Fair	Presun	Non-sp	30	Unknow	Natura	Humbo	Iaqua B	35	40.76	-124	Zone-1	T04N,	FRESH	FOUNI	1984: E	Develo	WATE	OBSER	PVT	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	10	15656	30121	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Blue La	1500	40.91	-124	Zone-1	T06N,	ABOUT	MAPPE	DOMIN	Loggin	SITES	ONE A	PVT-G	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	8	15657	30120	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Blue La	800	40.91	-124	Zone-1	T06N,	ALONG	FIELD	FROGS	Loggin	SITE M	"MANY	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphib	AAAAJ	None	None	G3?	S2S3		CDFW	106	15687	30117	2E+07	2E+07	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	400	40.84	-124	Zone-1	T05N,	0.1 MIL	MAPPE	DOMINANT PLANT C			KNOW	PVT-G	#####	Korbel	10	4E+05	5E+06
Northe	Northe	Marsh	CTT52	None	None	G3	S3.2			40	16127	06833	198307	198603	N	A-Exce	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	0	40.88	-124	Zone-1	T06N,	MAD R	A LON	SALICORNIA		PORTI	SEE H	PVT, S	#####	Eureka	10	4E+05	5E+06
Northe	Northe	Marsh	CTT52	None	None	G3	S3.2			41	16128	06760	198307	198307	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata South (		40.85	-124	Zone-1	T05N,	ARCATA BOT		CORDGRASS		SEWA	SEE H	UNKN	#####	Arcata	10	4E+05	5E+06
Northe	Northe	Marsh	CTT52	None	None	G3	S3.2			38	16131	06799	198307	198307	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka (40124		40.79	-124	Zone-1	T05N,	WEST EUREK		CORDGRASS		SURR	SEE H	PVT	#####	Eureka	10	4E+05	5E+06
Northe	Northe	Marsh	CTT52	None	None	G3	S3.2			35	16132	06814	198307	198307	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Eureka (40124		40.81	-124	Zone-1	T05N,	INDIAN	200 AC	CORDGRASS		HWY F	SEE H	CITY C	#####	Eureka	10	4E+05	5E+06
Northe	Northe	Marsh	CTT52	None	None	G3	S3.2			37	16133	06809	198307	198307	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka (40124		40.83	-124	Zone-1	T05N,	NE OF SAMO.		CORDGRASS		RAILR	SEE H	PVT	#####	Eureka	10	4E+05	5E+06
Northe	Northe	Marsh	CTT52	None	None	G3	S3.2			36	16134	06843	198307	198307	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata South (		40.8	-124	Zone-1	T05N,	EUREKA SLO		CORDGRASS		INDUS	SEE H	PVT	#####	Eureka	10	4E+05	5E+06
Layia c	beach	Dicots	PDAST	Threate	Endang	G2	S2	1B.1	SB_Ca	15	16907	06901	2E+07	2E+07	N	X-None	Extirpa	Circula	90	Unknow	Natura	Humbo	Cranne	10	41.02	-124	Zone-1	T07N,	SAND DUNES NEAR			Non-na	HABIT	SITE B	DPR-L	#####	Cranne	10	4E+05	5E+06
Layia c	beach	Dicots	PDAST	Threate	Endang	G2	S2	1B.1	SB_Ca	14	16908	71356	201504	201504	N	U-Unkn	Presun	Circula	40	Unknow	Natura	Humbo	Tyee C	20	40.93	-124	Zone-1	T06N,	MA-LE	MAPPE	DUNES	Erosion	EROSI	SITE IS	PVT	#####	Tyee C	10	4E+05	5E+06
Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	6	17337	30118	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Korbel	600	40.8	-124	Zone-1	T05N,	WEST OF MA		DOMIN	Loggin	SITE M	ONE A	PVT-G	#####	Korbel	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCF	None	None	G4T2	S2	1B.2	BLM_S	12	17666	06810	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Eureka (40124		40.84	-124	Zone-1	T05N,	ABOUT	MAPPE	SALT MARSH (SAND			SITE IS	UNKN	#####	Eureka	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCF	None	None	G4T2	S2	1B.2	BLM_S	15	17669	06893	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	5	40.8	-124	Zone-1	T05N,	ALONG	ON TH	TIDAL	Develo	PIPELI	MORE	PVT	#####	Arcata	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCF	None	None	G4T2	S2	1B.2	BLM_S	10	17674	06864	2E+07	2E+07	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Tyee C	5	40.9	-124	Zone-1	T06N,	MAD R	6 POLY	COASTAL SALT MAR			FEWE	UNKN	#####	Tyee C	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCF	None	None	G4T2	S2	1B.2	BLM_S	11	17675	94060	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Eureka	10	40.81	-124	Zone-1	T05N,	WOOD	EXACT	SALT MARSH.			SITE IS	UNKN	#####	Eureka	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	101	17840	25265	2E+07	2E+07	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	250	40.83	-124	Zone-1	T05N,	BETWI	NEST SITE LOCATED AT TH				N HUM	PVT	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	11	18271	24931	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Korbel	1200	40.87	-124	Zone-1	T06N,	1.5 MILES EA		DOMIN	Loggin	SITE M	TWO A	PVT-G	#####	Korbel	10	4E+05	5E+06
Oenoth	Wolf's	Dicots	PDONA	None	None	G2	S1	1B.1	SB_Be	4	18767	06891	2E+07	2E+07	N	U-Unkn	Presun	Specifi	20	Unknow	Introdu	Humbo	Cranne	100	41.04	-124	Zone-1	T08N,	SOUTH	MAPPE	ON ST	Road/t	ROADS	TYPE (	HUM C	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	1	18959	21523	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Korbel	500	40.83	-124	Zone-1	T05N,	NORTH AND SOUTH FORKS OF BI					DETEC	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphib	AAAAJ	None	None	G3?	S2S3		CDFW	118	19319	33309	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Blue La	1000	40.98	-124	Zone-1	T07N,	ABOUT	CENTE	DRAINAGES WITHIN			4 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	42	20285	34750	1994X	1994X	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	800	40.92	-124	Zone-1	T06N,	2 MILE	INFOR	HABIT	Grazin	POSSI	NESTS	PVT-R	#####	Blue La	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	41	20286	34749	1994X	1994X	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Blue La	1600	40.92	-124	Zone-1	T06N,	2 MILE	INFOR	HABIT	Grazin	POSSI	NESTS	PVT-R	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	16	20587	30223	1993X	1993X	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Cranne	500	41.08	-124	Zone-1	T08N,	ONE T	SITE IS	DOMIN	Loggin	SITE M	A "FEV	PVT-L	#####	Trinida	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	34	20860	06790	1983X	1983X	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Eureka	20	40.8	-124	Zone-1	T05N,	SAMO.	NORTH	IN SANDY SOIL.			ALSO	UNKN	#####	Eureka	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	33	20862	37990	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Decrea	Natura	Humbo	Tyee C	20	40.89	-124	Zone-1	T06N,	LANPH	ABOUT	DUNE	Non-na	ABRO	FEWE	USFW	#####	Tyee C	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	26	20864	06823	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	25	40.86	-124	Zone-1	T06N,	NORTH	0.3 MIL	COAST	ORV a	POTEN	FEWE	BLM	#####	Eureka	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	25	20866	06827	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	40	40.87	-124	Zone-1	T06N,	NORTH	TWO S	ON LE	ORV a	POTEN	FEWE	PVT, B	#####	Eureka	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	15	20879	06815	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Eureka	15	40.85	-124	Zone-1	T05N,	DUNE	5 POLY	ON TO	ORV a	DUNE	100-15	PVT, M	#####	Eureka	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	14	20882	06885	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	20	40.98	-124	Zone-1	T07N,	SOUTH	2 POLY	IN OPE	ORV a	ORVS,	10 PLA	CALTR	#####	Arcata	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	13	20883	06894	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	10	40.99	-124	Zone-1	T07N,	NEAR	UPPER	UPPER	ORV a	INCRE	10 PLA	HUM C	#####	Arcata	10	4E+05	5E+06

Arborin	Sonom	Mamm	AMAFI	None	None	G3	S3		CDFW	23	21607	24925	2E+07	2E+07	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Blue La	1000	40.9	-124	Zone-1	T06N,	NORTI	TWO N	HABIT	Loggin	SITE M	2 TWIC	PVT-G	#####	Blue La	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCI	None	None	G4T2	S2	1B.2	BLM_S	6	21610	71365	2E+07	2E+07	N		B-Good	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	5	40.85	-124	Zone-1	T05N,	NE SIL	MOSTI	CLAY-I	Develo	DEVEL	50,000	CITY C	#####	Arcata	10	4E+05	5E+06
Lilium (	western	Monoc	PMLIL	Endang	Endang	G1G2	S1	1B.1	SB_Be	14	21850	06933	2E+07	2E+07	Y		X-None	Possib	Circula	90	Unkno	Natura	Humbo	Arcata	50					*SENS	PLEAS	IN WET GROUND IN AZALEA PAT(					#####	Arcata	0		
Lilium (	western	Monoc	PMLIL	Endang	Endang	G1G2	S1	1B.1	SB_Be	18	21851	06892	2E+07	2E+07	Y		X-None	Possib	Circula	90	Unkno	Natura	Humbo	Arcata South (4012471) | Eureka (4012472)						*SENS	PLEAS	0-200 FT IN FERNS ON NATURAL I					#####	Arcata	0		
Arborin	Sonom	Mamm	AMAFI	None	None	G3	S3		CDFW	15	22259	24932	2E+07	2E+07	N		U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	2200	40.86	-124	Zone-1	T06N,	KNUTZ CREE		HABIT	Loggin	SITE M	FIVE N	PVT-G	#####	Korbel	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFI	None	None	G3	S3		CDFW	17	22261	34147	2E+07	2E+07	N		U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	1200	40.87	-124	Zone-1	T06N,	1.5 MIL	NEST	HABIT	Loggin	SITE M	ONE N	PVT-G	#####	Korbel	10	4E+05	5E+06
Plethod	Del No	Amphit	AAAAD	None	None	G4	S3		CDFW	43	22264	24084	2E+07	2E+07	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Panthe	800	41.12	-124	Zone-1	T09N,	ROADCUT AL		SITE L	Loggin	SITE I	ONE A	PVT-G	#####	Panthe	10	4E+05	5E+06
Chlorop	Point R	Dicots	PDSCI	None	None	G4?T2	S2	1B.2	BLM_S	39	22462	23041	2E+07	2E+07	N		B-Good	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	7	40.76	-124	Zone-1	T04N,	ELK RI	ALONC	IN CLAY-PEA		SITE R	ABOUT	CITY C	#####	Eureka	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCI	None	None	G4T2	S2	1B.2	BLM_S	21	22466	23043	2E+07	2E+07	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Eureka	5	40.81	-124	Zone-1	T05N,	WEST	INDIAN	IN HEAVY MUD WITH			SITE I	UNKN	#####	Eureka	10	4E+05	5E+06
Chlorop	Point R	Dicots	PDSCI	None	None	G4?T2	S2	1B.2	BLM_S	27	22467	06838	2E+07	2E+07	N		A-Exce	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	7	40.81	-124	Zone-1	T05N,	FROM	4 POL	ON BE	ORV a	DISTU	E POL	USFW	#####	Eureka	10	4E+05	5E+06
Chlorop	Point R	Dicots	PDSCI	None	None	G4?T2	S2	1B.2	BLM_S	31	22468	06824	2E+07	2E+07	N		D-Poor	Presun	Specifi	10	Unkno	Natura	Humbo	Eureka	7	40.85	-124	Zone-1	T05N,	MANILA, SAM		IN MO	Develo	SOME	400-50	UNKN	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	15	22873	30163	2E+07	2E+07	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Arcata	20	40.89	-124	Zone-1	T06N,	ARCATA MILL		LUMBE	Loggin	SITE I	ONE A	PVT-G	#####	Arcata	10	4E+05	5E+06
Actiner	northw	Reptile	ARAAD	Propos	None	G2	SNR		BLM_S	18	22878	26180	1993X	1993X	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Korbel	700	40.84	-124	Zone-1	T05N,	TRIBU	ONE S	DOMIN	Loggin	SITE I	UNKN	PVT-G	#####	Korbel	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFI	None	None	G3	S3		CDFW	20	22993	24926	2E+07	2E+07	N		U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	600	40.89	-124	Zone-1	T06N,	NORTH FORK		HABIT	Loggin	SITE M	ONE N	PVT-G	#####	Blue La	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJI	None	None	G5	S2S3		BLM_S	232	23494	06969	2E+07	2E+07	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Korbel	2270	40.79	-124	Zone-1	T05N,	VICINI	DFG/B	REDWOOD FOREST			OBSEI	UNKN	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphit	AAABH	None	None	G3T4	S4		BLM_S	338	23996	20972	2E+07	2E+07	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Korbel	435	40.83	-124	Zone-1	T05N,	BLACK	MAPPI	STREA	Loggin	MAIN T	ONE A	PVT-G	#####	Korbel	10	4E+05	5E+06
Chlorop	Point R	Dicots	PDSCI	None	None	G4?T2	S2	1B.2	BLM_S	29	24268	06811	2E+07	2E+07	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	5	40.83	-124	Zone-1	T05N,	SAMO	WEST	IN UPF	Road/t	SITE I	ABOUT	PVT	#####	Eureka	10	4E+05	5E+06
Lathyru	marsh	Dicots	PDFAE	None	None	G5	S2	2B.2		2	24270	27975	2E+07	2E+07	N		U-Unkr	Presun	Circula	70	Unkno	Natura	Humbo	Eureka	10	40.76	-124	Zone-1	T04N,	EUREI	EXACT	MARSH AND BOG L			MAIN S	UNKN	#####	Eureka	10	4E+05	5E+06
Lathyru	marsh	Dicots	PDFAE	None	None	G5	S2	2B.2		3	24291	45003	2E+07	2E+07	N		U-Unkr	Presun	Circula	70	Unkno	Natura	Humbo	Eureka	10	40.82	-124	Zone-1	T05N,	NEAR	EXACT	IN SWAMP ADJACEN			ONLY	UNKN	#####	Eureka	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCI	None	None	G4T2	S2	1B.2	BLM_S	2	24293	71362	2E+07	2E+07	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Eureka	5	40.82	-124	Zone-1	T05N,	SAMOA PENI		COASTAL SALT MAF			MAIN S	UNKN	#####	Eureka	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	102	24356	25266	1983X	2E+07	N		U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	320	40.83	-124	Zone-1	T05N,	ALONG THE SOUTH EDGE OF WA					N HUM	PVT	#####	Arcata	10	4E+05	5E+06
Riparia	bank s	Birds	ABPAU	None	Threate	G5	S3		BLM_S	122	25171	06900	2E+07	2E+07	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Cranne	40	41.03	-124	Zone-1	T08N,	MOONSTONE		NESTING HOLES ON			NOT A	PVT	#####	Cranne	10	4E+05	5E+06
Rana b	foothill	Amphit	AAABH	None	None	G3T4	S4		BLM_S	330	25322	20975	2E+07	2E+07	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Korbel	350	40.8	-124	Zone-1	T05N,	UNNAMED TF		HABIT	Loggin	THREA	MANY	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphit	AAABH	None	None	G3T4	S4		BLM_S	335	25323	20974	2E+07	2E+07	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Korbel	150	40.81	-124	Zone-1	T05N,	MAD R	FROGS	HABIT	Loggin	THREA	MANY	PVT-G	#####	Korbel	10	4E+05	5E+06
Hydrob	fork-tai	Birds	ABNDC	None	None	G5	S1		BLM_S	8	25367	06878	1970X	1970X	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Cranne	5	41.05	-124	Zone-1	T99X,	TRINID	INCLUDES "DOUBLE", "MR'				BREED	UNKN	#####	Trinida	10	4E+05	5E+06
Hydrob	fork-tai	Birds	ABNDC	None	None	G5	S1		BLM_S	9	25369	06889	1972X	1972X	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Cranne	80	41.04	-124	Zone-1	T99X,	LITTLE RIVER ROCK, OFFSHORE					LARGE	UNKN	#####	Cranne	10	4E+05	5E+06
Fraterc	tufted p	Birds	ABNNI	None	None	G5	S1S2		CDFW	13	25629	06889	1972X	1972X	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Cranne	80	41.04	-124	Zone-1	T99X,	LITTLE RIVER ROCK, OFFSHORE,					PROB	UNKN	#####	Cranne	10	4E+05	5E+06
Cerorh	rhinoce	Birds	ABNNI	None	None	G5	S3		CDFW	4	25644	06889	1972X	1972X	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Cranne	80	41.04	-124	Zone-1	T99X,	LITTLE RIVER ROCK, OFFSHORE,					SUSPE	UNKN	#####	Cranne	10	4E+05	5E+06
Charad	western	Birds	ABNNE	Threate	None	G3T3	S3		CDFW	81	25734	06844	1978X	1978X	N		U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Tyee C	20	40.89	-124	Zone-1	T06N,	LANPHERE DUNES, WEST OF MA					TWO F	USFW	#####	Tyee C	10	4E+05	5E+06
Charad	western	Birds	ABNNE	Threate	None	G3T3	S3		CDFW	79	25736	06788	1977X	1977X	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Eureka	10	40.77	-124	Zone-1	T04N,	ELK RIVER SPIT, HUMBOLDT BAY					ONE M	UNKN	#####	Eureka	10	4E+05	5E+06
Charad	western	Birds	ABNNE	Threate	None	G3T3	S3		CDFW	82	25737	06873	1978X	1978X	N		U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Arcata	10	40.95	-124	Zone-1	T07N,	MAD RIVER SPIT, MOUTH OF MAD					TWO M	PVT	#####	Tyee C	10	4E+05	5E+06
Charad	western	Birds	ABNNE	Threate	None	G3T3	S3		CDFW	78	25739	A5914	2E+07	2E+07	N		B-Good	Presun	Non-sp	30	Unkno	Natura	Humbo	Fields I	12	40.71	-124	Zone-1	T04N,	COAST	1977: D	NESTI	ORV a	SEA LI	UP TO	PVT, C	#####	Cannib	10	4E+05	5E+06
Rallus	Califor	Birds	ABNMI	Endang	Endang	G3T1	S2		CDFW	56	25838	06814	1932X	1932X	N		X-None	Extirpa	Non-sp	30	Unkno	Natura	Humbo	Eureka (40124		40.81	-124	Zone-1	T05N,	INDIAN ISLAND IN HUMBOLDT BA					BREED	CITY C	#####	Eureka	10	4E+05	5E+06
Rallus	Califor	Birds	ABNMI	Endang	Endang	G3T1	S2		CDFW	55	25840	06861	1932X	1932X	N		X-None	Extirpa	Circula	50	Unkno	Natura	Humbo	Tyee City (401		40.93	-124	Zone-1	T06N,	HUMBOLDT BAY ON THE MOUTH					BREED	UNKN	#####	Tyee C	10	4E+05	5E+06
Nyctico	black-c	Birds	ABNGA	None	None	G5	S4		IUCN_	1	25934	A6406	2E+07	2E+07	N		U-Unkr	Presun	Circula	40	Fluctua	Natura	Humbo	Eureka	4	40.81	-124	Zone-1	T05N,	INDIAN	ROOK	ROOKERY IS LOCAT			52 PAI	CITY C	#####	Eureka	10	4E+05	5E+06
Ardea a	great e	Birds	ABNGA	None	None	G5	S4		CDF_S	8	25941	A6406	2E+07	2E+07	N		U-Unkr	Presun	Circula	40	Decrea	Natura	Humbo	Eureka	4	40.81	-124	Zone-1	T05N,	INDIAN	ROOK	ROOKERY IS LOCAT			65 PAI	CITY C	#####	Eureka	10	4E+05	5E+06
Ardea h	great b	Birds	ABNGA	None	None	G5	S4		CDF_S	15	25962	A6406	2E+07	2E+07	N		U-Unkr	Presun	Circula	40	Decrea	Natura	Humbo	Eureka	4	40.81	-124	Zone-1	T05N,	INDIAN	ROOK	ROOKERY IS LOCAT			EGG S	CITY C	#####	Eureka	10	4E+05	5E+06
Northe	Northe	Marsh	CTT52	None	None	G3	S3.2			39	26270	06795	198307	198307	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Eureka (40124		40.75	-124	Zone-1	T04N,	MOUTH OF E		SALT MARSH		HWY F	SEE H	PVT	#####	Eureka	10	4E+05	5E+06
Northe	Northe	Dune	CTT21	None	None	G1	S1.1			1	26346	06844	1979X	1979X	N		U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Tyee C	50	40.89	-124	Zone-1	T06N,	LANPHERE-C		LEYMUS MOL		ONE C	TNC A	USFW	#####	Tyee C	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCI	None	None	G4T2	S2	1B.2	BLM_S	9	26387	71360	2E+07	2E+07	N		B-Good	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	5	40.88	-124	Zone-1	T06N,	MAD R	MAPPI	ASSOC	Agricul	AGRIC	10,000	USFW	#####	Tyee C	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCI	None	None	G4T2	S2	1B.2	BLM_S	13	26389	06789	2E+07	2E+07	N		B-Good	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	5	40.76	-124	Zone-1	T04N,	ELK RI	MAPPI	NORTH	Develo	DEVEL	10,000	PVT?	#####	Eureka	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCI	None	None	G4T2	S2	1B.2	BLM_S	14	26397	06839	200305	200305	N		B-Good	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	10	40.8	-124	Zone-1	T05N,	EUREI	MAPPI	NORTH	Develo	DISTU	7000 P	CITY C	#####	Eureka	10	4E+05	5E+06
Chlorop	Point R	Dicots	PDSCI	None	None	G4?T2	S2	1B.2	BLM_S	37	26952	06850	2E+07	2E+07	N		B-Good	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	5	40.88	-124	Zone-1	T06N,	MAD R	SINGL	IN CO	Non-na	LITTLE	>10,00	TNC, F	#####	Tyee C	10	4E+05	5E+06
Nanno	double	Birds	ABNFD	None	None	G5	S4		CDFW	9	27378	06872	2E+07	2E+07	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Arcata	10	40.84	-124	Zone-1	T05N,	OLD ARCATA		ONE OF THREE PRI			BREED	UNKN	#####	Arcata	10	4E+05	5E+06
Nanno	double	Birds	ABNFD	None	None	G5	S4		CDFW	8	27380	06889	2E+07	2E+07	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Cranne	80	41.04	-124	Zone-1	T99X,	LITTLE RIVER ROCK, OFFSHORE,					BREED	UNKN	#####	Cranne	10	4E+05	5E+06
Rana b	foothill	Amphit	AAABH	None	None	G3T4	S4		BLM_S	340	28503	33378	2E+07	2E+07	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Korbel	350	40.76	-124	Zone-1	T04N,	MAPLE	MAPPED TO CAS STATED I				1 ADU	UNKN	#####	Korbel	10	4E+05	5E+06
Eucycl	tidewat	Fish	AFCQN	Endang	None	G3	S3		AFS_E	6	28575	06914	2E+07	2E+07	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	0	40.85	-124	Zone-1	T05N,	NE SH	INCLUDES THE MOUTH OF				COLLE	CITY C	#####	Arcata	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFI	None	None	G3	S3		CDFW	44	28938	34751	1994X	1994X	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Korbel	1520	40.76	-124	Zone-1	T04N,	UNNAI	INFOR	SITE I	Loggin	POSSI	1 NES	PVT-S	#####	Korbel	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFI	None	None	G3	S3		CDFW	43	28940	34752	1995X	1995X	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Korbel	2000	40.76	-124	Zone-1	T04N,	BETWI	INFOR	HABIT	Loggin	POSSI	A NUM	PVT	#####	Korbel	10	4E+05	5E+06
Carex l	bristle-	Monoc	PMCYI	None	None	G5	S1	2B.2	IUCN_	6	29011	27929	2E+07	2E+07	N		U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Cranne	200	41.07	-124	Zone-1	T08N,	VICINITY OF TRINIDAD.					ONLY	UNKN	#####	Trinida	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		28	29022	35185	2E+07	2E+07	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	200	40.76	-124	Zone-1	T04N,	CLONE	ON WE	ONE P	Non-na	TIMBE	2 PLAN	UNKN	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	20	29235	33402	2011X	2011X	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	25	41	-124	Zone-1	T07N,	CLAM BEACH POND			Diseas	BD PR	1 SUB	UNKN	#####	Cranne	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	61	29275	06913	1984X	1984X	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	110	40.96	-124	Zone-1	T07N,	WIDOV	3 MILE	THE R	Develo	LAND	FISH D	PVT	#####	Arcata	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	28	29300	06961	1995X	1995X	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Maple	40	41.11	-124	Zone-1	T08N,	REDW	STRAV	CT-C C	Loggin	EROSI	MOST	NPS, D	#####	Bald H	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	177	29340	33386	2E+07	2E+07	N		B-Good	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	1240	40.83	-124	Zone-1	T05N,	UPPEF	1995 S	NEST	Loggin	THREA	2 ADU	PVT-G	#####	Arcata	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	124	29341	33319	2E+07	2E+07	N		B-Good	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	1100	41	-124	Zone-1	T07N,	TRIBU	ABOVE	STEEP, NORTH-FAC			2 JUVE	PVT-L	#####	Blue La	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	190	29587	33511	1995X	1995X	N		C-Fair	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	350	40.89	-124	Zone-1	T06N,	NORTI	NEST	NEST	Loggin	THREA	NEST	PVT	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	176	29588	33267	2E+07	2E+07	N		B-Good	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	250	40.89	-124	Zone-1	T06N,	SOUTI	LOCAT	NEST	Develo	THREA	2 ADU	PVT	#####	Arcata	10	4E+05	5E+06
Carex	norther	Monoc	PMCYI	None	None	G5	S2	2B.2		6	31372	98400	2E+07	2E+07	N		U-Unkr	Presun	Circula	80	Unkno	Natura	Humbo	Arcata South (		40.78	-124	Zone-1	T05N,	EUREI	MAPPI	WET GROUND.			SITE B	UNKN	#####	Arcata	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	36	31522	36525	2E+07	2E+07	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Tyee C	30	40.91	-124	Zone-1	T06N,	NORTI	ONLY	COASTAL DUNES AI			MAP D	USFW	#####	Tyee C	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	22	31570	36573	1994X	1994X	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Blue La	880	40.92	-124	Zone-1	T06N,	MILL C	SLOW	AREA	Loggin	LOGGI	SEVEF	PVT	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	23	31572	36575	1994X	1994X	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Blue La	1520	40.92	-124	Zone-1	T06N,	UPPEF	SLOW	AREA	Loggin	LOGGI	SEVEF	PVT	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	24	31573	36576	1994X	1994X	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Blue La	2000	40.93	-124	Zone-1	T06N,	TIP TC	SLOW	AREA	Loggin	LOGGI	SEVEF	PVT	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	25	31574	36577	1994X	1994X	N		U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Blue La	1200	40.9	-124	Zone-1	T06N,	0.1 MIL	SLOW	AREA	Loggin	LOGGI	SEVEF	PVT	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	29	31602	A4185	2E+07	2E+07	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Cranne	700	41.13	-124	Zone-1	T09N,	TRIBU	MAPPED BY CNDDB ALON(				DETEC	PVT-G	#####	Rodger	10	4E+05	5E+06
Haliae	bald ea	Birds	ABNKC	Deliste	Endang	G5	S3		BLM_S	177	31605	36608	2004X	2004X	N		U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Korbel	160	40.83	-124	Zone-1	T05N,	MAD R	"CANC	NESTI	Loggin	POSSI	2 FLED	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	30	31661	36664	2E+07	2E+07	N		U-Unkr	Presun	Circula	40	Unkno	Natura	Humbo	Tyee C	35	40.89	-124	Zone-1	T06N,	NEAR THE SC		COASTAL DUNE FOI			A 1988	USFW	#####	Tyee C	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		2	32406	37404	2E+07	2E+07	N		U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	1900	40.76	-124	Zone-1	T04N,	BETWI	MAPPED JUS		Loggin	SITE I	SMALL	PVT	#####	Korbel	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		3	32407	37405	1996X	1996X	N		B-Good	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	2000	40.93	-124	Zone-1	T06N,	TIP TC	MAPPI	NORTH	Loggin	SITE I	TWO C	PVT	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		4	32408	37406	1996X	1996X	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Blue La	700	40.92	-124	Zone-1	T06N,	WEST	MAPPED WIT		Loggin	SITE I	MAIN S	PVT	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		5	32409	37407	1996X	1996X	N		U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Blue La	850	40.92	-124	Zone-1	T06N,	WEST	MAPPED WIT		Loggin	SITE I	MAIN S	PVT	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		6	32410	37408	1996X	1996X	N		U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	850	40.91	-124	Zone-1	T06N,	WEST	MAPPED WIT		Loggin	SITE I	MAIN S	PVT	#####	Blue La	10	4E+05	5E+06

Lycopc	running	Ferns	PPLYC	None	None	G5	S3	4.1		7	32411	37409	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	1040	40.79	-124	Zone-1	T05N,	BETWI	IN OVE	UPLAN	Loggin	SITE IS	POPUL	PVT	#####	Arcata	10	4E+05	5E+06
Lycopc	running	Ferns	PPLYC	None	None	G5	S3	4.1		8	32412	37410	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	1300	40.79	-124	Zone-1	T05N,	BETWI	MAPPI	UPLAN	Loggin	SITE IS	LANDC	PVT	#####	Arcata	10	4E+05	5E+06
Lycopc	running	Ferns	PPLYC	None	None	G5	S3	4.1		9	32413	37411	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbc	Arcata	750	40.87	-124	Zone-1	T06N,	ARCAT	AT ED	GROW	Road/t	MOST	MAIN S	CITY C	#####	Arcata	10	4E+05	5E+06
Lycopc	running	Ferns	PPLYC	None	None	G5	S3	4.1		10	32414	37412	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbc	Arcata	250	40.98	-124	Zone-1	T07N,	ABOUT	MAPPI	SECON	Loggin	TIMBE	INFOR	UNKN	#####	Arcata	10	4E+05	5E+06
Lycopc	running	Ferns	PPLYC	None	None	G5	S3	4.1		11	32415	37413	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Arcata	160	40.93	-124	Zone-1	T06N,	MCKIN	CREEK	IN ALDER, SPRUCE			ONLY	UNKN	#####	Arcata	10	4E+05	5E+06
Lycopc	running	Ferns	PPLYC	None	None	G5	S3	4.1		12	32416	37414	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Blue La	1000	40.98	-124	Zone-1	T07N,	ABOUT	"NEAR	FORMS	Loggin	TIMBE	ONLY	UNKN	#####	Arcata	10	4E+05	5E+06
Lycopc	running	Ferns	PPLYC	None	None	G5	S3	4.1		13	32417	37415	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbc	Cranne	650	41.07	-124	Zone-1	T08N,	NORTH	NORTH SIDE		Loggin	TIMBE	ONLY	PVT	#####	Cranne	10	4E+05	5E+06
Lycopc	running	Ferns	PPLYC	None	None	G5	S3	4.1		14	32418	43144	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbc	Cranne	500	41.03	-124	Zone-1	T08N,	ABOUT	INCLU	SECON	Loggin	TIMBE	FOUR	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopc	running	Ferns	PPLYC	None	None	G5	S3	4.1		15	32419	37417	2E+07	2E+07	N	D-Poor	Presun	Specifi	10	Unknow	Natura	Humbc	Cranne	600	41.05	-124	Zone-1	T08N,	ABOVE	MAPPI	IN SEC	Loggin	TIMBE	UNKN	PVT-G	#####	Cranne	10	4E+05	5E+06
Monotr	ghost-p	Dicots	PDMO	None	None	G5	S2	2B.2	SB_Ca	1	32430	37428	197108	197108	N	U-Unkr	Presun	Circula	70	Unknow	Natura	Humbc	Arcata	100	40.77	-124	Zone-1	T05N,	REDW	REDWOOD ACRES IN A FA				ONLY	UNKN	#####	Eureka	10	4E+05	5E+06
Rhyaco	southe	Amphib	AAAAJ	None	None	G3?	S2S3		CDFW	138	32444	37442	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbc	Cranne	300	41.12	-124	Zone-1	T09N,	TRIBU	FOUNI	HABIT	Loggin	THREA	1 JUVE	PVT-L	#####	Cranne	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	209	32445	37443	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbc	Cranne	300	41.12	-124	Zone-1	T09N,	"LINEMANS C		NEST	Loggin	THREA	BIG LA	PVT-L	#####	Cranne	10	4E+05	5E+06
Rhyaco	southe	Amphib	AAAAJ	None	None	G3?	S2S3		CDFW	139	32502	33754	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Cranne	900	41.06	-124	Zone-1	T08N,	WEST	NORTH	HABIT	Loggin	THREA	ONE A	PVT-L	#####	Cranne	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJF	None	None	G5	S2S3		BLM_S	413	33093	38086	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbc	Blue La	2720	40.88	-124	Zone-1	T06N,	BALD I	MAPPI	40-50 Y	Loggin	TIMBE	ONE IN	PVT-G	#####	Blue La	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJF	None	None	G5	S2S3		BLM_S	415	33098	38091	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Panthe	1400	41.05	-124	Zone-1	T08N,	ALONG	MAPPI	DOUG	Loggin	TIMBE	FISHE	PVT-G	#####	Panthe	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJF	None	None	G5	S2S3		BLM_S	416	33099	38092	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbc	Panthe	2136	41.05	-124	Zone-1	T08N,	K AND K ROA		SCATT	Loggin	TIMBE	TRACK	PVT-G	#####	Panthe	10	4E+05	5E+06
Plethoc	Del No	Amphib	AAAAD	None	None	G4	S3		CDFW	87	33821	38814	1994X)	1994X)	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbc	Blue La	1320	40.93	-124	Zone-1	T06N,	S OF DENMA		YOUN	Loggin	TIMBE	UNKN	PVT	#####	Blue La	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	240	34380	39378	1995X)	2E+07	N	C-Fair	Presun	Circula	50	Unknow	Natura	Humbc	Korbel	400	40.83	-124	Zone-1	T05N,	VICINITY OF I		HABIT	Loggin	THREA	EUREK	PVT-G	#####	Korbel	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	264	34472	39470	1998X)	1998X)	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	400	40.83	-124	Zone-1	T05N,	SW OF	1998 N	HABITAT CONSISTS			EUREK	PVT	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	266	34475	39473	1995X)	2E+07	N	C-Fair	Presun	Circula	50	Unknow	Natura	Humbc	Arcata	880	40.8	-124	Zone-1	T05N,	EAST (	NEST	NEST	Loggin	THREA	EUREK	PVT-G	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	267	34478	39476	1996X)	2E+07	N	C-Fair	Presun	Circula	50	Unknow	Natura	Humbc	Arcata	800	40.81	-124	Zone-1	T05N,	VICINI	NEST	NEST	Loggin	THREA	EUREK	PVT-G	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	268	34479	39477	2E+07	2E+07	N	B-Good	Presun	Circula	50	Unknow	Natura	Humbc	Arcata	300	40.82	-124	Zone-1	T05N,	VICINITY OF I		NEST	Develo	THREA	EUREK	PVT	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	291	34608	39606	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	900	40.87	-124	Zone-1	T06N,	BETWI	THIS NEST W		Loggin	THREA	EUREK	UNKN	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	292	34609	39607	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbc	Arcata	400	40.81	-124	Zone-1	T05N,	0.5 MIL	LOCAT	NEST	Develo	THREA	EUREK	UNKN	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	293	34613	39611	1995X)	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	600	40.81	-124	Zone-1	T05N,	UPPER (EAST		NEST TREE IS A LOI			EUREK	PVT-G	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	294	34614	39612	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	550	40.81	-124	Zone-1	T05N,	ROCKY	NEST	NEST	Develo	THREA	EUREK	PVT	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	296	34628	39626	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	600	40.89	-124	Zone-1	T06N,	FICKLI	NEST TREE IS		Loggin	THREA	EUREK	UNKN	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	297	34632	39630	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	400	40.82	-124	Zone-1	T05N,	WASH	SITE IS LOCA		Loggin	THREA	EUREK	PVT-G	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	298	34633	39631	XXXXX	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	400	40.87	-124	Zone-1	T06N,	JUST I	TO GE	NEST TREE IS A LAF			EUREK	UNKN	#####	Arcata	10	4E+05	5E+06
Layia c	beach	Dicots	PDAST	Threate	Endang	G2	S2	1B.1	SB_Ca	29	35408	40401	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbc	Eureka	10	40.76	-124	Zone-1	T04N,	MOUT	MAPPI	SAND	ORV a	INVAS	1000+	CITY C	#####	Eureka	10	4E+05	5E+06
Ardea I	great b	Birds	ABNGA	None	None	G5	S4		CDF_S	59	35587	40583	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Eureka	10	40.81	-124	Zone-1	T05N,	WOOD	THIS S	HABITAT CONSISTS			ROOK	PVT	#####	Eureka	10	4E+05	5E+06
Ardea a	great e	Birds	ABNGA	None	None	G5	S4		CDF_S	24	35588	40583	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Eureka	10	40.81	-124	Zone-1	T05N,	WOOD	THIS S	HABITAT CONSISTS			ROOK	PVT	#####	Eureka	10	4E+05	5E+06
Nyctico	black-c	Birds	ABNGA	None	None	G5	S4		IUCN_	9	35589	40583	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Eureka	10	40.81	-124	Zone-1	T05N,	WOOD	THIS S	HABITAT CONSISTS			ROOK	PVT	#####	Eureka	10	4E+05	5E+06
Egretta	snowy	Birds	ABNGA	None	None	G5	S4		IUCN_	9	35590	40583	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Eureka	10	40.81	-124	Zone-1	T05N,	WOOD	THIS S	HABITAT CONSISTS			ROOK	PVT	#####	Eureka	10	4E+05	5E+06
Nyctico	black-c	Birds	ABNGA	None	None	G5	S4		IUCN_	10	35617	40610	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	150	40.78	-124	Zone-1	T05N,	EAST (	ROOK	NEST TREE IS A MO			ROOK	PVT	#####	Arcata	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	58	41077	41077	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Arcata	400	40.87	-124	Zone-1	T06N,	JOLLY GIANT CREEK, AND FICKLE					3 SPE	UNKN	#####	Arcata	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	59	41078	41078	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Korbel	1600	40.76	-124	Zone-1	T04N,	0.75 M	MAPPED ALONG ROAD.				3 SPE	UNKN	#####	Arcata	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	60	41079	41079	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Korbel	1550	40.83	-124	Zone-1	T05N,	FICKLI	MAPPED ALONG FICKLE H				1 SPE	UNKN	#####	Arcata	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	63	41082	41082	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	McWhi	1000	40.74	-124	Zone-1	T04N,	FRESH	MAPPED TO FRESHWATER				2 SPE	UNKN	#####	McWhi	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	81	41117	41117	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Korbel	1000	40.84	-124	Zone-1	T05N,	4 AND	MAPPED ALONG THE ROAI				4 NES	UNKN	#####	Korbel	10	4E+05	5E+06
Arborin	Sonom	Mamm	AMAFF	None	None	G3	S3		CDFW	82	41119	41119	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Maple	640	40.78	-124	Zone-1	T05N,	1 MILE NE BY ROAD FROM TOWN					1 SPE	UNKN	#####	Korbel	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	126	41150	41150	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Cranne	700	41.13	-124	Zone-1	T09N,	TRIBU	MAPPI	HABITAT IMMEDIATE			PRESE	PVT-G	#####	Rodger	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	28	41383	41383	2004X)	2004X)	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbc	Eureka	15	40.82	-124	Zone-1	T05N,	NORTH	2 POLY	NORTH	ORV a	BEACH	FEWE	PVT	#####	Eureka	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	40	41384	41384	2E+07	2E+07	N	D-Poor	Presun	Specifi	10	Unknow	Natura	Humbc	Eureka	8	40.77	-124	Zone-1	T04N,	SOUTH END (		LOW S	ORV a	LOTS (	5 PLAN	DHS-C	#####	Eureka	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	39	41385	41385	2E+07	2E+07	N	X-None	Possib	Specifi	10	Unknow	Natura	Humbc	Tyee C	30	40.88	-124	Zone-1	T06N,	SOUTH	MAPPI	DUNE MAT VEGETA			50 PLA	USFWS	#####	Tyee C	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	323	41547	41547	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbc	Arcata	80	40.82	-124	Zone-1	T05N,	VICINI	LOCAT	NEST TREE IS A LAF			EUREK	UNKN	#####	Arcata	10	4E+05	5E+06
Nyctico	black-c	Birds	ABNGA	None	None	G5	S4		IUCN_	11	41558	41558	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbc	Blue La	100	40.88	-124	Zone-1	T06N,	SOUTH	SITE IS	NESTING SUBSTRAT			ROOK	PVT	#####	Blue La	10	4E+05	5E+06
Lathyru	seaside	Dicots	PDFAE	None	None	G5	S2	2B.1	IUCN_	1	43313	43313	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknow	Natura	Humbc	Eureka	200	40.76	-124	Zone-1	T04N,	ELK RI	MAPPI	AMONG DRIFT LOGS			ONLY	UNKN	#####	Eureka	10	4E+05	5E+06
Montia	Howell	Dicots	PDPOI	None	None	G3G4	S2	2B.2		21	43360	43360	2E+07	2E+07	N	X-None	Possib	Specifi	20	Unknow	Natura	Humbc	Arcata	240	40.76	-124	Zone-1	T04N,	ALONG	"FRES	CLEAR	ORV a	TIMBE	1 PLAN	PVT-H	#####	Arcata	10	4E+05	5E+06
Carex a	norther	Monoc	PMCYI	None	None	G5	S1	2B.2	IUCN_	6	43373	32648	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbc	Eureka	500	40.8	-124	Zone-1	T05N,	EUREK	EXACT	IN BEDS OF POOLS			TRACY	UNKN	#####	Eureka	10	4E+05	5E+06
Carex a	norther	Monoc	PMCYI	None	None	G5	S1	2B.2	IUCN_	7	43374	26632	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbc	Arcata	200	40.97	-124	Zone-1	T07N,	DOWS	EXACT	SEDGE SWAMP.			ONLY	UNKN	#####	Arcata	10	4E+05	5E+06
Castille	Oregon	Dicots	PDSCF	None	None	G3	S3	2B.2		18	44722	32648	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbc	Eureka	500	40.8	-124	Zone-1	T05N,	EUREK	EXACT	FOUND AMONGST D			SITE IS	UNKN	#####	Eureka	10	4E+05	5E+06
Castille	Oregon	Dicots	PDSCF	None	None	G3	S3	2B.2		19	44723	44723	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Crannell (4112		41.05	-124	Zone-1	T08N,	1.2 TO	MAPPI	FOUND ON ROCKY (			SITE IS	UNKN	#####	Cranne	10	4E+05	5E+06
Castille	Oregon	Dicots	PDSCF	None	None	G3	S3	2B.2		20	44724	95489	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknow	Natura	Humbc	Cranne	50	41.03	-124	Zone-1	T08N,	MOUT	EXACT	COAST BLUFFS.			ONLY	UNKN	#####	Cranne	10	4E+05	5E+06
Spergu	wester	Dicots	PDCAF	None	None	G5T4	S1	2B.1		1	45003	45003	XXXXX	XXXXX	N	U-Unkr	Presun	Circula	70	Unknow	Natura	Humbc	Eureka	10	40.82	-124	Zone-1	T05N,	SAMOA.					NEEDS	UNKN	#####	Eureka	10	4E+05	5E+06
Spergu	wester	Dicots	PDCAF	None	None	G5T4	S1	2B.1		2	45004	06814	XXXXX	XXXXX	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Eureka	5	40.81	-124	Zone-1	T05N,	GUNTHER (INDIAN) ISLAND.					NEEDS	CITY C	#####	Eureka	10	4E+05	5E+06
Spergu	wester	Dicots	PDCAF	None	None	G5T4	S1	2B.1		3	45005	06770	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Fields I	10	40.73	-124	Zone-1	T04N,	HUMB	MAPPI	TIDAL	ORV a	GENEI	OCCAS	PVT, C	#####	Fields I	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		83	45275	45275	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbc	Arcata	1650	40.78	-124	Zone-1	T05N,	BETWI	MAPPI	SEQU(	Loggin	TIMBE	16 PLA	PVT-PA	#####	Arcata	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		84	45280	45280	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbc	Arcata	200	40.77	-124	Zone-1	T05N,	SOUTH	2 POPULATIC		Road/t	ROADS	54 PLA	PVT	#####	Arcata	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		85	45281	45281	2E+07	2E+07	N	D-Poor	Presun	Non-sp	30	Unknow	Natura	Humbc	Arcata	1400	40.76	-124	Zone-1	T04N,	BETWI	LOCAT	SEQU(	Loggin	LOGGI	ONE P	PVT-PA	#####	Arcata	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		86	45282	45282	2E+07	2E+07	N	D-Poor	Presun	Specifi	20	Unknow	Natura	Humbc	Arcata	600	40.76	-124	Zone-1	T04N,	BETWI	LOCAT	PLANT	Loggin	ROAD	2 PLAN	PVT-PA	#####	Arcata	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		89	45292	45292	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbc	Arcata	1100	40.82	-124	Zone-1	T05N,	BETWI	LOCAT	OPENI	Non-na	TIMBE	APPRO	PVT-PA	#####	Arcata	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		90	45293	45293	2E+07	2E+07	N	D-Poor	Presun	Specifi	20	Unknow	Natura	Humbc	Arcata	600	40.77	-124	Zone-1	T05N,	BETWI	LOCAT	MESIC	Loggin	TIMBE	ONE P	PVT-PA	#####	Arcata	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		91	45294	45294	2E+07	2E+07	N	D-Poor	Presun	Specifi	20	Unknow	Natura	Humbc	Arcata	400	40.75	-124	Zone-1	T04N,	JUST E	LOCAT	SANDY	Loggin	TIMBE	3 PLAN	PVT-PA	#####	Arcata	10	4E+05	5E+06
Usnea	Methus	Lichens	NLLEC	None	None	G4	S4	4.2	BLM_S	16	45351	45351	XXXXX	XXXXX	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbc	Korbel	1460	40.85	-124	Zone-1	T05N,	E OF M	USED UTM GIVEN IN SOUR				NEEDS	UNKN	#####	Korbel	10	4E+05	5E+06
Fisside	minute	Bryoph	NBMUS	None	None	G3?	S2	1B.2	USFS_	3	45403	45403	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Arcata	650	40.87	-124	Zone-1	T06N,	ARCAT	ALONG	IN SECOND GROWT			SITE B	CITY C	#####	Arcata	10	4E+05	5E+06
Carex I	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	7	45796	45796	XXXXX	XXXXX	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Arcata	5	40.86	-124	Zone-1	T06N,	ARCATA, MCDANIEL SLOUGH.					NEEDS	UNKN	#####	Arcata	10	4E+05	5E+06
Carex I	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	8	45797	45797	2E+07	2E+07	N	A-Exce	Presun	Specifi	20	Unknow	Natura	Humbc	Arcata	3	40.85	-124	Zone-1	T05N,	SOUTH	INCLU	DIKED	Grazin	HEAVY	UNKN	CITY C	#####	Arcata	10	4E+05	5E+06
Carex I	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	9	45798	58540	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbc	Eureka	10	40.75	-124	Zone-1	T04N,	SOUTH	SCATT	SALT M	Grazin	GRAZI	VERY	UNKN	#####	Eureka	10	4E+05	5E+06
Carex I	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	10	45799	98277	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbc	Eureka	10	40.83	-124	Zone-1	T05N,	BORDI	MAPPI	SALT MARSH.			TYPE I	UNKN	#####	Eureka	10	4E+05	5E+06
Carex I	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	11	45800	71174	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbc	Eureka	5	40.8	-124	Zone-1	T05N,	ALONG	MAPPI	BRACKISH SLOUGH			SITE B	UNKN	#####	Eureka	10	4E+05	5E+06
Carex I	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	12	45801	44724	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbc	Cranne	7	41.02	-124	Zone-1	T07N,	JUST V	MAPPI	OPEN	Non-na	"AMAR	5000 P	DPR-L	#####	Cranne	10	4E+05	5E+06

Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		100	46319	46319	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	1200	40.92	-124	Zone-1	T06N,	NORTH	MAPPE	PREVI	Loggin	PLANT	14 IND	PVT-G	#####	Blue La	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		101	46320	46320	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	1600	40.9	-124	Zone-1	T06N,	JUST V	SEVER	CLOSE	Loggin	ROADS	31 IND	PVT-G	#####	Blue La	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		104	46324	46324	2E+07	2E+07	N	A-Exce	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	1400	40.83	-124	Zone-1	T05N,	FICKLE	EXACT	CLEAR	Loggin	HERBI	OVER	PVT-G	#####	Arcata	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		105	46326	46326	2E+07	2E+07	N	A-Exce	Presun	Non-sp	30	Unknow	Natura	Humbo	Eureka (40124		40.76	-124	Zone-1	T04N,	BOB H	MAPPE	MESIC	Loggin	TIMBE	208 IN	PVT	#####	Eureka	10	4E+05	5E+06
Mitella	leafy-st	Dicots	PDSAX	None	None	G5	S4	4.2		14	46421	46421	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	1200	40.83	-124	Zone-1	T05N,	UPPER	PLANT	WITH S	Loggin	CHANG	EXTEN	PVT	#####	Arcata	10	4E+05	5E+06
Mitella	leafy-st	Dicots	PDSAX	None	None	G5	S4	4.2		15	46422	46422	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	1100	40.79	-124	Zone-1	T05N,	DEVIL	ALONG	CLOSE	Loggin	TIMBE	70 PLA	PVT	#####	Korbel	10	4E+05	5E+06
Actiner	northw	Reptile	ARAAD	Propos	None	G2	SNR		BLM_S	143	46848	46848	2E+07	2E+07	N	B-Good	Presun	Circula	40	Unknow	Natura	Humbo	Arcata	130	40.97	-124	Zone-1	T07N,	0.3 MILE DIRE		POND (2'-3' DEEP, 5(			10 JUL	PVT	#####	Arcata	10	4E+05	5E+06
Usnea	Methus	Lichens	NLLEC	None	None	G4	S4	4.2	BLM_S	100	46887	46887	2E+07	2E+07	N	D-Poor	Presun	Specifi	20	Unknow	Natura	Humbo	McWhi	1320	40.75	-124	Zone-1	T04N,	HEADW	ALONG	IN SEC	Loggin	TIMBE	TWO C	PVT-P	#####	Arcata	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL	None	None	G4G5	S3	2B.2	SB_UC	13	47185	32648	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Eureka (40124		40.8	-124	Zone-1	T05N,	EUREKA.					NEEDS	UNKN	#####	Eureka	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL	None	None	G4G5	S3	2B.2	SB_UC	18	47194	47194	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Maple	2800	40.88	-124	Zone-1	T06N,	ABOUT	ON BC	DOUG	Loggin	10 PLA	POPUL	PVT-G	#####	Lord-E	10	4E+05	5E+06
Rhyaco	southe	Amphib	AAAAJ	None	None	G3?	S2S3		CDFW	164	47880	47880	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	450	40.77	-124	Zone-1	T05N,	BETWE	THP 1-	HABIT	Loggin	THREA	1 ADU	PVT-P	#####	Arcata	10	4E+05	5E+06
Rhyaco	southe	Amphib	AAAAJ	None	None	G3?	S2S3		CDFW	169	49617	49617	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	2000	40.75	-124	Zone-1	T04N,	SOUTH OF DI		HABIT	Loggin	THREA	1 ADU	PVT-P	#####	Korbel	10	4E+05	5E+06
Astraga	coastal	Dicots	PDFAB	None	None	G2T2	S2	1B.2	BLM_S	23	49680	45003	2E+07	2E+07	N	U-Unkr	Presun	Circula	70	Unknow	Natura	Humbo	Eureka (40124		40.82	-124	Zone-1	T05N,	SAMO	EXACT LOCA		ORV a	PREVI	SITE B	UNKN	#####	Eureka	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		139	49881	49881	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Blue La	750	40.92	-124	Zone-1	T06N,	ABOUT	MAPPE	PLANT	Loggin	TIMBE	ABOUT	PVT-G	#####	Blue La	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		140	49882	49882	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	1000	40.9	-124	Zone-1	T06N,	WEST	ON SID	ALONG	Loggin	TIMBE	ABOUT	PVT-G	#####	Blue La	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		141	49883	49883	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Blue La	1200	40.91	-124	Zone-1	T06N,	SOUTH	IN A 2-	ASPEC	Loggin	TIMBE	ABOUT	PVT-G	#####	Blue La	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		142	49884	49884	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Blue La	1200	40.9	-124	Zone-1	T06N,	EAST (	IN A 2-	ASPEC	Loggin	TIMBE	ABOUT	PVT-G	#####	Blue La	10	4E+05	5E+06
Sidalce	maple-	Dicots	PDMAI	None	None	G3	S3	4.2		143	49885	49885	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Blue La	1400	40.9	-124	Zone-1	T06N,	EAST (	IN A 2-	ASPEC	Loggin	TIMBE	ABOUT	PVT-G	#####	Blue La	10	4E+05	5E+06
Oncorh	coho s	Fish	AFCHA	Threate	Threate	G5T2Q	S2		AFS_T	1	50109	50109	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Arcata	40	40.91	-124	Zone-1	T06N,	ESSEX PUMP		SURF	Surface water		THIS W	HUMB	#####	Arcata	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCR	None	None	G4T2	S2	1B.2	BLM_S	29	51054	51054	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	7	40.79	-124	Zone-1	T05N,	ON TH	OUTSI	ON BA	Develo	PIPELI	112 PL	UNKN	#####	Arcata	10	4E+05	5E+06
Gilia ca	Pacific	Dicots	PDPLM	None	None	G5T3	S3	1B.2	SB_Ca	13	52133	35011	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Eureka	250	40.77	-124	Zone-1	T05N,	BUCKS	EXACT	SANDY FIELD.			ONLY	UNKN	#####	Eureka	10	4E+05	5E+06
Gilia ca	Pacific	Dicots	PDPLM	None	None	G5T3	S3	1B.2	SB_Ca	15	52135	52135	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Cranne	20	41.04	-124	Zone-1	T08N,	0.25 M	EXACT	OCEAN BLUFF.			MAIN S	UNKN	#####	Cranne	10	4E+05	5E+06
Myotis	long-ea	Mamm	AMACC	None	None	G5	S3		BLM_S	6	52404	52404	2E+07	2E+07	N	B-Good	Presun	Circula	50	Unknow	Natura	Humbo	Arcata	40	40.76	-124	Zone-1	T04N,	MAINSTEM O		HABITAT CONSISTS			2 ADU	PVT-P	#####	Arcata	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCR	None	None	G4T2	S2	1B.2	BLM_S	32	52536	52536	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	22	40.96	-124	Zone-1	T07N,	NORTH	ONE S	SANDY	Road/t	FOOT	42 PLA	HUM C	#####	Arcata	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNYC	None	None	G4G5T	S2	1B.1	BLM_S	48	52558	52558	2E+07	2E+07	N	A-Exce	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	10	41.01	-124	Zone-1	T07N,	LITTLE	7 POLY	LOCATED IN OPEN S			APPRO	DPR-L	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		36	54181	54181	2E+07	2E+07	N	C-Fair	Presun	Circula	40	Unknow	Natura	Humbo	Korbel	1750	40.84	-124	Zone-1	T05N,	CANOE	MAPPE	GROW	Loggin	PLANT	ONE M	PVT-G	#####	Korbel	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		39	54184	54184	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Korbel	1600	40.86	-124	Zone-1	T06N,	SOUTH	MAPPE	REDW	Loggin	TIMBE	2? MAT	PVT-G	#####	Korbel	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		40	54185	54185	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	1560	40.83	-124	Zone-1	T05N,	CANOE	ONE M	UPLAN	Loggin	GROW	2 MATS	PVT-G	#####	Korbel	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		41	54186	54186	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	1800	40.77	-124	Zone-1	T05N,	NORTH	ALONG	IN SEC	Loggin	LOGGI	3 PLAN	PVT-P	#####	Korbel	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		42	54187	54187	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	1840	40.76	-124	Zone-1	T04N,	EXTEN	SEVER	FOUND	Loggin	TIMBE	41 PLA	PVT-P	#####	Korbel	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		43	54191	54191	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	1850	40.99	-124	Zone-1	T07N,	RIDGE	THREE	MIXED	Loggin	TIMBE	THREE	PVT-G	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		44	54192	54192	2E+07	2E+07	N	C-Fair	Presun	Circula	40	Unknow	Natura	Humbo	Blue La	1200	40.97	-124	Zone-1	T07N,	ALONG	MAPPE	IN RED	Loggin	TIMBE	2 MATS	PVT-G	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		45	54193	54193	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Blue La	1500	40.96	-124	Zone-1	T07N,	TIP TC	MAPPE	SEQU	Loggin	TIMBE	1 MAT	PVT-G	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		46	54194	54194	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	1315	40.96	-124	Zone-1	T07N,	TIP TC	MAPPE	SEQU	Loggin	TIMBE	1 MAT	PVT-G	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		47	54195	54195	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Blue La	1940	40.95	-124	Zone-1	T07N,	TIP TC	WEST	REDW	Loggin	TIMBE	UNKN	PVT-G	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		48	54196	54196	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Blue La	1470	40.95	-124	Zone-1	T07N,	TIP TC	EAST (	REDW	Loggin	TIMBE	UNKN	PVT-G	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		49	54197	54197	2E+07	2E+07	N	C-Fair	Presun	Circula	40	Unknow	Natura	Humbo	Blue La	950	40.95	-124	Zone-1	T07N,	EAST S	ON EA	FAIRLY	Loggin	TIMBE	ONE S	PVT-G	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		50	54198	54198	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	750	40.93	-124	Zone-1	T06N,	WEST	MAPPE	IN MIX	Loggin	TIMBE	ABOUT	PVT-G	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		51	54199	54199	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	1200	40.92	-124	Zone-1	T06N,	SOUTH	TWO M	IN UPL	Loggin	TIMBE	2 MATS	PVT-G	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		52	54200	54200	2E+07	2E+07	N	D-Poor	Presun	Specifi	10	Unknow	Natura	Humbo	Blue La	1100	40.91	-124	Zone-1	T06N,	SOUTH	MAPPE	IN UPL	Loggin	TIMBE	ONE M	PVT-G	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		63	54211	54213	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Blue La	1600	40.95	-124	Zone-1	T07N,	TIP TC	MAPPE	REDW	Loggin	TIMBE	UNKN	PVT-G	#####	Blue La	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLM	None	None	G2	S2	1B.2	BLM_S	22	54363	71737	2004X	2004X	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	20	40.82	-124	Zone-1	T05N,	ALONG	IN VIC	COAST	Non-na	COMP	2000 P	PVT-P	#####	Eureka	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLM	None	None	G2	S2	1B.2	BLM_S	23	54364	54364	200304	200304	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	20	40.8	-124	Zone-1	T05N,	NEAR	LOCAT	COAST	Non-na	COMP	OVER	PVT-P	#####	Eureka	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLM	None	None	G2	S2	1B.2	BLM_S	24	54365	54365	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknow	Natura	Humbo	Eureka	15	40.78	-124	Zone-1	T05N,	NORTH	EXACT	COAST	ORV a	OHVS	MAIN S	UNKN	#####	Eureka	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLM	None	None	G2	S2	1B.2	BLM_S	25	54366	54366	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	15	40.76	-124	Zone-1	T04N,	SAND	MAPPE	IN DUN	ORV a	OFF R	FEWE	CITY C	#####	Eureka	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLM	None	None	G2	S2	1B.2	BLM_S	26	54368	54368	2E+07	2E+07	N	A-Exce	Presun	Specifi	20	Unknow	Natura	Humbo	Tyee C	50	40.89	-124	Zone-1	T06N,	LANPH	ONE P	PLANTS OCCUR AS			UNKN	USFWS	#####	Tyee C	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLM	None	None	G2	S2	1B.2	BLM_S	27	54372	A1359	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Cranne	20	41.01	-124	Zone-1	T07N,	CLAM	EXACT	OPEN SANDY AREA			MAIN S	HUM C	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		69	54563	54563	XXXXX	XXXXX	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	1150	40.78	-124	Zone-1	T05N,	EASTE	MAPPED WITHIN THE NW 1				UNKN	PVT	#####	Korbel	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		70	54573	54573	1996X	1996X	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	1640	40.92	-124	Zone-1	T06N,	WEST	MAPPED WITHIN THE SW 1				UNKN	UNKN	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		71	54577	54577	1996X	1996X	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Blue La	1300	40.91	-124	Zone-1	T06N,	HEAD	MAPPED WITHIN THE SE 1/				UNKN	UNKN	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		72	54578	54578	1996X	1996X	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	1375	40.9	-124	Zone-1	T06N,	HEADW	MAPPED WITHIN THE S 1/2				UNKN	UNKN	#####	Blue La	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		73	54584	54584	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Korbel	740	40.83	-124	Zone-1	T05N,	SPUR	ELEVA	IN MESIC SEMI-OPE			ONLY	UNKN	#####	Korbel	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		74	54586	54586	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	180	40.83	-124	Zone-1	T05N,	BOTH	SEVER	GROW	Loggin	LOGGI	3 MATS	PVT-G	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		75	54587	54587	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	1000	40.79	-124	Zone-1	T05N,	SOUTH	MAPPE	GROW	Loggin	TIMBE	UNKN	PVT-P	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		76	54588	54588	199604	199604	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	400	40.78	-124	Zone-1	T05N,	FRESH	SW1/4 OF NW1/4 SEC 34.				UNKN	UNKN	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		77	54589	54589	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	440	40.78	-124	Zone-1	T05N,	NORTH	8 POLY	PLANT	Loggin	TIMBE	ABOUT	PVT-P	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		78	54590	54590	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	1200	40.78	-124	Zone-1	T05N,	SOUTH	MAPPE	MODE	Loggin	TIMBE	UNKN	PVT-P	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		79	54591	54591	2002X	2002X	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	McWhi	720	40.75	-124	Zone-1	T04N,	SOUTH	SEVERAL COLONIES MAPP				ONLY	PVT-P	#####	McWhi	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		80	54603	54603	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	400	40.98	-124	Zone-1	T07N,	NORTH	EXACT	GROW	Loggin	THREA	UNKN	PVT-G	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		81	54627	54627	2E+07	2E+07	N	D-Poor	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	160	40.93	-124	Zone-1	T06N,	NORTH	JUST N	ON ME	Develo	ROAD	ONE P	PVT-G	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		82	54629	54629	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	180	40.95	-124	Zone-1	T07N,	ALONG	SCATT	GROW	Loggin	TIMBE	UNKN	PVT-G	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		83	54630	54630	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	215	40.94	-124	Zone-1	T06N,	WEST	MAPPE	IN SEC	Loggin	TIMBE	IN 200	PVT-G	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		84	54634	54634	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	600	40.88	-124	Zone-1	T06N,	ARCAT	TWO F	PLANT	Road/t	MOST	2 MATS	CITY C	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		85	54635	54635	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	450	40.88	-124	Zone-1	T06N,	UPPER	3 MATS	IN MES	Loggin	TIMBE	IN 200	PVT-M	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		86	54641	54641	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	980	41	-124	Zone-1	T07N,	TIP TC	EXACT	GROW	Loggin	ROAD	MANY	PVT-G	#####	Arcata	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		87	54642	54642	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Panthe	1400	41.06	-124	Zone-1	T08N,	ALONG	MAPPE	IN SEC	Loggin	TIMBE	IN 200	PVT-G	#####	Panthe	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		88	54643	54643	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Panthe	900	41.05	-124	Zone-1	T08N,	NORTH	ALONG	HABIT	Loggin	CLEAR	ABOUT	PVT-G	#####	Panthe	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		89	54644	54644	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Panthe	900	41.05	-124	Zone-1	T08N,	RIDGE	ALONG	HABIT	Loggin	CLEAR	ABOUT	PVT-G	#####	Panthe	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		90	54645	54645	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Panthe	930	41.04	-124	Zone-1	T08N,	RIDGE	EAST (	HABIT	Loggin	CLEAR	ABOUT	PVT-G	#####	Panthe	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		91	54646	54646	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Panthe	2200	41.02	-124	Zone-1	T07N,	EAST (	EXACT	LOWER SLOPE ALO			ONLY	UNKN	#####	Panthe	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		92	54647	54647	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Panthe	1200	41.01	-124	Zone-1	T07N,	SOUTH	EXACT	LOWER SLOPES OF			ONLY	UNKN	#####	Panthe	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		94	54659	54659	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	450	40.99	-124	Zone-1	T07N,	BOTH	EXACT	GROW	Loggin	ROAD	MANY	PVT-G	#####	Arcata	10	4E+05	5E+06

Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		95	54660	54660	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Panthe	480	41.03	-124	Zone-1	T08N,	NORTH	MATS	GROW	Loggin	TIMBE	UNKN	PVT-G	#####	Panthe	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		96	54661	54661	2E+07	2E+07	N	D-Poor	Presun	Specifi	10	Unknow	Natura	Humbo	Cranne	570	41.11	-124	Zone-1	T08N,	MAPLE	MAT W	IN SEC	Loggin	TIMBE	ONE M	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		97	54662	54662	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Cranne	940	41.11	-124	Zone-1	T08N,	UPPER	MAPPE	GROW	Loggin	TIMBE	1 PATC	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		98	54663	54663	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Cranne	1450	41.11	-124	Zone-1	T08N,	UPPER	SOUTH	GROW	Loggin	TIMBE	1 PATC	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		99	54664	54664	2E+07	2E+07	N	D-Poor	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	950	41.1	-124	Zone-1	T08N,	NORTH	MAPPE	GROW	Loggin	ROAD	ONE 6	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		100	54665	54665	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Cranne	675	41.07	-124	Zone-1	T08N,	RIDGE	ALONG	IN SEC	Loggin	TIMBE	UNKN	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		101	54666	54666	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Cranne	730	41.07	-124	Zone-1	T08N,	EAST (	EXACT	IN SEC	Loggin	TIMBE	UNKN	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		102	54667	54667	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Cranne	600	41.02	-124	Zone-1	T07N,	WEST	ALONG	GROW	Loggin	TIMBE	3 SMA	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		103	54668	54668	2E+07	2E+07	N	D-Poor	Presun	Specifi	10	Unknow	Natura	Humbo	Cranne	1100	41.05	-124	Zone-1	T08N,	WEST	MAPPE	MESIC	Loggin	SKID F	ONE M	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		104	54669	54669	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	750	41.05	-124	Zone-1	T08N,	EAST (	NORTH	MESIC	Loggin	SKID F	THREE	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		105	54670	54670	2E+07	2E+07	N	D-Poor	Presun	Specifi	10	Unknow	Natura	Humbo	Cranne	750	41.06	-124	Zone-1	T08N,	HEAD	MAPPE	MESIC	Loggin	SKID F	ONE M	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		106	54671	54671	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Cranne	550	41.04	-124	Zone-1	T08N,	ALONG	BETWE	GROW	Loggin	TIMBE	ONE M	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		107	54672	54672	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	1450	41.06	-124	Zone-1	T08N,	HEAD	MAPPE	GROW	Loggin	TIMBE	UNKN	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		108	54673	54673	2E+07	2E+07	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Cranne	930	41.01	-124	Zone-1	T07N,	NW TIF	EXACT	GROW	Loggin	ROAD	MANY	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		109	54674	54674	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Cranne	450	41.01	-124	Zone-1	T07N,	NE TIF	EXACT	GROW	Loggin	ROAD	MANY	PVT-G	#####	Cranne	10	4E+05	5E+06
Lycopo	running	Ferns	PPLYC	None	None	G5	S3	4.1		115	54680	54680	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Panthe	1200	41.05	-124	Zone-1	T08N,	NORTH	6 PATC	GROW	Loggin	TIMBE	UNKN	PVT-G	#####	Panthe	10	4E+05	5E+06
Montia	Howell	Dicots	PDPOI	None	None	G3G4	S2	2B.2		38	55080	55080	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	700	40.78	-124	Zone-1	T05N,	RIDGE	ALONG	HABIT	Loggin	TIMBE	ABOUT	PVT	#####	Korbel	10	4E+05	5E+06
Montia	Howell	Dicots	PDPOI	None	None	G3G4	S2	2B.2		55	55212	55212	2E+07	2E+07	N	X-None	Possib	Specifi	20	Unknow	Natura	Humbo	McWhi	120	40.75	-124	Zone-1	T04N,	MCKAY	SEVER	UNIMP	Loggin	ROAD	122 PL	PVT-G	#####	Arcata	10	4E+05	5E+06
Montia	Howell	Dicots	PDPOI	None	None	G3G4	S2	2B.2		58	55313	55313	2E+07	2E+07	N	D-Poor	Presun	Specifi	20	Unknow	Natura	Humbo	Panthe	900	41.03	-124	Zone-1	T08N,	ALONG	GROW	IN APF	Loggin	TIMBE	30-50 I	PVT-G	#####	Panthe	10	4E+05	5E+06
Oenoth	Wolf's (	Dicots	PDONA	None	None	G2	S1	1B.1	SB_Be	9	56018	56002	2001X	2001X	N	U-Unkn	Presun	Specifi	20	Unknow	Introdu	Humbo	Cranne	10	41.03	-124	Zone-1	T08N,	MOON	EDGE OF ALL		Other |	SEVER	ARTIFI	UNKN	#####	Cranne	10	4E+05	5E+06
Arborin	white-f	Mamm	AMAFF	None	None	G3G4	S2		CDFW	5	59761	59725	2E+07	2E+07	N	U-Unkn	Presun	Circula	90	Unknow	Natura	Humbo	Korbel	800	40.84	-124	Zone-1	T05N,	ABOUT	EXACT LOCATION UNKNOV				ONE F	UNKN	#####	Korbel	10	4E+05	5E+06
Cicinde	sandy	Insects	IICOL0	None	None	G5T2	S2			28	60081	60045	1905X	1905X	N	X-None	Extirpa	Non-sp	30	Unknow	Natura	Humbo	Arcata	10	40.81	-124	Zone-1	T05N,	EUREK	EXACT LOCALITY NOT GIV				HISTO	UNKN	#####	Eureka	10	4E+05	5E+06
Hesper	short-le	Dicots	PDAST	None	None	G4T3	S3	1B.2	BLM_S	25	60263	60227	2E+07	2E+07	N	U-Unkn	Presun	Circula	50	Unknow	Natura	Humbo	Eureka	10	40.78	-124	Zone-1	T05N,	ON NC	NORTH	ON MOSTLY OPEN S			SITE B	UNKN	#####	Eureka	10	4E+05	5E+06
Hesper	short-le	Dicots	PDAST	None	None	G4T3	S3	1B.2	BLM_S	26	60264	54366	2E+07	2E+07	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka (40124		40.76	-124	Zone-1	T04N,	BUCKS	LOCAT	SANDY GROUND.			ONLY	UNKN	#####	Eureka	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCF	None	None	G4T2	S2	1B.2	BLM_S	33	61485	61449	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	5	40.79	-124	Zone-1	T05N,	SOUTH	MAPPE	SATUR	Develo	HABIT	300 PL	UNKN	#####	Arcata	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	19	61725	61689	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	5	40.83	-124	Zone-1	T05N,	SOUTH	MAPPE	DIKED	Grazin	TRENC	UNKN	UNKN	#####	Arcata	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	20	61728	61692	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	10	40.8	-124	Zone-1	T05N,	IN FAY	PLANT	BAY M	Other	TRENC	EASTE	PVT	#####	Arcata	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	21	61732	61696	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	5	40.79	-124	Zone-1	T05N,	EAST (	PLANT	MUD B	Other	TRENC	UNKN	UNKN	#####	Arcata	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	22	61734	61449	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	5	40.79	-124	Zone-1	T05N,	SOUTH	MAPPE	SATUR	Develo	HABIT	15' X 5	UNKN	#####	Arcata	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	23	61735	61699	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	20	40.77	-124	Zone-1	T05N,	SOUTH	IN EPH	INTER	Non-na	INVAS	1000 P	BLM	#####	Eureka	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	24	61736	61700	2E+07	2E+07	N	A-Exce	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	20	40.87	-124	Zone-1	T06N,	ABOUT	PLANT	PLANT	ORV a	OCCAS	5,000 F	BLM-M	#####	Eureka	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	25	61745	61709	2E+07	2E+07	N	U-Unkn	Presun	Circula	70	Unknow	Natura	Humbo	Arcata North (		40.96	-124	Zone-1	T07N,	NORTH	BASED	ALONG ESTUARY SI			UNKN	UNKN	#####	Arcata	10	4E+05	5E+06
Carex l	bristle-	Monoc	PMCYI	None	None	G5	S1	2B.2	IUCN_	8	63265	63173	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	800	41.09	-124	Zone-1	T08N,	PRIVA	MAPPE	IN CLE	Non-na	COMM	S POL	PVT-G	#####	Cranne	10	4E+05	5E+06
Iliamna	Califor	Dicots	PDMAI	None	None	G2G3	S2	1B.2	SB_Ca	7	63783	26634	191907	191907	N	U-Unkn	Presun	Circula	90	Unknow	Natura	Humbo	Maple Creek (		40.88	-124	Zone-1	T06N,	BALD I	EXACT LOCATION UNKNOV				ONLY	UNKN	#####	Lord-E	10	4E+05	5E+06
Sidalce	Siskiyo	Dicots	PDMAI	None	None	G4G5T	S2	1B.2	SB_UC	13	63837	63742	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	1100	40.81	-124	Zone-1	T05N,	ON MA	ON EA	DISTU	Agricul	UNSTA	4+ IND	UNKN	#####	Korbel	10	4E+05	5E+06
Sidalce	Siskiyo	Dicots	PDMAI	None	None	G4G5T	S2	1B.2	SB_UC	18	63846	63751	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	114	40.95	-124	Zone-1	T07N,	EAST (	ADJAC	SEASC	ORV a	IMPAC	20-30 I	PVT	#####	Arcata	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL(	None	None	G4G5	S3	2B.2	SB_UC	50	64160	64065	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	2100	40.8	-124	Zone-1	T05N,	FICKLE	2 POLY	65% C	Grazin	LAND I	EASTE	PVT-G	#####	Korbel	10	4E+05	5E+06
Ardea	great b	Birds	ABNGA	None	None	G5	S4		CDF_S	80	64312	64217	2002X	2005X	N	A-Exce	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	120	40.88	-124	Zone-1	T06N,	BETWE	NRM H	NEST	Loggin	THREA	3 OCC	PVT	#####	Arcata	10	4E+05	5E+06
Ardea	great b	Birds	ABNGA	None	None	G5	S4		CDF_S	81	64313	64218	2003X	2005X	N	A-Exce	Presun	Circula	40	Unknow	Natura	Humbo	Arcata	450	40.88	-124	Zone-1	T06N,	UPPER	NRM H	ABOUT	Loggin	THREA	NUME	PVT	#####	Arcata	10	4E+05	5E+06
Ardea	great b	Birds	ABNGA	None	None	G5	S4		CDF_S	82	64314	64219	2004X	2005X	N	A-Exce	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	450	40.87	-124	Zone-1	T06N,	JUST N	NRM H	SINGL	Loggin	THREA	1 OCC	PVT	#####	Arcata	10	4E+05	5E+06
Ardea	great b	Birds	ABNGA	None	None	G5	S4		CDF_S	83	64322	64227	2005X	2005X	N	A-Exce	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	80	40.88	-124	Zone-1	T06N,	SOUTH	NRM H	SINGL	Loggin	THREA	ROOK	PVT	#####	Arcata	10	4E+05	5E+06
Ardea	great b	Birds	ABNGA	None	None	G5	S4		CDF_S	84	64325	64230	2003X	2005X	N	A-Exce	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	100	40.87	-124	Zone-1	T06N,	BETWE	NRM H	SINGL	Loggin	THREA	A SING	PVT, N	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	386	64327	64218	2005X	2005X	N	U-Unkn	Presun	Circula	40	Unknow	Natura	Humbo	Arcata	420	40.88	-124	Zone-1	T06N,	UPPER	NRM C	NEST TREE IS A LAF			NEST	PVT, N	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	387	64329	64234	2004X	2004X	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	290	40.87	-124	Zone-1	T06N,	ALONG	NRM C	SURROUNDING HAE			NEST	PVT, N	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	388	64331	64236	2005X	2005X	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	500	40.88	-124	Zone-1	T06N,	UPPER	NRM C	SURROUNDING HAE			NEST	PVT, N	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	389	64333	64238	2005X	2005X	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	280	40.89	-124	Zone-1	T06N,	ALONG	NRM C	SURROUNDING HAE			ACTIV	PVT, N	#####	Arcata	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	390	64336	64241	2005X	2005X	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	400	40.89	-124	Zone-1	T06N,	ALONG	NRM C	SURROUNDING HAE			ACTIV	PVT, N	#####	Arcata	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJF	None	None	G5	S2S3		BLM_S	488	65577	65498	2E+07	2E+07	N	A-Exce	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	2086	40.8	-124	Zone-1	T05N,	7.5 MILES EA		HABIT	Loggin	LOGGI	1 INDI	UNKN	#####	Korbel	10	4E+05	5E+06
Coptis	Oregor	Dicots	PDRAN	None	None	G4?	S3?	4.2		9	68270	73580	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	2683	40.88	-124	Zone-1	T06N,	SOUTH	STEEF	STEEF	Loggin	EROSI	W POL	PVT-G	#####	Blue La	10	4E+05	5E+06
Coptis	Oregor	Dicots	PDRAN	None	None	G4?	S3?	4.2		10	68271	68127	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	800	40.96	-124	Zone-1	T07N,	ALONG	ALONG	WITHI	Loggin	THREA	2007: 1	PVT-G	#####	Blue La	10	4E+05	5E+06
Piperia	white-fl	Monoc	PMOR	None	None	G3?	S3	1B.2	SB_Ca	29	71177	70294	2E+07	2E+07	N	A-Exce	Presun	Non-sp	30	Unknow	Natura	Humbo	Crannell (4112		41.12	-124	Zone-1	T09N,	PRESE	ELEVA	REDW	Loggin	TIMBE	ONLY	PVT-S	#####	Cranne	10	4E+05	5E+06
Fisside	minute	Bryoph	NBMUS	None	None	G3?	S2	1B.2	USFS_	8	71634	70721	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata South (		40.88	-124	Zone-1	T06N,	JOLLY	EXACT	IN CUT-OVER REDW			SITE B	CITY C	#####	Arcata	10	4E+05	5E+06
Abronia	pink sa	Dicots	PDNY(	None	None	G4G5T	S2	1B.1	BLM_S	56	71696	70786	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	40	40.96	-124	Zone-1	T07N,	WITHIN 4 ME		DUNE	Non-na	AMMO	FEWEI	DPR	#####	Arcata	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	27	72091	71173	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	8	40.86	-124	Zone-1	T06N,	ARCAT	DESCF	STORMWATER WET			ONLY	CITY C	#####	Arcata	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCF	None	None	G4T2	S2	1B.2	BLM_S	35	72257	71353	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	65	40.97	-124	Zone-1	T07N,	0.59 AIR MILE		EPHEN	Non-na	AMMO	4-10 P	HUM C	#####	Arcata	10	4E+05	5E+06
Coptis	Oregor	Dicots	PDRAN	None	None	G4?	S3?	4.2		34	72291	71393	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	840	40.95	-124	Zone-1	T07N,	KRUEGER CF		N-FAC	Loggin	DIREC	215 PL	PVT-G	#####	Blue La	10	4E+05	5E+06
Coptis	Oregor	Dicots	PDRAN	None	None	G4?	S3?	4.2		35	72292	71394	2E+07	2E+07	N	D-Poor	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	698	40.95	-124	Zone-1	T07N,	WEST	GROW	NE-FA	Loggin	IMPAC	20 PLA	PVT-G	#####	Blue La	10	4E+05	5E+06
Coptis	Oregor	Dicots	PDRAN	None	None	G4?	S3?	4.2		36	72293	71395	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	840	40.94	-124	Zone-1	T06N,	JACKS	8 POLY	N TO N	Loggin	THREA	3 SW F	PVT-G	#####	Blue La	10	4E+05	5E+06
Riparia	bank s	Birds	ABPAU	None	Threate	G5	S3		BLM_S	222	72423	71529	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Stable	Natura	Humbo	Arcata	114	40.97	-124	Zone-1	T07N,	ALONG	ALONG	SEDIMENTAR		POSSI	1 OBS	UNKN	#####	Arcata	10	4E+05	5E+06
Erysim	Menzie	Dicots	PDBRA	Endang	Endang	G1	S1	1B.1	SB_Ca	15	72450	23041	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	5	40.76	-124	Zone-1	T04N,	ELK RIVER SI		DUNE	ORV a	INVAS	FORM	CITY C	#####	Eureka	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLM	None	None	G2	S2	1B.2	BLM_S	32	72635	71739	200304	200304	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	35	40.85	-124	Zone-1	T05N,	NEAR	LOCAT	COAST	Non-na	COMP	2000 P	PVT-P	#####	Eureka	10	4E+05	5E+06
Hesper	short-le	Dicots	PDAST	None	None	G4T3	S3	1B.2	BLM_S	33	72685	71797	2E+07	2E+07	N	U-Unkn	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	12	40.77	-124	Zone-1	T05N,	SAMO	2 POLY	DUNES. SOIL COMP			FIRST	BLM	#####	Eureka	10	4E+05	5E+06
Oenoth	Wolf's (	Dicots	PDONA	None	None	G2	S1	1B.1	SB_Be	24	73631	72787	2E+07	2E+07	N	U-Unkn	Presun	Circula	60	Unknow	Natura	Humbo	Eureka	10	40.83	-124	Zone-1	T05N,	NORTH	EXACT	MARSHLAND AND A			SITE B	UNKN	#####	Eureka	10	4E+05	5E+06
Packer	seacoa	Dicots	PDAST	None	None	G4T4	S2S3	2B.2		46	73719	72848	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Panthe	400	41.03	-124	Zone-1	T08N,	ALONG	EXACT	ON RIVER BANK.			ONLY	UNKN	#####	Cranne	10	4E+05	5E+06
Sidalce	Siskiyo	Dicots	PDMAI	None	None	G4G5T	S2	1B.2	SB_UC	29	74164	73231	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	145	40.96	-124	Zone-1	T07N,	ALONG FIELD		MOWE	Road/t	ROAD	APPRO	PVT	#####	Arcata	10	4E+05	5E+06
Spergu	wester	Dicots	PDCAF	None	None	G5T4	S1	2B.1		4	74262	61449	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	5	40.79	-124	Zone-1	T05N,	SOUTH	MAPPE	SATUR	Develo	HABIT	75 PLA	UNKN	#####	Arcata	10	4E+05	5E+06
Trichoc	cylindri	Bryoph	NBMUS	None	None	G4G5	S2	2B.2		12	74437	73466	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata North (		40.89	-124	Zone-1	T06N,	OPEN,	EXACT	OPEN, GRASSY FIEL			ONLY	UNKN	#####	Arcata	10	4E+05	5E+06
Viola p	alpine	Dicots	PDVIO	None	None	G5	S1S2	2B.2		6	74504	73534	2E+07	2E+07	N	U-Unkn	Presun	Circula	90	Unknow	Natura	Humbo	Arcata South (		40.79	-124	Zone-1	T05N,	3.5 MIL	EXACT	IN HEAVY FOREST.			ONLY	UNKN	#####	Arcata	10	4E+05	5E+06
Rana b	foothill	Amphib	AAABH	None	None	G3T4	S4		BLM_S	256	75367	74345	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	790	40.79	-124	Zone-1	T05N,	JACOB	SITE D	COASTAL STREAM.			COLLE	CITY C	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	83	75505	74494	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	10	40.86	-124	Zone-1	T06N,	ARCAT	ON BC	TARICHA GRANULO			7 FRO	CITY C	#####	Arcata	10	4E+05	5E+06
Rana b	foothill	Amphib	AAABH	None	None	G3T4	S4		BLM_S	172	75567	74567	2E+07	2E+07	N	U-Unkn	Presun	Specifi	10	Unknow	Natura	Humbo	Panthe	390	41.12	-124	Zone-1	T08N,	ALONG	FELLERS SITE ID #R-006X,				4 ADU	UNKN	#####	Panthe	10	4E+05	5E+06
Rana b	foothill	Amphib	AAABH	None	None	G3T4	S4		BLM_S	170	75819	74818	2E+07	2E+07	N	U-Unkn	Presun	Non-sp	30	Unknow	Natura	Humbo	Hupa M	570	41.08	-124	Zone-1	T08N,	ALONG	REACH #32 MAPPED TO PF				2 ADU	UNKN	#####	Panthe	10	4E+05	5E+06

Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	88	75956	74818	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Hupa M	570	41.08	-124	Zone-1	T08N,	0.9 KM	REI SURVEY REACH NUMB				1 CAPT	UNKN	#####	Panthe	10	4E+05	5E+06
Rana b	foothill	Amphib	AAABH	None	None	G3T4	S4		BLM_S	343	75989	74980	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbo	Maple	400	40.76	-124	Zone-1	T04N,	BOULD	MAPPED TO BET06U0001 F				10 COI	PVT	#####	Maple	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	204	80721	79728	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	100	40.75	-124	Zone-1	T04N,	LOWE	STUDY	3 TO 8 FOOT WIDE S			MULTI	UNKN	#####	Arcata	10	4E+05	5E+06
Eucycl	tidewat	Fish	AFCQN	Endang	None	G3	S3		AFS_E	119	82215	81225	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknow	Natura	Humbo	Fields L	5	40.75	-124	Zone-1	T04N,	VICINI	LAT-LO	2006 GOBY HAD AN			ONE C	UNKN	#####	Eureka	10	4E+05	5E+06
Eucycl	tidewat	Fish	AFCQN	Endang	None	G3	S3		AFS_E	120	82216	81226	200609	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	10	40.79	-124	Zone-1	T05N,	VICINI	LAT-LONG GIVEN IS ON LA				52 TIS	UNKN	#####	Arcata	10	4E+05	5E+06
Riparia	bank s	Birds	ABPAU	None	Threate	G5	S3		BLM_S	225	83680	82678	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbo	Cranne	60	41.04	-124	Zone-1	T08N,	MOUT	NEST LOCATED ABOUT MI				NEST	UNKN	#####	Cranne	10	4E+05	5E+06
Coptis	Oregon	Dicots	PDRAN	None	None	G4?	S3?	4.2		63	84638	83605	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	3000	40.99	-124	Zone-1	T07N,	ALONG	PLANT	BROAD	Loggin	TIMBE	5 PLAN	PVT-G	#####	Blue La	10	4E+05	5E+06
Coptis	Oregon	Dicots	PDRAN	None	None	G4?	S3?	4.2		64	84639	83606	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	1400	40.96	-124	Zone-1	T07N,	ALONG	PLANT	SHADY	Loggin	LAND	4 PLAN	PVT-G	#####	Blue La	10	4E+05	5E+06
Coptis	Oregon	Dicots	PDRAN	None	None	G4?	S3?	4.2		65	84665	83636	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	1260	40.95	-124	Zone-1	T07N,	SOUTH	ON TH	STEEP	Loggin	POTEN	2000 P	PVT-G	#####	Blue La	10	4E+05	5E+06
Actiner	northw	Reptile	ARAAD	Propos	None	G2	SNR		BLM_S	1238	84817	83795	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	32	40.77	-124	Zone-1	T04N,	ALONG	MAPPED TO I		Other |	SEDIM	1 ADU	UNKN	#####	Arcata	10	4E+05	5E+06
Riparia	bank s	Birds	ABPAU	None	Threate	G5	S3		BLM_S	108	85385	32648	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Eureka	50	40.8	-124	Zone-1	T05N,	EUREK	LOCATION STATED AS "EU				EGG S	UNKN	#####	Eureka	10	4E+05	5E+06
Riparia	bank s	Birds	ABPAU	None	Threate	G5	S3		BLM_S	298	85487	84459	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Arcata	60	40.9	-124	Zone-1	T06N,	MAD R	LOCATION STATED AS "ES				AT LEA	UNKN	#####	Arcata	10	4E+05	5E+06
Coptis	Oregon	Dicots	PDRAN	None	None	G4?	S3?	4.2		79	86626	85594	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Lord-E	2300	40.89	-124	Zone-1	T06N,	BALD I	4 COL	ABOVE	Loggin	WITHIN	106 PL	PVT-G	#####	Lord-E	10	4E+05	5E+06
Coptis	Oregon	Dicots	PDRAN	None	None	G4?	S3?	4.2		80	86627	85595	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	780	40.97	-124	Zone-1	T07N,	NORTH	MAPPE	10 FT U	Develo	WITHIN	75 PLA	PVT-G	#####	Blue La	10	4E+05	5E+06
Cardar	seaside	Dicots	PDBRA	None	None	G4G5	S3	2B.1		2	86720	85693	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	McWhi	310	40.76	-124	Zone-1	T04N,	FRESH	UNABL	NORTH COAST RED			ONLY	UNKN	#####	Arcata	10	4E+05	5E+06
Spirinc	longfin	Fish	AFCHE	Propos	Threate	G5	S1		IUCN_	1	86738	85708	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	0	40.81	-124	Zone-1	T05N,	EUREK	MAPPE	1981-1982 STUDY SI			3 COLL	UNKN	#####	Eureka	10	4E+05	5E+06
Spirinc	longfin	Fish	AFCHE	Propos	Threate	G5	S1		IUCN_	2	86739	72341	200508	200508	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Fields L	0	40.83	-124	Zone-1	T05N,	NORTH	MAPPE	1983-1984 COLLECT			3 COLL	UNKN	#####	Eureka	10	4E+05	5E+06
Spirinc	longfin	Fish	AFCHE	Propos	Threate	G5	S1		IUCN_	7	86788	85758	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Eureka	0	40.78	-124	Zone-1	T99X,	ALONG	MAPPED TO GENERAL ARE				7 COLL	UNKN	#####	Eureka	10	4E+05	5E+06
Spirinc	longfin	Fish	AFCHE	Propos	Threate	G5	S1		IUCN_	8	86790	85760	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknow	Natura	Humbo	Eureka	0	40.76	-124	Zone-1	T99X,	JUST S	MAPPED TO "1/2 MILE SOU				33 COI	UNKN	#####	Eureka	10	4E+05	5E+06
Oncorh	coast c	Fish	AFCHA	None	None	G5T4	S3		AFS_V	83	88167	87201	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	100	40.88	-124	Zone-1	T06N,	LEGGI	"REACH 132." MAPPED TO				22 DET	UNKN	#####	Arcata	10	4E+05	5E+06
Riparia	bank s	Birds	ABPAU	None	Threate	G5	S3		BLM_S	319	90634	89627	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknow	Natura	Humbo	Korbel	100	40.85	-124	Zone-1	T05N,	ALONG	BANK WITH COLONY LOCA				BANK	UNKN	#####	Korbel	10	4E+05	5E+06
Thaleic	eulach	Fish	AFCHE	Threate	None	G5	S1		CDFW	2	91921	90882	197604	2E+07	N	X-None	Possib	Non-sp	30	Decrea	Natura	Humbo	Korbel (40123		40.91	-124	Zone-1	T06N,	MAD R	DETEC	THE M	Develo	WATEI	REPOR	UNKN	#####	Arcata	10	4E+05	5E+06
Thaleic	eulach	Fish	AFCHE	Threate	None	G5	S1		CDFW	4	91925	90887	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Korbel (40123		40.84	-124	Zone-1	T05N,	HUMB	EXACT	EULACHON REPORT			1 ADU	DFG, U	#####	Arcata	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL	None	None	G4G5	S3	2B.2	SB_UC	124	92129	91076	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	2400	40.87	-124	Zone-1	T06N,	ALONG	3 POLY	MOIST	Loggin	THREA	2010 P	PVT-G	#####	Korbel	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL	None	None	G4G5	S3	2B.2	SB_UC	125	92130	91077	2E+07	2E+07	N	D-Poor	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	2200	40.86	-124	Zone-1	T06N,	SOUTH	JUST U	SOUTH	Loggin	THREA	1 PLAN	PVT-G	#####	Korbel	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL	None	None	G4G5	S3	2B.2	SB_UC	126	92131	91078	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	330	40.83	-124	Zone-1	T05N,	SOUTH	PLANT	GROW	Loggin	LAND I	ROUG	PVT-G	#####	Korbel	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL	None	None	G4G5	S3	2B.2	SB_UC	127	92132	91079	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	1600	40.81	-124	Zone-1	T05N,	FICKLE	2 POLY	N POL	Loggin	THREA	310 PL	PVT-G	#####	Korbel	10	4E+05	5E+06
Erythro	giant fa	Monoc	PMLIL	None	None	G5	S2	2B.2	SB_UC	19	92833	91743	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Lord-E	2000	40.94	-124	Zone-1	T06N,	APPRO	EXACT	MIXED EVERGREEN			ONLY	UNKN	#####	Lord-E	10	4E+05	5E+06
Erythro	giant fa	Monoc	PMLIL	None	None	G5	S2	2B.2	SB_UC	27	92853	91755	2E+07	2E+07	N	U-Unkr	Presun	Circula	70	Unknow	Natura	Humbo	Hupa Mountai		41.07	-124	Zone-1	T08N,	2 MILE	EXACT	ROADSIDE.			ONLY	UNKN	#####	Hupa M	10	4E+05	5E+06
Sulcari	twisted	Lichens	NLT00	None	None	G3G4	S2	1B.2	BLM_S	5	93915	92757	2E+07	2E+07	N	U-Unkr	Presun	Circula	80	Unknow	Natura	Humbo	Eureka	30	40.83	-124	Zone-1	T05N,	MANIL	EXACT	IN 1974, PINE FORES			SITE B	UNKN	#####	Eureka	10	4E+05	5E+06
Sulcari	twisted	Lichens	NLT00	None	None	G3G4	S2	1B.2	BLM_S	6	93916	92758	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	43	40.86	-124	Zone-1	T06N,	ARCAT	MAPPE	HOST: PINUS CONT			"COMM	BLM	#####	Eureka	10	4E+05	5E+06
Sulcari	twisted	Lichens	NLT00	None	None	G3G4	S2	1B.2	BLM_S	7	93917	92759	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Tyee C	40	40.88	-124	Zone-1	T06N,	LANPH	MAPPE	HOST: PINUS CONT			SITE B	USFWS	#####	Tyee C	10	4E+05	5E+06
Coptis	Oregon	Dicots	PDRAN	None	None	G4?	S3?	4.2		114	94035	92879	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	970	40.97	-124	Zone-1	T07N,	APPRO	NORTH	NORTH	Loggin	TIMBE	18 PLA	PVT-G	#####	Blue La	10	4E+05	5E+06
Fisside	minute	Bryoph	NBMUS	None	None	G3?	S2	1B.2	USFS_	18	94049	92900	2E+07	2E+07	N	U-Unkr	Presun	Circula	70	Unknow	Natura	Humbo	Arcata	100	40.76	-124	Zone-1	T04N,	FRESH	MAPPE	ON MOIST SOIL IN D			SITE B	UNKN	#####	Arcata	10	4E+05	5E+06
Corynd	Towns	Mamm	AMAC	None	None	G4	S2		BLM_S	566	94294	93148	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Korbel	250	40.84	-124	Zone-1	T05N,	ABOUT	EXACT LOCATION UNKNOW				1 MALI	UNKN	#####	Korbel	10	4E+05	5E+06
Corynd	Towns	Mamm	AMAC	None	None	G4	S2		BLM_S	571	94301	93153	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbo	Arcata	30	40.81	-124	Zone-1	T05N,	7244 M	EXACT LOCATION UNKNOW				1 FEM	UNKN	#####	Arcata	10	4E+05	5E+06
Chloro	Point R	Dicots	PDSCR	None	None	G4?T2	S2	1B.2	BLM_S	79	95183	94059	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	5	40.83	-124	Zone-1	T05N,	BRACU	MAPPE	MIXED SALT MARSH			~500 P	PVT	#####	Arcata	10	4E+05	5E+06
Chloro	Point R	Dicots	PDSCR	None	None	G4?T2	S2	1B.2	BLM_S	80	95184	94060	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Eureka (40124		40.81	-124	Zone-1	T05N,	WOOD	EXACT	SALT MARSH.			ONLY	UNKN	#####	Eureka	10	4E+05	5E+06
Chloro	Point R	Dicots	PDSCR	None	None	G4?T2	S2	1B.2	BLM_S	81	95185	94061	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka (40124		40.79	-124	Zone-1	T05N,	WEST	2 POLY	COAST	Vandal	GARBA	244 PL	CITY C	#####	Eureka	10	4E+05	5E+06
Chloro	Point R	Dicots	PDSCR	None	None	G4?T2	S2	1B.2	BLM_S	82	95186	94062	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbo	Tyee City (401		40.93	-124	Zone-1	T06N,	MAD R	EXACT	HIGH ELEVATION SA			ONLY	HUM C	#####	Tyee C	10	4E+05	5E+06
Montia	Howell	Dicots	PDPOR	None	None	G3G4	S2	2B.2		104	96756	95621	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	39	40.88	-124	Zone-1	T06N,	BETWE	MAPPE	ALONG	Other |	WEED	MORE	PVT	#####	Arcata	10	4E+05	5E+06
Bombu	obscur	Insects	IIHYM	None	None	G2G3	S1S2		IUCN_	23	97248	96092	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Cranne	70	41.04	-124	Zone-1	T08N,	SPRIN	EXACT LOCATION UNKNOW				COLLE	UNKN	#####	Cranne	10	4E+05	5E+06
Bombu	obscur	Insects	IIHYM	None	None	G2G3	S1S2		IUCN_	24	97249	96094	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Arcata	20	41.01	-124	Zone-1	T07N,	4.5 MIL	COLLECTION LOCALITIES I				COLLE	UNKN	#####	Cranne	10	4E+05	5E+06
Bombu	obscur	Insects	IIHYM	None	None	G2G3	S1S2		IUCN_	25	97253	96098	2E+07	2E+07	N	U-Unkr	Presun	Circula	80	Unknow	Natura	Humbo	Arcata	10	40.93	-124	Zone-1	T06N,	MAD R	EXACT LOCATION UNKNOW				COLLE	HUM C	#####	Tyee C	10	4E+05	5E+06
Bombu	obscur	Insects	IIHYM	None	None	G2G3	S1S2		IUCN_	26	97295	96139	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Arcata	100	40.87	-124	Zone-1	T06N,	ARCAT	EXACT LOCATION UNKNOW				SPECI	UNKN	#####	Arcata	10	4E+05	5E+06
Bombu	obscur	Insects	IIHYM	None	None	G2G3	S1S2		IUCN_	27	97297	32648	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Eureka	50	40.8	-124	Zone-1	T05N,	EUREK	EXACT LOCATION UNKNOW				SPECI	UNKN	#####	Eureka	10	4E+05	5E+06
Bombu	obscur	Insects	IIHYM	None	None	G2G3	S1S2		IUCN_	28	97321	96164	2E+07	2E+07	N	U-Unkr	Presun	Circula	70	Unknow	Natura	Humbo	Fields L	0	40.75	-124	Zone-1	T04N,	SOUTH	EXACT LOCATION UNKNOW				COLLE	DFG-S	#####	Fields L	10	4E+05	5E+06
Bombu	obscur	Insects	IIHYM	None	None	G2G3	S1S2		IUCN_	30	97327	96166	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Iaqua B	2100	40.76	-124	Zone-1	T04N,	KNEEL	EXACT LOCATION UNKNOW				COLLE	UNKN	#####	Korbel	10	4E+05	5E+06
Bombu	obscur	Insects	IIHYM	None	None	G2G3	S1S2		IUCN_	32	97330	96171	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknow	Natura	Humbo	Maple	540	40.76	-124	Zone-1	T04N,	MAPLE	EXACT LOCATION UNKNOW				2 COLL	UNKN	#####	Maple	10	4E+05	5E+06
Bombu	obscur	Insects	IIHYM	None	None	G2G3	S1S2		IUCN_	44	97370	06844	1978XX	1978XX	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Tyee C	50	40.89	-124	Zone-1	T06N,	LANPH	EXACT LOCATION UNKNOW				1 QUE	USFWS	#####	Tyee C	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threate	None	G5T3Q	S3		AFS_T	3	97591	B8495	2E+07	2E+07	N	C-Fair	Presun	Non-sp	30	Decrea	Natura	Humbo	Lord-E	119	41.21	-124	Zone-1	T09N,	LOWE	MAPPE	PORTI	Loggin	TIMBE	10,000	NPS, D	#####	Rodger	10	4E+05	5E+06
Oenoth	Wolf's	Dicots	PDONA	None	None	G2	S1	1B.1	SB_Be	29	98735	97444	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	25	40.99	-124	Zone-1	T07N,	HIGHW	EXACT	ROADSIDE.			SITE B	HUM C	#####	Arcata	10	4E+05	5E+06
Bombu	western	Insects	IIHYM	None	Candid	G3	S1		IUCN_	36	99449	96098	2E+07	2E+07	N	U-Unkr	Presun	Circula	80	Unknow	Natura	Humbo	Arcata	10	40.93	-124	Zone-1	T06N,	MAD R	EXACT LOCATION UNKNOW				COLLE	HUM C	#####	Tyee C	10	4E+05	5E+06
Bombu	western	Insects	IIHYM	None	Candid	G3	S1		IUCN_	37	99452	06844	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Tyee C	50	40.89	-124	Zone-1	T06N,	LANPH	EXACT LOCATION UNKNOW				COLLE	USFWS	#####	Tyee C	10	4E+05	5E+06
Bombu	western	Insects	IIHYM	None	Candid	G3	S1		IUCN_	38	99460	96139	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Arcata	100	40.87	-124	Zone-1	T06N,	ARCAT	EXACT LOCATION UNKNOW				COLLE	UNKN	#####	Arcata	10	4E+05	5E+06
Bombu	western	Insects	IIHYM	None	Candid	G3	S1		IUCN_	39	99491	98086	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Eureka	20	40.84	-124	Zone-1	T05N,	VICINI	EXACT LOCATION UNKNOW				COLLE	PVT, M	#####	Eureka	10	4E+05	5E+06
Bombu	western	Insects	IIHYM	None	Candid	G3	S1		IUCN_	40	99492	98088	2E+07	2E+07	N	U-Unkr	Presun	Circula	80	Unknow	Natura	Humbo	Eureka	15	40.78	-124	Zone-1	T05N,	3 MILE	EXACT LOCATION UNKNOW				COLLE	UNKN	#####	Eureka	10	4E+05	5E+06
Bombu	western	Insects	IIHYM	None	Candid	G3	S1		IUCN_	41	99494	32648	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Eureka	50	40.8	-124	Zone-1	T05N,	EUREK	EXACT LOCATION UNKNOW				COLLE	UNKN	#####	Eureka	10	4E+05	5E+06
Bombu	western	Insects	IIHYM	None	Candid	G3	S1		IUCN_	42	99495	98090	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Arcata	100	40.99	-124	Zone-1	T07N,	8 MILE	EXACT LOCATION UNKNOW				COLLE	UNKN	#####	Arcata	10	4E+05	5E+06
Bombu	western	Insects	IIHYM	None	Candid	G3	S1		IUCN_	43	99496	96166	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Iaqua B	2100	40.76	-124	Zone-1	T04N,	KNEEL	EXACT LOCATION UNKNOW				COLLE	UNKN	#####	Korbel	10	4E+05	5E+06
Carex L	Lyngby	Monoc	PMCYP	None	None	G5	S3	2B.2	IUCN_	30	99684	98273	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	10	40.78	-124	Zone-1	T05N,	ALONG	MAPPE	GROW	Other	MAJOR	UNKN	PVT-G	#####	Arcata	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL	None	None	G4G5	S3	2B.2	SB_UC	143	99740	98331	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	1700	40.8	-124	Zone-1	T05N,	WEST	MAPPE	ON LA	Loggin	TIMBE	525 PL	PVT-G	#####	Korbel	10	4E+05	5E+06
Montia	Howell	Dicots	PDPOR	None	None	G3G4	S2	2B.2		105	99998	98630	2020XX	2020XX	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	300	40.81	-124	Zone-1	T05N,	SOUTH	MAPPE	GROW	Loggin	ROAD	"MULT	PVT-G	#####	Korbel	10	4E+05	5E+06
Lilium o	western	Monoc	PMLIL	Endang	Endang	G1G2	S1	1B.1	SB_Be	33	1E+05	99352	2E+07	2E+07	Y	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	60					*SENS	PLEAS	SHORE	Over-c	2 OF THE 3 PLANTS			#####	Arcata	0		
Castille	Humbo	Dicots	PDSCR	None	None	G4T2	S2	1B.2	BLM_S	20	1E+05	23572	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	7	40.82	-124	Zone-1	T05N,	INDIAN	INDIAN	SPART	Road/t	POTEN	WEST	CITY C	#####	Eureka	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCR	None	None	G4T2	S2	1B.2	BLM_S	38	1E+05	99583	2E+07	2E+07	N	A-Exce	Presun	Specifi	10	Unknow	Natura	Humbo	Eureka	5	40.81	-124	Zone-1	T05N,	SOUTH	MAPPE	SALT M	Develo	DEVEL	100 PL	PVT?	#####	Eureka	10	4E+05	5E+06
Castille	Humbo	Dicots	PDSCR	None	None	G4T2	S2	1B.2	BLM_S	39	1E+05	99584	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	5	40.78	-124	Zone-1	T05N,	WEST EDGE		MAINLAND SALT MA			739 PL	CITY C	#####	Eureka	10	4E+05	5E+06
Elanus	white-t	Birds	ABNKC	None	None	G5	S3S4		BLM_S	164	1E+05	99694	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Eureka	60	40.76	-124	Zone-1	T04N,	ABOUT	MAPPE	NEST A	Develo	DEVEL	NESTI	UNKN	#####	Eureka	10	4E+05	5E+06
Elanus	white-t	Birds	ABNKC	None	None	G5	S3S4		BLM_S	165	1E+05	99695	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Eureka	60	40.77	-124	Zone-1	T05N,	ABOUT	MAPPE	NEST A	Other	NEST I	NESTI	UNKN	#####	Eureka	10	4E+05	5E+06
Pandio	osprey	Birds	ABNKC	None	None	G5	S4		CDF_S	489	1E+05	99700	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Eureka	10	40.76	-124	Zone-1	T04N,	ABOUT	MAPPE	NEST I	Other	POTEN	NESTI	UNKN	#####	Eureka	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	274	1E+05	A0320	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	1230	40.87	-124	Zone-1	T06N,	HATCH	NEAR	SOUTHERN TORRE			36 FOU	PVT-G	#####	Korbel	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	275	1E+05	A0605	200608	200608	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	150	40.83	-124	Zone-1	T05N,	CANON CREE		NORTHERN RED-LE			3 SUB	PVT-G	#####	Korbel	10	4E+05	5E+06

Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	276	1E+05	A0608	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Korbel	200	40.81	-124	Zone-1	T05N,	ALON(	NEAR THE MOUTH OF A TF				7 CAP	PVT-G	#####	Korbel	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	277	1E+05	A0610	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Korbel	800	40.8	-124	Zone-1	T05N,	1.2 AIF	ALONG A TRIBUTARY, 0.35				1 INDI	PVT-G	#####	Korbel	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	278	1E+05	A0611	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Korbel	930	40.8	-124	Zone-1	T05N,	DEVIL CREEK, 1.0 MILE SW OF ITS					10 IND	PVT-G	#####	Korbel	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	283	1E+05	A0623	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	2100	40.99	-124	Zone-1	T07N,	4.5 AIF	NEAR THE POINT WHERE I				INDIVI	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	284	1E+05	A0931	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	800	40.98	-124	Zone-1	T07N,	NORTH FORK MAD RIVER, 0.1 MIL					6 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threat	None	G5T3Q	S3		AFS_T	6	1E+05	A0738	2E+07	2E+07	N	D-Poor	Presun	Non-sp	30	Decrea	Natura	Humbc	Panthe	302	41.11	-124	Zone-1	T08N,	MAPLE CREEK AND			Loggin	LOGGI	ABOU	PVT	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	285	1E+05	A0933	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	1050	40.97	-124	Zone-1	T07N,	0.3 MILE SW OF THE CONFLUENC					2 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	286	1E+05	A0935	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	1100	40.96	-124	Zone-1	T07N,	ALONG CANYON CREEK, 1.1 TO 1					157 FC	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	287	1E+05	A0937	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	700	40.94	-124	Zone-1	T06N,	ALONG MULE CREEK, 0.2 MILE NE					FOUNI	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	288	1E+05	A0938	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	600	40.92	-124	Zone-1	T06N,	PINE CREEK,		NORTHERN RED-LE			COLLE	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	289	1E+05	A0939	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	700	40.92	-124	Zone-1	T06N,	1.5 AIF	ALONG A TRIBUTARY TO L				2 SUB	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	290	1E+05	A0940	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	500	40.91	-124	Zone-1	T06N,	POLLOCK CREEK AT THE CONFLU					MANY	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	291	1E+05	A0941	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	1200	40.91	-124	Zone-1	T06N,	POLL(	MAPPED AS TWO POLYGO				1 CAP	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	292	1E+05	A0942	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	750	40.9	-124	Zone-1	T06N,	0.8 AIF	ALONG AN UNNAMED TRIB				MANY	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	293	1E+05	A0944	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	500	40.9	-124	Zone-1	T06N,	BALD MOUNTAIN CREEK, JUST UI					546 DE	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	294	1E+05	A0948	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbc	Blue La	400	40.89	-124	Zone-1	T06N,	JIGGS	FROM THE CONFLUENCE T				5 CAP	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	295	1E+05	A8177	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	1200	40.88	-124	Zone-1	T06N,	ALONG JIGGS CREEK, 0.7 TO 1.0 I					MANY	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	296	1E+05	A0953	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	1700	40.88	-124	Zone-1	T06N,	2.0 AIF	ALONG A SOUTHERN TRIB				5 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	297	1E+05	A0957	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Arcata	300	40.82	-124	Zone-1	T05N,	ALONG ROCKY GULCH, 0.9 MILE S					3 INDI	PVT-G	#####	Arcata	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	298	1E+05	A0958	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Arcata	135	40.94	-124	Zone-1	T06N,	0.5 AIF	ALONG A TRIBUTARY TO L				2 INDI	PVT-G	#####	Arcata	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	300	1E+05	A0965	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	650	41.08	-124	Zone-1	T08N,	ALONG PANTHER CREEK, 0.75 MI					1 SUB	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	301	1E+05	A0968	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	1000	41.08	-124	Zone-1	T08N,	1.1 AIF	ALONG A NORTHERN TRIB				2 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	302	1E+05	A0970	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Panthe	800	41.07	-124	Zone-1	T08N,	ALONG PANTHER CREEK, 1.4 MIL					47 FOU	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	303	1E+05	A1017	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	900	41.04	-124	Zone-1	T08N,	TRIBUTARY TO REDWOOD CREEI					20 FOU	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	304	1E+05	A1018	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	1000	41.04	-124	Zone-1	T08N,	TRIBUTARY TO REDWOOD CREEI					24 FOU	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	305	1E+05	A1019	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	550	41.03	-124	Zone-1	T08N,	1.1 AIF	ALONG A TRIBUTARY, 0.3 I				5 WER	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	306	1E+05	A1020	2014X	2014X	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Panthe	300	41.03	-124	Zone-1	T07N,	CONFLUENCE OF UPPER SOUTH					CAUGI	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	307	1E+05	A1021	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	550	41.03	-124	Zone-1	T07N,	REDW	AT AN UNNAMED TRIBUTA				1 SUB	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	308	1E+05	A1022	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	900	41.02	-124	Zone-1	T07N,	1.1 AIF	ALONG A TRIBUTARY TO R				5 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	309	1E+05	A1023	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	1200	41.01	-124	Zone-1	T07N,	2.0 AIF	ALONG A TRIBUTARY TO U				7 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	310	1E+05	A1024	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	1100	41	-124	Zone-1	T07N,	1.8 AIF	ALONG A TRIBUTARY TO U				12 IND	PVT-G	#####	Panthe	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL(	None	None	G4G5	S3	2B.2	SB_U(	148	1E+05	A1154	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknov	Natura	Humbc	Korbel	1900	40.86	-124	Zone-1	T06N,	ALON(	MAPPI	GROW	Loggin	EROSI	ABOU	PVT-G	#####	Korbel	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLN	None	None	G2	S2	1B.2	BLM_S	51	1E+05	06770	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbc	Fields I	10	40.73	-124	Zone-1	T04N,	SOUTI	EXACT LOCATION UNKNOV				ONLY	DFG-S	#####	Fields I	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLN	None	None	G2	S2	1B.2	BLM_S	52	1E+05	A1397	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknov	Natura	Humbc	Eureka	36	40.84	-124	Zone-1	T05N,	MANIL	EXACT	COASTAL SAND DUI			SITE IS	UNKN(	#####	Eureka	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLN	None	None	G2	S2	1B.2	BLM_S	53	1E+05	23043	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknov	Natura	Humbc	Eureka	5	40.81	-124	Zone-1	T05N,	WEST	EXACT	SPARSE GRASSES.			SITE IS	UNKN(	#####	Eureka	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLN	None	None	G2	S2	1B.2	BLM_S	54	1E+05	A1398	2E+07	2E+07	N	B-Goo(	Presun	Specifi	10	Unknov	Natura	Humbc	Eureka	22	40.77	-124	Zone-1	T05N,	SAMO	MAPPI	SEMI-S	Non-na	INVAS	MORE	BLM	#####	Eureka	10	4E+05	5E+06
Gilia m	dark-ey	Dicots	PDPLN	None	None	G2	S2	1B.2	BLM_S	55	1E+05	36525	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbc	Tyee C	30	40.91	-124	Zone-1	T06N,	WEST	EXACT	SAND DUNES.			ONLY	UNKN(	#####	Tyee C	10	4E+05	5E+06
Lasthe	perenn	Dicots	PDAST	None	None	G3T2	S2	1B.2	BLM_S	60	1E+05	32648	191305	191305	N	U-Unkr	Presun	Circula	90	Unknov	Natura	Humbc	Eureka	(40124	40.8	-124	Zone-1	T05N,	EUREI	EXACT LOCATION UNKNOV				ONLY	UNKN(	#####	Eureka	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	348	1E+05	A1641	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Cranne	400	41.12	-124	Zone-1	T09N,	ALONG A TRIBUTARY TO MAPLE (					SEVEF	PVT-G	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	349	1E+05	A1642	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Cranne	700	41.1	-124	Zone-1	T08N,	ALON(	ABOUT 2.75 MILES EAST O				1 SUB	PVT-G	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	350	1E+05	A1656	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Cranne	500	41.09	-124	Zone-1	T08N,	0.3 MIL	NEAR THE MOUTH OF A TF				14 IND	PVT-G	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	351	1E+05	A1657	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Cranne	550	41.08	-124	Zone-1	T08N,	ALONG BEACH CREEK, 0.5 MILE S					2 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	352	1E+05	A1658	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Cranne	600	41.04	-124	Zone-1	T08N,	1.1 AIF	ALONG A TRIBUTARY OF L				2 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	353	1E+05	A1661	2007X	2007X	N	U-Unkr	Presun	Circula	40	Unknov	Natura	Humbc	Cranne	300	41.04	-124	Zone-1	T08N,	RAILR	LOCATION WAS GIVEN AS				10 SUE	PVT-G	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	354	1E+05	A1662	2014X	2014X	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Cranne	150	41.03	-124	Zone-1	T08N,	RAILROAD CREEK, JUST UPSTRE					COLLE	PVT-G	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	355	1E+05	A1664	201706	201706	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Cranne	300	41.03	-124	Zone-1	T08N,	NEAR CONFLUENCE OF LOWER S					NUMBI	PVT-G	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	356	1E+05	A1667	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Cranne	300	41.02	-124	Zone-1	T07N,	0.5 AIF	ALONG A SOUTH TRIBUTA				2 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	357	1E+05	A1669	2014X	2014X	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Cranne	150	41.01	-124	Zone-1	T07N,	NEAR THE CONFLUENCE OF SOU					NUMBI	PVT-G	#####	Cranne	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJF	None	None	G5	S2S3		BLM_S	813	1E+05	A1885	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknov	Natura	Humbc	Arcata	182	40.96	-124	Zone-1	T07N,	MURR	EXACT LOCA		Vehicle	VEHIC	1 FISH	UNKN(	#####	Arcata	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJF	None	None	G5	S2S3		BLM_S	814	1E+05	A1886	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknov	Natura	Humbc	Arcata	319	40.97	-124	Zone-1	T07N,	MURR	EXACT LOCA		Vehicle	VEHIC	1 FISH	UNKN(	#####	Arcata	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	194	1E+05	A2445	199XX	199XX	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbc	Arcata	200	40.87	-124	Zone-1	T06N,	CAMPI	CAMPBELL CREEK IS THE				5 ADU	CITY C	#####	Arcata	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	200	1E+05	A2507	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	1600	41.08	-124	Zone-1	T08N,	1.4 AIF	ALON(	CLEAR STREAM WI			5 LARV	PVT-G	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphit	AAABA	None	None	G4	S3S4		CDFW	379	1E+05	A2507	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Panthe	1600	41.08	-124	Zone-1	T08N,	1.4 AIF	ALON(	CLEAR STREAM WI			ONE F	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	243	1E+05	A0320	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Korbel	1230	40.87	-124	Zone-1	T06N,	HATCI	NEAR	PACIFIC TAILED FR(			DETE(	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	244	1E+05	A2745	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Korbel	650	40.82	-124	Zone-1	T05N,	0.8 AIF	ALONG A TRIBUTARY OF D				1 INDI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	245	1E+05	A0608	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Korbel	200	40.81	-124	Zone-1	T05N,	ALON(	NEAR THE MOUTH OF A TF				2 INDI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	246	1E+05	A0610	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Korbel	800	40.8	-124	Zone-1	T05N,	1.2 AIF	ALONG A TRIBUTARY, 0.35				4 INDI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	247	1E+05	A2747	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Korbel	700	40.79	-124	Zone-1	T05N,	1.3 AIF	ALONG AN UNNAMED DRA				6 INDI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	248	1E+05	A0623	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	2100	40.99	-124	Zone-1	T07N,	4.5 AIF	NEAR THE POINT WHERE I				4 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	249	1E+05	A2749	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	2200	40.98	-124	Zone-1	T07N,	1.5 AIR MILES WEST OF THE CON					51 IND	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	250	1E+05	A2752	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	2300	40.98	-124	Zone-1	T07N,	1.9 AIR MILES NE OF THE CONFLU					5 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	251	1E+05	A2760	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	900	40.97	-124	Zone-1	T07N,	0.4 MILE NORTH OF THE CONFLU					4 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	252	1E+05	A2762	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknov	Natura	Humbc	Blue La	1300	40.97	-124	Zone-1	T07N,	1 MILE EAST OF THE CONFLUEN(					SMALL	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	253	1E+05	A2765	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	1400	40.96	-124	Zone-1	T07N,	ALONG CANYON CREEK, 1.4 AIR I					5 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	254	1E+05	A2766	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	987	40.96	-124	Zone-1	T07N,	ALONG CANYON CREEK, 1.1 AIR I					1 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	255	1E+05	A2767	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	700	40.96	-124	Zone-1	T07N,	ALONG NORTH FORK MAD RIVER					16 IND	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	256	1E+05	A2769	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	1100	40.95	-124	Zone-1	T07N,	0.7 AIF	ALONG A TRIBUTARY TO K				4 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	257	1E+05	A2770	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	1100	40.95	-124	Zone-1	T07N,	ALONG MULE CREEK, 0.7 MILE NE					4 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	258	1E+05	A2772	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	1200	40.94	-124	Zone-1	T06N,	0.6 AIF	SITE REPRESENTED AS TV				3 FOU	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	259	1E+05	A0937	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknov	Natura	Humbc	Blue La	700	40.94	-124	Zone-1	T06N,	ALONG MULE CREEK, 0.2 MILE NE					1 FOU	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	260	1E+05	A2777	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	850	40.93	-124	Zone-1	T06N,	LONG PRAIRIE CREEK, 1.3 MILES					1 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyaco	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	261	1E+05	A2778	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknov	Natura	Humbc	Blue La	1300	40.91	-124	Zone-1	T06N,	1.2 AIF	ALON(	NORTHERN RED-LE			4 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06

Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	262	1E+05	A2779	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	800	40.92	-124	Zone-1	T06N,	0.2 MIL	EAST SIDE OF HWY 299 AL		1 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	263	1E+05	A2780	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	600	40.92	-124	Zone-1	T06N,	0.3 MIL	EAST SIDE OF HWY 299.		NUMB	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	264	1E+05	A2781	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Blue La	1400	40.92	-124	Zone-1	T06N,	1.2 AIF	OCCURRENCE REPRESEN		29 CAF	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	265	1E+05	A2782	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	2100	40.91	-124	Zone-1	T06N,	1.8 MIL	UPPER POLLOCK CREEK (		15 IND	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	266	1E+05	A2783	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	1200	40.91	-124	Zone-1	T06N,	0.9 MILE EAST OF THE CONFLUEN			1 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	267	1E+05	A2784	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Blue La	1200	40.9	-124	Zone-1	T06N,	0.6 MILE ESE OF THE CONFLUEN(			1 CAPT	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	268	1E+05	A2785	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	400	40.9	-124	Zone-1	T06N,	0.3 MILE WEST OF THE CONFLUE			SMALL	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	269	1E+05	A2788	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	250	40.88	-124	Zone-1	T06N,	0.5 MILE SW OF THE CONFLUENC			2 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	270	1E+05	A0949	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Blue La	1200	40.88	-124	Zone-1	T06N,	ALONG JIGGS CREEK, 0.7 TO 0.9			1 CAPT	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	271	1E+05	A0953	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	1700	40.88	-124	Zone-1	T06N,	2.0 AIF	ALONG A SOUTHERN TRIB		4 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	279	1E+05	A2802	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	300	40.82	-124	Zone-1	T05N,	1.5 AIF	ALONG A TRIBUTARY TO W		2 INDI	PVT-G	#####	Arcata	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	280	1E+05	A2805	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	800	40.81	-124	Zone-1	T05N,	1.6 AIR MILES EAST OF THE INTE			1 INDI	PVT-G	#####	Arcata	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	293	1E+05	A2850	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Panthe	1950	41.09	-124	Zone-1	T08N,	1.5 AIR MILES WNW OF THE CONF			1 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	294	1E+05	A2851	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Panthe	850	41.09	-124	Zone-1	T08N,	1.0 AIR MILE ESE OF THE CONFLU			6 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	295	1E+05	A0968	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Panthe	1000	41.08	-124	Zone-1	T08N,	1.1 AIF	ALONG A NORTHERN TRIB		2 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	296	1E+05	A2852	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Panthe	1200	41.07	-124	Zone-1	T08N,	PANTHER CR		COMMERCIAL TIMB	1 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	297	1E+05	A2856	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Panthe	2000	41.06	-124	Zone-1	T08N,	2.4 AIF	ALONG TWO TRIBUTARIES		1 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	298	1E+05	A2858	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Panthe	1300	41.05	-124	Zone-1	T08N,	1.6 AIR MILES WEST OF THE CON			3 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	299	1E+05	A2862	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Panthe	500	41.03	-124	Zone-1	T08N,	0.7 MILE ENE OF CONFLUENCE O			1 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	300	1E+05	A2863	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Panthe	2000	41.02	-124	Zone-1	T07N,	2.0 MILES WEST OF THE CONFLU			2 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Collins	round-l	Dicots	PDSCF	None	None	G1	S1	1B.2	SB_Ca	13	1E+05	32648	XXXXX	XXXXX	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Eureka	(40124	40.8	-124	Zone-1	T05N,	EUREI	COLLECTION LABEL SAYS		ONLY	UNKN(	#####	Eureka	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	301	1E+05	A1023	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Panthe	1200	41.01	-124	Zone-1	T07N,	2.0 AIF	ALONG A TRIBUTARY TO U		1 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	367	1E+05	A3125	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unkno	Natura	Humbo	Cranne	500	41.08	-124	Zone-1	T08N,	NORTI	LOCAT	SECONDARY GROW	1 ADU	PVT	#####	Trinida	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	370	1E+05	A3128	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	1800	41.12	-124	Zone-1	T09N,	5.1 AIF	0.4 MILE WEST OF SHOTGU		1 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	371	1E+05	A3129	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	600	41.09	-124	Zone-1	T08N,	0.3 MIL	ALONG A SMALL TRIBUTAF		12 IND	PVT-G	#####	Cranne	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	372	1E+05	A3130	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	600	41.08	-124	Zone-1	T08N,	1.0 MIL	ALONG A TRIBUTARY OF M		8 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	373	1E+05	A3131	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	650	41.07	-124	Zone-1	T08N,	1.5 AIF	ALONG A TRIBUTARY OF B		3 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	374	1E+05	A3132	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	1100	41.07	-124	Zone-1	T08N,	2.1 MIL	ALONG A TRIBUTARY OF M		2 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	375	1E+05	A3133	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Cranne	750	41.06	-124	Zone-1	T08N,	2.3 AIF	ALON(	1 METER WIDE RIFF	6 LAR	PVT-L(	#####	Cranne	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	376	1E+05	A3134	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Cranne	1000	41.06	-124	Zone-1	T08N,	2.3 AIF	200 ME	2 METER WIDE RIFF	6 ADU	PVT-L(	#####	Cranne	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	377	1E+05	A3137	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	550	41.04	-124	Zone-1	T08N,	0.8 MIL	100 TC	<1 METER WIDE RIF	10 LAF	PVT-L(	#####	Cranne	10	4E+05	5E+06
Rhyac	southe	Amphit	AAAAJ	None	None	G3?	S2S3		CDFW	378	1E+05	A3138	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Panthe	1000	41.01	-124	Zone-1	T07N,	1.5 AIF	ALON(	<1 METER WIDE RIF	3 LAR	PVT-L(	#####	Panthe	10	4E+05	5E+06
Actiner	northw	Reptile	ARAAD	Propos	None	G2	SNR		BLM_S	1345	1E+05	A3920	2E+07	2E+07	N	B-Goo	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	20	41.02	-124	Zone-1	T07N,	S SIDE	MAPPI	BACK DUNES TRAIL	1 ADU	DPR-L	#####	Cranne	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	144	1E+05	A3998	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Korbel	80	40.87	-124	Zone-1	T06N,	ALON(	IN A POND ON THE EAST S		19 EG(	UNKN(	#####	Korbel	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	145	1E+05	A3999	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Korbel	100	40.86	-124	Zone-1	T06N,	POND:	JUST EAST OF MAD RIVER		2 INDI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	146	1E+05	A4000	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Korbel	100	40.86	-124	Zone-1	T06N,	MAD RIVER FISH HATCHERY, ABC			2 INDI	DFG	#####	Korbel	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	147	1E+05	A0320	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	1230	40.87	-124	Zone-1	T06N,	HATCH	NEAR	PACIFIC TAILED FR(	1 INDI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	151	1E+05	A0605	200608	200608	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	150	40.83	-124	Zone-1	T05N,	CANON CREE		PACIFIC TAILED FR(	1 WAS	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	152	1E+05	A4020	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	770	40.82	-124	Zone-1	T05N,	1.1 MILES NE OF THE CONFLUEN(			1 INDI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	153	1E+05	A4023	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	1400	40.81	-124	Zone-1	T05N,	1.2 MILES SW OF THE CONFLUEN			FROG:	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	154	1E+05	A4024	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	450	40.78	-124	Zone-1	T05N,	ALONG MAPLE CREEK, 1.3 AIR MI			COLLE	PVT	#####	Korbel	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	155	1E+05	A4025	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Lord-E	1800	40.94	-124	Zone-1	T07N,	9 MILES EAST OF THE CITY OF BL			COLLE	PVT	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	156	1E+05	A0938	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	600	40.92	-124	Zone-1	T06N,	PINE CREEK,		PACIFIC TAILED FR(	1 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	157	1E+05	A4026	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Blue La	750	40.93	-124	Zone-1	T06N,	NEAR GRASSY CREEK, 2.0 AIR MI			INDIVI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	158	1E+05	A2778	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	1300	40.91	-124	Zone-1	T06N,	1.2 AIF	ALON(	SOUTHERN TORREI	1 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	159	1E+05	A0940	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	500	40.91	-124	Zone-1	T06N,	POLLOCK CR		PACIFIC TAILED FR(	2 INDI	PVT-G	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	160	1E+05	A0942	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Blue La	750	40.9	-124	Zone-1	T06N,	0.8 AIF	ALON(	PACIFIC TAILED FR(	A COL	PVT-G	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	161	1E+05	A4029	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Blue La	600	40.89	-124	Zone-1	T06N,	TUCKER POND, 0.25 MILE NORTH			31 EG(	PVT	#####	Blue La	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	186	1E+05	A4110	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	10	40.87	-124	Zone-1	T06N,	MCDANIEL SLOUGH, NORTH OF S			6 EGG	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	187	1E+05	A4111	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	10	40.86	-124	Zone-1	T06N,	MAD RIVER SLOUGH WILDLIFE AI			121 EC	DFG-M	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	188	1E+05	A4112	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	10	40.86	-124	Zone-1	T06N,	BETWEEN HIGHWAY 101 AND UNI			COLLE	CITY C	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	189	1E+05	A4113	199XX	199XX	N	U-Unkr	Presun	Circula	70	Unkno	Natura	Humbo	Arcata	50	40.86	-124	Zone-1	T06N,	BEITH	LOCATION ONLY DESCRIB		DETE(	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	190	1E+05	A4115	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	200	40.84	-124	Zone-1	T05N,	POND ON SE SIDE OF BAYWOOD			1 EGG	PVT	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	191	1E+05	A4116	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	10	40.81	-124	Zone-1	T05N,	EASTERN PORTION OF FAY SLOU			425 EC	DFG-F	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	192	1E+05	A4118	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	10	40.8	-124	Zone-1	T05N,	WESTERN PORTION OF FAY SLOI			12 EG(	DFG-F	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	193	1E+05	A4121	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	10	40.81	-124	Zone-1	T05N,	ALONG MYRTLE AVENUE, 0.3 MIL			1 EGG	PVT	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	194	1E+05	A4122	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	10	40.8	-124	Zone-1	T05N,	ALONG MYRT		CULVERT ALONG A	1 EGG	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	195	1E+05	A4124	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	10	40.79	-124	Zone-1	T05N,	NEAR	FOUND SE OF MYRTLE AT		5 EGG	PVT	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	196	1E+05	A4125	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	20	40.78	-124	Zone-1	T05N,	0.6 MIL	AT THE TANNIN PONDS, JU		34 EG(	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	197	1E+05	A4127	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Arcata	30	40.78	-124	Zone-1	T05N,	ABOUT	COLLECTION LOCALITY DE		A COL	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	198	1E+05	A4128	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Korbel	800	40.79	-124	Zone-1	T05N,	ALONG JACOBY CREEK ABOUT 3			A COL	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	199	1E+05	A4129	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	100	40.77	-124	Zone-1	T05N,	CLONEY GULCH, 0.2 MILE NORTH			AN AD	PVT	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	200	1E+05	A4131	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	50	40.76	-124	Zone-1	T04N,	FRESHWATER CREEK, 0.1 MILE E			A COL	PVT	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	201	1E+05	A4132	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	10	40.77	-124	Zone-1	T05N,	JUST WEST OF THE INTERSECTI(			6 EGG	UNKN(	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	202	1E+05	A4133	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Eureka	20	40.78	-124	Zone-1	T05N,	ALONG RYAN CREEK, JUST SW O			AT LE/	PVT	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	203	1E+05	A4134	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	10	40.76	-124	Zone-1	T04N,	0.2 MIL	DRAINAGE NORTH OF MAF		4 EGG	CITY C	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	204	1E+05	A4135	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	10	40.76	-124	Zone-1	T04N,	0.3 MILE NE (		HABITAT APPEARS	8 EGG	UNKN(	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	205	1E+05	A4136	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Eureka	10	40.75	-124	Zone-1	T04N,	0.3 MIL	VICINITY OF DRAINAGE SC		1 EGG	CITY C	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	206	1E+05	A4138	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Eureka	40	40.75	-124	Zone-1	T04N,	CONFLUENCE OF BOB HILL GULC			1 INDI	PVT-G	#####	Eureka	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	207	1E+05	A4139	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	200	40.99	-124	Zone-1	T07N,	SOUTH	3.7 MILES ENE OF THE AR(		INDIVI	PVT-G	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	208	1E+05	A4141	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	5	40.97	-124	Zone-1	T07N,	WEST	VICINI	AT TIMES THE MAD	COLLE	HUM C	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphit	AAABH	None	None	G4	S3		CDFW	209	1E+05	A4142	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	130	40.96	-124	Zone-1	T07N,	BEAU PRE GOLF COURSE, MCKIN			191 EC	PVT	#####	Arcata	10	4E+05	5E+06

Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	210	1E+05	A4143	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	100	40.95	-124	Zone-1	T07N,	0.4 MIL	ON THE WEST SIDE OF CE				COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	211	1E+05	A4147	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Arcata	100	40.92	-124	Zone-1	T06N,	AZALEA STATE NATURAL RESERV					COLLE	DPR-A	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	212	1E+05	A4148	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	100	40.9	-124	Zone-1	T06N,	NEAR	AT KERNAN WETLANDS (S				COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	213	1E+05	A4151	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	50	40.9	-124	Zone-1	T06N,	ALDERGROVE MARSH, EAST OF T					COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	214	1E+05	A4152	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	20	40.9	-124	Zone-1	T06N,	ALONG MAD		MOST LIKELY FOUN			32 EG(	PVT	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	215	1E+05	A4153	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	30	40.89	-124	Zone-1	T06N,	TRIBUTARY TO MCDANIEL SLOU(					FOUNI	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	216	1E+05	A4154	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unkno	Natura	Humbo	Arcata	400	40.88	-124	Zone-1	T06N,	ABOUT 1 MILI		REDWOOD FOREST			COLLE	CITY C	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	217	1E+05	A4155	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Tyee C	50	40.88	-124	Zone-1	T06N,	1.1 MIL	WITHIN LAMPHERE DUNES				COLLE	USFW:	#####	Tyee C	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	222	1E+05	A4198	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Panthe	1450	41.05	-124	Zone-1	T08N,	2.7 AIR MILES NE OF CONFLUENC					1 INDI	PVT-G	#####	Panthe	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	228	1E+05	A4211	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Cranne	400	41.12	-124	Zone-1	T09N,	TRIBU	MAPPED BY CNDDB NON-S				NUMEI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	229	1E+05	A4214	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	800	41.11	-124	Zone-1	T08N,	3.9 AIF	1.2 MILES NW OF THE GAP				6 CAPT	PVT-G	#####	Cranne	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	230	1E+05	A4215	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	500	41.11	-124	Zone-1	T08N,	MAPLE CREEK, 2.6 AIR MILES SOU					1 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	231	1E+05	A1661	2005X	2005X	N	U-Unkr	Presun	Circula	40	Unkno	Natura	Humbo	Cranne	300	41.04	-124	Zone-1	T08N,	RAILR	LOCATION WAS GIVEN AS				2 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	232	1E+05	A1662	2013X	2013X	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	150	41.03	-124	Zone-1	T08N,	RAILROAD CREEK, JUST UPSTRE					1 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	233	1E+05	A4217	2011X	2011X	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	350	41.03	-124	Zone-1	T07N,	0.1 MI SE OF CONFLUENCE OF L(					1 INDI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rana a	norther	Amphil	AAABH	None	None	G4	S3		CDFW	234	1E+05	A4218	2013X	2013X	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	100	41.01	-124	Zone-1	T07N,	CONFLUENCE OF SOUTH FORK L					1 ADU	PVT-G	#####	Cranne	10	4E+05	5E+06
Eucycl	tidewat	Fish	AFCQI	Endang	None	G3	S3		AFS_E	122	1E+05	A4258	2E+07	2E+07	N	D-Poor	Presun	Specifi	10	Unkno	Natura	Humbo	Eureka	5	40.87	-124	Zone-1	T06N,	MAD SLOUGH		ISOLA	Altered	ALMOS	NOT D	DOD-C	#####	Eureka	10	4E+05	5E+06
Eucycl	tidewat	Fish	AFCQI	Endang	None	G3	S3		AFS_E	123	1E+05	A4264	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	4	40.86	-124	Zone-1	T06N,	NORTH EDGE OF ARCATA BAY, H					13 GOI	UNKN(	#####	Eureka	10	4E+05	5E+06
Eucycl	tidewat	Fish	AFCQI	Endang	None	G3	S3		AFS_E	124	1E+05	A4452	19821(	19821(	N	U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Arcata	12	40.8	-124	Zone-1	T05N,	MITIGATION MARSH AT FRESHWA					CAPTU	UNKN(	#####	Arcata	10	4E+05	5E+06
Eucycl	tidewat	Fish	AFCQI	Endang	None	G3	S3		AFS_E	125	1E+05	A4453	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	10	40.83	-124	Zone-1	T05N,	ROCKY GULCH, 0.2 TO 0.5 MILE S					16 IND	UNKN(	#####	Arcata	10	4E+05	5E+06
Erethiz	North A	Mamm	AMAFJ	None	None	G5	S3		IUCN_	171	1E+05	A4963	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Cranne	237	41.06	-124	Zone-1	T08N,	VICINI	MAPPED GENERALLY AS B				1 MALI	UNKN(	#####	Trinida	10	4E+05	5E+06
Erethiz	North A	Mamm	AMAFJ	None	None	G5	S3		IUCN_	174	1E+05	A4968	1990X	1990X	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Korbel	2061	40.8	-124	Zone-1	T05N,	ALON(	MAPPED ACCORDING TO T				1 POR	UNKN(	#####	Korbel	10	4E+05	5E+06
Erethiz	North A	Mamm	AMAFJ	None	None	G5	S3		IUCN_	175	1E+05	A4971	19611(	19611(	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	53	40.89	-124	Zone-1	T06N,	ALON(	MAPPED AS A		Vehicle	POTEN	1 POR	UNKN(	#####	Arcata	10	4E+05	5E+06
Erethiz	North A	Mamm	AMAFJ	None	None	G5	S3		IUCN_	176	1E+05	A4974	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Arcata	817	40.87	-124	Zone-1	T06N,	~0.5 M	MAPPI	REDWOOD / DOUGL			1 MALI	PVT	#####	Arcata	10	4E+05	5E+06
Erethiz	North A	Mamm	AMAFJ	None	None	G5	S3		IUCN_	177	1E+05	A4975	199XX	199XX	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Eureka	19	40.85	-124	Zone-1	T05N,	ALON(	LOCATION DESCRIBED AS				1 POR	UNKN(	#####	Eureka	10	4E+05	5E+06
Erethiz	North A	Mamm	AMAFJ	None	None	G5	S3		IUCN_	178	1E+05	A4977	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Arcata	24	40.79	-124	Zone-1	T05N,	VICINI	MAPPED ACC		Vehicle	THREA	1 POR	UNKN(	#####	Arcata	10	4E+05	5E+06
Coturn	yellow	Birds	ABNMI	None	None	G4	S2		CDFW	8	1E+05	A5238	1884X	1884X	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Arcata	4	40.8	-124	Zone-1	T05N,	MOUTI	1886 ARTICLE GAVE SECO				A PAIR	UNKN(	#####	Arcata	10	4E+05	5E+06
Coturn	yellow	Birds	ABNMI	None	None	G4	S2		CDFW	38	1E+05	A5362	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Eureka	24	40.8	-124	Zone-1	T05N,	NORTH SPIT		SEASONAL POND O			1 FLUS	UNKN(	#####	Eureka	10	4E+05	5E+06
Coturn	yellow	Birds	ABNMI	None	None	G4	S2		CDFW	44	1E+05	A5365	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Eureka	9	40.81	-124	Zone-1	T05N,	VICINI	2013 LOCATI(		Other |	FERAL	INJUR	PVT	#####	Eureka	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	40	1E+05	A5515	2007X	2007X	N	U-Unkr	Presun	Circula	70	Unkno	Natura	Humbo	Cranne	50	41.01	-124	Zone-1	T07N,	LITTLE	MAPPED TO 1966 SPECIME				10 COI	UNKN(	#####	Cranne	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	39	1E+05	A5517	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Cranne	280	41.03	-124	Zone-1	T08N,	LITTLE RIVER, JUST EAST OF COI					1 FOUI	PVT-G	#####	Cranne	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	255	1E+05	A5540	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unkno	Natura	Humbo	Arcata	20	40.92	-124	Zone-1	T06N,	MAD R	ATTRIBUTED SPECIMEN C(				COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	253	1E+05	A5547	2E+07	2E+07	N	A-Exce	Presun	Specifi	20	Unkno	Natura	Humbo	Korbel	61	40.89	-124	Zone-1	T06N,	8 MILE	MAPPI	SURR(	Other |	FOOT	COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	305	1E+05	A5551	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unkno	Natura	Humbo	Blue La	700	40.9	-124	Zone-1	T06N,	NORTI	ATTRIBUTED SPECIMENS (				COLLE	UNKN(	#####	Blue La	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	304	1E+05	A5553	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Blue La	500	40.9	-124	Zone-1	T06N,	LISCOM HILL RD, ABOUT 0.5 MI W					COLLE	PVT	#####	Blue La	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	252	1E+05	A4154	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unkno	Natura	Humbo	Arcata	400	40.88	-124	Zone-1	T06N,	ABOU	COLLECTION LOCALITIES (				COLLE	CITY C	#####	Arcata	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	257	1E+05	A5562	2007X	2007X	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Arcata	36	40.83	-124	Zone-1	T05N,	LOWEI	1969 SPECIMEN COLLECTE				1 COLI	PVT	#####	Arcata	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	327	1E+05	A5563	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	127	40.87	-124	Zone-1	T06N,	NEAR	MAPPED TO COORDINATE:				1 FOUI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	339	1E+05	A5564	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	400	40.84	-124	Zone-1	T05N,	0.2 MIL	MAPPED TO PROVIDED CC				1 FOUI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	337	1E+05	A5565	2E+07	2E+07	N	A-Exce	Presun	Non-sp	30	Unkno	Natura	Humbo	Korbel	161	40.83	-124	Zone-1	T05N,	MAD R	MAPPI	LOW G	Loggin	INDIRE	ELECT	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	336	1E+05	A5586	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	250	40.83	-124	Zone-1	T05N,	ALON(	MAPPED TO PROVIDED CC				6 FOUI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	332	1E+05	A4023	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	1400	40.81	-124	Zone-1	T05N,	1.2 MILES SW OF THE CONFLUEN					1 FOUI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	331	1E+05	A0608	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	200	40.81	-124	Zone-1	T05N,	ALON(	NEAR THE MOUTH OF A TF				1 FOUI	PVT-G	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	329	1E+05	A4024	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unkno	Natura	Humbo	Korbel	450	40.78	-124	Zone-1	T05N,	ALON(	MAPPED TO BET11D0001 &				10 COI	PVT	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	328	1E+05	A5590	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unkno	Natura	Humbo	Maple	400	40.77	-124	Zone-1	T05N,	MAPLE	MILLER FIELD NOTES SAY:				16 COI	PVT	#####	Korbel	10	4E+05	5E+06
Rana b	foothill	Amphil	AAABH	None	None	G3T4	S4		BLM_S	341	1E+05	96166	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Iaqua B	2100	40.76	-124	Zone-1	T04N,	VICINITY OF KNEELAND, EAST OF					ADULT	UNKN(	#####	Korbel	10	4E+05	5E+06
Myotis	long-ea	Mamm	AMAC(	None	None	G5	S3		BLM_S	140	1E+05	A5830	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Arcata	429	40.99	-124	Zone-1	T07N,	ABOU	MAPPED TO PROVIDED SP				1 FEM/	UNKN(	#####	Arcata	10	4E+05	5E+06
Actiner	northw	Reptile	ARAAD	Propos	None	G2	SNR		BLM_S	1364	1E+05	A5843	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unkno	Natura	Humbo	Eureka	17	40.76	-124	Zone-1	T04N,	MARTI	MAPPI	SLOUGH IN GOLF C(			2 ADUI	UNKN(	#####	Eureka	10	4E+05	5E+06
Actiner	northw	Reptile	ARAAD	Propos	None	G2	SNR		BLM_S	1365	1E+05	24055	1994X	1994X	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	400	40.88	-124	Zone-1	T06N,	JOLLY GIANT		CREEK THROUGH R			DETE(	CITY C	#####	Arcata	10	4E+05	5E+06
Entosp	Pacific	Fish	AFBAA	None	None	G4	S3		AFS_V	4	1E+05	A6264	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Iaqua B	35	40.76	-124	Zone-1	T04N,	FRESH	MAPPI	DETECTIONS WERE			1 COLI	PVT-G	#####	Arcata	10	4E+05	5E+06
Entosp	Pacific	Fish	AFBAA	None	None	G4	S3		AFS_V	6	1E+05	A6983	2014X	2014X	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	McWhi	42	40.7	-124	Zone-1	T04N,	ELK RI	1994 D	SPECIES EXPECTED			1 AMM	UNKN(	#####	Fields I	10	4E+05	5E+06
Entosp	Pacific	Fish	AFBAA	None	None	G4	S3		AFS_V	7	1E+05	A5924	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	24	40.83	-124	Zone-1	T05N,	JACOE	MAPPI	NO LAMPREYS OBS			AMMO	UNKN(	#####	Arcata	10	4E+05	5E+06
Entosp	Pacific	Fish	AFBAA	None	None	G4	S3		AFS_V	8	1E+05	A7170	1994X	1994X	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	43	40.88	-124	Zone-1	T06N,	JOLLY	1990S DETECTIONS NEAR				CARC/	CITY C	#####	Arcata	10	4E+05	5E+06
Lampe	western	Fish	AFBAA	None	None	G4G5	S3S4		CDFW	1	1E+05	A6264	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Iaqua B	35	40.76	-124	Zone-1	T04N,	FRESH	MAPPI	SPECIES SUSPECTE			FRESH	UNKN(	#####	Arcata	10	4E+05	5E+06
Lampe	western	Fish	AFBAA	None	None	G4G5	S3S4		CDFW	3	1E+05	A5929	20XXX	20XXX	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	236	40.89	-124	Zone-1	T06N,	JANES	EXACT DETECTION LOCAT				UNIDE	UNKN(	#####	Arcata	10	4E+05	5E+06
Anodo	Califor	Mollusl	IMBIV(	None	None	G3	S2?		USFS_	4	1E+05	A6839	XXXXX	XXXXX	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Iaqua B	41	40.7	-124	Zone-1	T04N,	ELK RI	EXACT COLLECTION LOCA				1 COLI	UNKN(	#####	Fields I	10	4E+05	5E+06
Margar	western	Mollusl	IMBIV2	None	None	G3G4	S1S2		IUCN_	71	1E+05	A6055	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Blue La	317	41.03	-124	Zone-1	T08N,	LITTLE	MAPPED TO LITTLE RIVER				1 COLI	UNKN(	#####	Cranne	10	4E+05	5E+06
Circus	norther	Birds	ABNK(	None	None	G5	S3		CDFW	58	1E+05	A6029	2E+07	2E+07	N	C-Fair	Presun	Specifi	10	Unkno	Natura	Humbo	Eureka	6	40.81	-124	Zone-1	T05N,	ABOU	MAPPI	NEST |	Other	EGG P	THREE	CITY C	#####	Eureka	10	4E+05	5E+06
Charac	mounta	Birds	ABNNE	None	None	G3	S2		BLM_S	96	1E+05	A6062	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Fields I	4	40.73	-124	Zone-1	T04N,	HUMB(	2009 DETECTIONS ON SOU				1 OBS	DFG, U	#####	Fields I	10	4E+05	5E+06
Charac	mounta	Birds	ABNNE	None	None	G3	S2		BLM_S	97	1E+05	A6064	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Arcata	7	40.86	-124	Zone-1	T06N,	ARCA	MAJORITY OF EBIRD CHE(				1 OBS	DFG, U	#####	Arcata	10	4E+05	5E+06
Nyctic	black-c	Birds	ABNGA	None	None	G5	S4		IUCN_	35	1E+05	A6059	2E+07	2E+07	N	U-Unkr	Presun	Circula	70	Unkno	Natura	Humbo	Eureka	11	40.79	-124	Zone-1	T05N,	VICINI	ROOKI	1971: N	Develo	DEVEL	10 NES	UNKN(	#####	Eureka	10	4E+05	5E+06
Oncorh	coho s	Fish	AFCHA	Threat	Threat	G5T2Q	S2		AFS_T	7	1E+05	A6839	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Iaqua B	41	40.7	-124	Zone-1	T04N,	ELK RI	ELK RI	INDUSTRIAL		SOME	DETE(	PVT-G	#####	Fields I	10	4E+05	5E+06
Oncorh	coho s	Fish	AFCHA	Threat	Threat	G5T2Q	S2		AFS_T	8	1E+05	A6264	2E+07	2E+07	N	C-Fair	Presun	Non-sp	30	Unkno	Natura	Humbo	Iaqua B	35	40.76	-124	Zone-1	T04N,	FRESH	FOUNI	FAIR T	Altered	PER 2(	DETE(	PVT-G	#####	Arcata	10	4E+05	5E+06
Oncorh	coho s	Fish	AFCHA	Threat	Threat	G5T2Q	S2		AFS_T	9	1E+05	A6111	2E+07	2E+07	N	C-Fair	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	42	40.89	-124	Zone-1	T06N,	MCDANIEL SI		LEVEE	Pollutic	SEDIM	DETE(	PVT, C	#####	Arcata	10	4E+05	5E+06
Oncorh	coho s	Fish	AFCHA	Threat	Threat	G5T2Q	S2		AFS_T	10	1E+05	A6268	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Korbel	117	40.82	-124	Zone-1	T05N,	JACOE	JOCOE	SECOI	Hybridi	HYBRI	DETE(	PVT, U	#####	Arcata	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threat	None	G5T3Q	S3		AFS_T	7	1E+05	B8504	2E+07	2E+07	N	C-Fair	Presun	Non-sp	30	Decrea	Natura	Humbo	Blue La	279	41.03	-124	Zone-1	T08N,	LITTLE RIVER AND I			Agricul	LOGGI	SPAWI	PVT-G	#####	Cranne	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAFA	None	None	G5TNF	SNR			3	1E+05	32648	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unkno	Natura	Humbo	Eureka	100	40.8	-124	Zone-1	T05N,	EUREI	EXACT LOCATION UNKNOV				COLLE	UNKN(	#####	Eureka	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAFA	None	None	G5TNF	SNR			10	1E+05	A6244	2E+07	2E+07	N	U-Unkr	Presun	Circula	70	Unkno	Natura	Humbo	Korbel	80	40.87	-124	Zone-1	T06N,	1 MILE	MAPPED BY CNDDB BASE[				COLLE	UNKN(	#####	Korbel	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAFA	None	None	G5TNF	SNR			11	1E+05	A6245	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unkno	Natura	Humbo	Korbel	1700	40.82	-124	Zone-1	T05N,	ALON(	LOCALITY GIVEN AS 7000 F				COLLE	PVT	#####	Korbel	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAFA	None	None	G5TNF	SNR			12	1E+05	A6246	1973X	1973X	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	350	40.88	-124	Zone-1	T06N,	FERN	INCLUDES COLLECTIONS F				MANY	STATE	#####	Arcata	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAFA	None	None	G5TNF	SNR			13	1E+05	A6247	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	200	40.87	-124	Zone-1	T06N,	REDWOOD PARK, ARCATA.					COLLE	CITY C	#####	Arcata	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAFA	None	None	G5TNF	SNR			14	1E+05	A6248	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unkno	Natura	Humbo	Arcata	100	40.86	-124	Zone-1	T06N,	GROTZMAN CREEK, SUNNY BRAE					COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06

Aplodo	Humbo	Mamm	AMAF	None	None	G5TNF	SNR			15	1E+05	A6249	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Arcata	200	40.81	-124	Zone-1	T05N,	JACOBY CRE		IN DAMP GRASS 80			COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	294	1E+05	A6250	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Arcata	97	40.82	-124	Zone-1	T05N,	MORRISON C		PRED(	Erosion	SEDIM	1 RED-	PVT	#####	Arcata	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAF	None	None	G5TNF	SNR			16	1E+05	A6252	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbo	Arcata	50	40.97	-124	Zone-1	T07N,	VISTA POINT		COASTAL CHAPARR			COLLE	HUM C	#####	Arcata	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threate	None	G5T3Q	S3		AFS_T	8	1E+05	B8505	2004X	2004X	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	146	40.99	-124	Zone-1	T07N,	STRAWBERRY CREEK, MCKINLEY					STEEL	PVT	#####	Arcata	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAF	None	None	G5TNF	SNR			17	1E+05	A6253	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	150	40.98	-124	Zone-1	T07N,	STRAW	EXACT LOCATION UNKNOW				COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAF	None	None	G5TNF	SNR			18	1E+05	A6254	2E+07	2E+07	N	U-Unkr	Presun	Circula	60	Unknow	Natura	Humbo	Arcata	150	40.92	-124	Zone-1	T06N,	NEAR	COLLECTION LOCALITY GI				COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAF	None	None	G5TNF	SNR			19	1E+05	A6255	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	100	40.9	-124	Zone-1	T06N,	WARR	COLLECTION LOCALITY GI				COLLE	PVT	#####	Arcata	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAF	None	None	G5TNF	SNR			20	1E+05	A6256	1971X	1971X	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	80	40.88	-124	Zone-1	T06N,	18TH S	COLLECTION LOCALITY DE				A COL	PVT	#####	Arcata	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAF	None	None	G5TNF	SNR			21	1E+05	A5929	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	236	40.89	-124	Zone-1	T06N,	JANES	COLLECTION LOCALITY GI				COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Aplodo	Humbo	Mamm	AMAF	None	None	G5TNF	SNR			24	1E+05	A6266	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Cranne	200	41.04	-124	Zone-1	T08N,	HIGHW	LOCATION GIVEN AS UTM				COLLE	UNKN(	#####	Cranne	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threate	None	G5T3Q	S3		AFS_T	9	1E+05	B8506	2004X	2004X	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	91	40.95	-124	Zone-1	T07N,	WIDOW WHITE CREEK AND ITS N					STEEL	PVT	#####	Arcata	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threate	None	G5T3Q	S3		AFS_T	10	1E+05	B8507	2E+07	2E+07	N	C-Fair	Presun	Non-sp	30	Decrea	Natura	Humbo	Maple	78	40.87	-124	Zone-1	T06N,	LOWE	MAPP	PORTI	Agricul	LOGGI	ACROS	PVT	#####	Korbel	10	4E+05	5E+06
Erethiz	North A	Mamm	AMAFJ	None	None	G5	S3		IUCN_	479	1E+05	A6392	195907	195907	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Mad Ri	517	40.76	-124	Zone-1	T04N,	MAPLE	THE 1	PORC	Vehicle	POTEN	2 KILLI	UNKN(	#####	Maple	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threate	None	G5T3Q	S3		AFS_T	11	1E+05	B8508	2018X	2018X	N	C-Fair	Presun	Non-sp	30	Decrea	Natura	Humbo	Ruth R	1993	40.57	-124	Zone-1	T02N,	UPPER	MAPP	PORTI	Agricul	LOGGI	ACROS	PVT	#####	Showe	10	4E+05	4E+06
Oncorh	steelhe	Fish	AFCHA	Threate	None	G5T3Q	S3		AFS_T	12	1E+05	B8509	2E+07	2E+07	N	C-Fair	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	74	40.82	-124	Zone-1	T05N,	JACOB	INCLUDES TH		Loggin	LOGGI	217 AD	PVT, C	#####	Arcata	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	425	1E+05	A6249	2E+07	2E+07	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Arcata	200	40.81	-124	Zone-1	T05N,	JACOB	COLLECTION LOCALITIES I				COLLE	UNKN(	#####	Arcata	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	445	1E+05	A8889	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Panthe	1500	41.1	-124	Zone-1	T08N,	DEVIL	WHERE AN OLD ROAD CR(				1 SUB/	NPS-R	#####	Panthe	10	4E+05	5E+06
Ascaph	Pacific	Amphib	AAABA	None	None	G4	S3S4		CDFW	447	1E+05	A8896	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Panthe	1843	41.06	-124	Zone-1	T08N,	2.3 AIF	ALON(	CLASS	Loggin	POTEN	1 TAIL	PVT-G	#####	Panthe	10	4E+05	5E+06
Montia	Howell	Dicots	PDPOF	None	None	G3G4	S2	2B.2		121	1E+05	A8924	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	90	40.94	-124	Zone-1	T06N,	ALON(	ESSEX	WET S	Loggin	POTEN	1,092 F	PVT	#####	Arcata	10	4E+05	5E+06
Silene	Scoule	Dicots	PDCAF	None	None	G5T4T	S2S3	2B.2		19	1E+05	35011	190409	190409	N	U-Unkr	Presun	Circula	90	Unknow	Natura	Humbo	Eureka (40124		40.77	-124	Zone-1	T05N,	BLUFF	EXACT	BLUFF.			ONLY	UNKN(	#####	Eureka	10	4E+05	5E+06
Rana b	foothill	Amphib	AAABH	None	None	G3T4	S4		BLM_S	254	1E+05	B0109	2E+07	2E+07	N	A-Exce	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	23	40.91	-124	Zone-1	T06N,	MAD RIVER, (		SURROUNDING LAN			1 ADU	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana b	foothill	Amphib	AAABH	None	None	G3T4	S4		BLM_S	171	1E+05	B0115	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Panthe	390	41.09	-124	Zone-1	T08N,	REDW	MAPPED TO COORDINATE				2 ADU	PVT-G	#####	Panthe	10	4E+05	5E+06
Rana b	foothill	Amphib	AAABH	None	None	G3T4	S4		BLM_S	333	1E+05	B0116	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	1190	40.82	-124	Zone-1	T05N,	DRAINAGE TO BLACK DOG CREE					1 CAU	PVT-G	#####	Korbel	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL(	None	None	G4G5	S3	2B.2	SB_UC	158	1E+05	B0392	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	995	40.94	-124	Zone-1	T06N,	ABOUT	MAPP	DOUG	Loggin	TIMBE	160 PL	PVT-G	#####	Blue La	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL(	None	None	G4G5	S3	2B.2	SB_UC	159	1E+05	B0396	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	2650	40.97	-124	Zone-1	T07N,	EASTE	MAPP	MOSS-	Loggin	SURR(	50 PLA	PVT-G	#####	Blue La	10	4E+05	5E+06
Erythro	coast f	Monoc	PMLIL(	None	None	G4G5	S3	2B.2	SB_UC	160	1E+05	B0397	2E+07	2E+07	N	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Blue La	2875	40.98	-124	Zone-1	T07N,	EASTE	MAPP	ROCK	Loggin	TIMBE	58 PLA	PVT-G	#####	Blue La	10	4E+05	5E+06
Layia c	beach	Dicots	PDAST	Threate	Endang	G2	S2	1B.1	SB_Ca	34	1E+05	B0596	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Tyee C	16	40.93	-124	Zone-1	T06N,	SOUTH	APPR(	PLANTS GROWING (			100+ F	UNKN(	#####	Tyee C	10	4E+05	5E+06
Lathyru	seaside	Dicots	PDFAB	None	None	G5	S2	2B.1	IUCN_	11	1E+05	B0990	2E+07	2E+07	N	U-Unkr	Presun	Circula	80	Unknow	Natura	Humbo	Arcata	5	40.81	-124	Zone-1	T05N,	EUREK	EXACT	SLOUGH BANK NEA			ONLY	UNKN(	#####	Eureka	10	4E+05	5E+06
Lathyru	seaside	Dicots	PDFAB	None	None	G5	S2	2B.1	IUCN_	12	1E+05	B0991	2E+07	2E+07	N	U-Unkr	Presun	Circula	50	Unknow	Natura	Humbo	Arcata	5	40.99	-124	Zone-1	T07N,	CLAM	EXACT	SAND DUNES.			SITE B	HUM C	#####	Arcata	10	4E+05	5E+06
Lathyru	seaside	Dicots	PDFAB	None	None	G5	S2	2B.1	IUCN_	13	1E+05	B0992	2E+07	2E+07	N	D-Poor	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	10	41.01	-124	Zone-1	T07N,	SOUTH	25 FEE	AMMOPHILA-DOMIN			1 PLAN	DPR-L	#####	Cranne	10	4E+05	5E+06
Lathyru	seaside	Dicots	PDFAB	None	None	G5	S2	2B.1	IUCN_	14	1E+05	B0993	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Cranne	4	41.03	-124	Zone-1	T07N,	NORTH	EAST :	EDGE OF TUFTED H			1150 F	DPR-L	#####	Cranne	10	4E+05	5E+06
Rana b	foothill	Amphib	AAABH	None	None	G3T4	S4		BLM_S	326	1E+05	B1485	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	160	40.86	-124	Zone-1	T06N,	0.1 MIL	NEAR	AT STORM WATER (			1 ADU	PVT-G	#####	Korbel	10	4E+05	5E+06
Montia	Howell	Dicots	PDPOF	None	None	G3G4	S2	2B.2		125	1E+05	B2681	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Korbel	135	40.87	-124	Zone-1	T06N,	PARKI	LOCAT	ROADS	Other	POSSI	100+ F	UNKN(	#####	Korbel	10	4E+05	5E+06
Elanus	white-t	Birds	ABNK(	None	None	G5	S3S4		BLM_S	183	1E+05	B2922	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	23	40.88	-124	Zone-1	T06N,	ALON(	ALON(	NEST	Develo	FUTUR	SEVER	PVT	#####	Arcata	10	4E+05	5E+06
Actiner	northw	Reptile	ARAAD	Propos	None	G2	SNR		BLM_S	1499	1E+05	B3583	2E+07	2E+07	N	A-Exce	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	24	40.91	-124	Zone-1	T06N,	SW SI	MAPP	DEEP	Altered	PEOPL	2 ADU	UNKN(	#####	Arcata	10	4E+05	5E+06
Rana a	norther	Amphib	AAABH	None	None	G4	S3		CDFW	296	1E+05	B3590	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	4	40.85	-124	Zone-1	T05N,	ARCAT	MAPP	RACEWAY WITH DO			1 ADU	CITY C	#####	Arcata	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJF	None	None	G5	S2S3		BLM_S	826	1E+05	B3735	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	281	40.89	-124	Zone-1	T06N,	EAST I	MAPP	BACKY	Other |	POTEN	1 INDI	PVT	#####	Arcata	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJF	None	None	G5	S2S3		BLM_S	827	1E+05	B3736	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	41	40.89	-124	Zone-1	T06N,	ALON(	MAPP	OBSEF	Other	INTER	PAIR (	CITY C	#####	Arcata	10	4E+05	5E+06
Pekani	Fisher	Mamm	AMAJF	None	None	G5	S2S3		BLM_S	829	1E+05	B3876	2E+07	2E+07	N	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	555	40.86	-124	Zone-1	T06N,	ABOUT	MAPP	SECOND-GROWTH I			1 FISH	CITY C	#####	Arcata	10	4E+05	5E+06
Chloro	Point R	Dicots	PDSCF	None	None	G4?T2	S2	1B.2	BLM_S	86	1E+05	B4014	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Eureka	5	40.77	-124	Zone-1	T05N,	WEST	MAPP	SALT MARSH.			SCATT	UNKN(	#####	Eureka	10	4E+05	5E+06
Chloro	Point R	Dicots	PDSCF	None	None	G4?T2	S2	1B.2	BLM_S	89	1E+05	B4364	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	8	40.83	-124	Zone-1	T05N,	EAST :	MAPPED ACCORDING TO 2				UNKN(	UNKN(	#####	Eureka	10	4E+05	5E+06
Hesper	short-le	Dicots	PDAST	None	None	G4T3	S3	1B.2	BLM_S	72	1E+05	B5682	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	10	40.77	-124	Zone-1	T05N,	ALON(	ABOVE RIPRAP BETWEEN				11-50 F	UNKN(	#####	Eureka	10	4E+05	5E+06
Scaphi	Behren	Insects	IICOL4	None	None	G2G4	S2S4			3	1E+05	24055	2E+07	2E+07	N	U-Unkr	Presun	Non-sp	30	Unknow	Natura	Humbo	Arcata	400	40.88	-124	Zone-1	T06N,	JOLLY GIANT CANYON, ARCATA (					A COL	CITY C	#####	Arcata	10	4E+05	5E+06
Bombu	Crotch'	Insects	IIHYM2	None	Candid	G2	S2		IUCN_	313	1E+05	96098	2E+07	2E+07	N	U-Unkr	Presun	Circula	80	Unknow	Natura	Humbo	Arcata	10	40.93	-124	Zone-1	T06N,	MAD R	SPECI	THIS APPEARS TO E			1 COLI	HUM C	#####	Tyee C	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	37	1E+05	B6950	2E+07	2E+07	N	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Eureka	4	40.87	-124	Zone-1	T06N,	EDGE	MAPPED ACCORDING TO 2				ONLY	USFW	#####	Eureka	10	4E+05	5E+06
Carex l	Lyngby	Monoc	PMCYI	None	None	G5	S3	2B.2	IUCN_	39	1E+05	B6954	2E+07	2E+07	N	U-Unkr	Presun	Specifi	20	Unknow	Natura	Humbo	Tyee C	4	40.93	-124	Zone-1	T06N,	ALON(	MAPPED ACCORDING TO 2				SITE B	UNKN(	#####	Tyee C	10	4E+05	5E+06
Sidalce	Siskiyo	Dicots	PDMAL	None	None	G4G5T	S2	1B.2	SB_UC	57	1E+05	B7341	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Korbel	2407	40.87	-124	Zone-1	T06N,	HEAD	MAPPED ACCORDING TO (				SITE D	PVT-G	#####	Korbel	10	4E+05	5E+06
Sidalce	Siskiyo	Dicots	PDMAL	None	None	G4G5T	S2	1B.2	SB_UC	58	1E+05	B7342	2E+07	2E+07	N	C-Fair	Presun	Specifi	20	Unknow	Natura	Humbo	Eureka	80	40.79	-124	Zone-1	T05N,	ON DE	MAPP	MOWE	Non-na	INVAS	15 PLA	EUREK	#####	Eureka	10	4E+05	5E+06
Sulcari	twisted	Lichens	NLT00	None	None	G3G4	S2	1B.2	BLM_S	11	1E+05	B7796	2E+07	2E+07	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Cranne	4	41.02	-124	Zone-1	T07N,	NORTH	LOCAT	HOST:	ORV a	MUCH	ONLY	DPR-L	#####	Cranne	10	4E+05	5E+06
Acipen	green s	Fish	AFCAA	Threate	None	G2T1	S1		AFS_V	13	1E+05	B8139	202010	202010	N	B-Good	Presun	Non-sp	30	Unknow	Natura	Humbo	Fields I	0	40.8	-124	Zone-1	T05N,	HUMB	MAPP	CRITIC	Other |	DRED(	CAUGI	HBHR(	#####	Eureka	10	4E+05	5E+06
Haliae	bald ea	Birds	ABNK(	Deliste	Endang	G5	S3		BLM_S	371	1E+05	B8149	2E+07	2E+07	N	B-Good	Presun	Circula	40	Unknow	Natura	Humbo	Arcata	29	40.81	-124	Zone-1	T05N,	ABOUT	MAPP	HABITAT DESCRIBE			2 ADU	PVT, D	#####	Arcata	10	4E+05	5E+06
Haliae	bald ea	Birds	ABNK(	Deliste	Endang	G5	S3		BLM_S	372	1E+05	B8150	200805	200805	N	U-Unkr	Presun	Circula	40	Unknow	Natura	Humbo	Arcata	210	40.82	-124	Zone-1	T05N,	JUST E	MAPPED NON-SPECIFICAL				IDENT	PVT	#####	Arcata	10	4E+05	5E+06
Falco p	Americ	Birds	ABNKD	Deliste	Deliste	G4T4	S3S4		CDF_S	63	1E+05	B8152	2E+07	2E+07	Y	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Eureka	40					*SENS	PLEAS	NEST ON LEDGE OF BRIDGE. HO					#####	Eureka	0		
Falco p	Americ	Birds	ABNKD	Deliste	Deliste	G4T4	S3S4		CDF_S	64	1E+05	B8155	2E+07	2012X	Y	B-Good	Presun	Specifi	10	Unknow	Natura	Humbo	Eureka	256					*SENS	PLEAS	NEST IN LIVE REDWOOD, LIKELY					#####	Eureka	0		
Falco p	Americ	Birds	ABNKD	Deliste	Deliste	G4T4	S3S4		CDF_S	66	1E+05	B8157	2E+07	2E+07	Y	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	272					*SENS	PLEAS	NEST IN GREEN OLD GROWTH RI					#####	Arcata	0		
Falco p	Americ	Birds	ABNKD	Deliste	Deliste	G4T4	S3S4		CDF_S	67	1E+05	B8159	2012X	2012X	Y	B-Good	Presun	Specifi	20	Unknow	Natura	Humbo	Arcata	586					*SENS	PLEAS	TERRITORY CONSISTED OF 2 LIV					#####	Arcata	0		
Falco p	Americ	Birds	ABNKD	Deliste	Deliste	G4T4	S3S4		CDF_S	68	1E+05	B8164	2003X	2003X	Y	U-Unkr	Presun	Specifi	10	Unknow	Natura	Humbo	Arcata	902					*SENS	PLEAS	CLIFF NEST. SITE APPEARS TO B					#####	Arcata	0		
Oncorh	steelhe	Fish	AFCHA	Threate	Endang	G5T2Q	S2		AFS_T	1	1E+05	B8439	2019X	2019X	N	D-Poor	Presun	Non-sp	30	Decrea	Natura	Humbo	Grouse	500	41.07	-124	Zone-1	T08N,	REDW	MAPP	FISH A	Loggin	HIGH T	ANNU/	NPS-R	#####	Panthe	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threate	Endang	G5T2Q	S2		AFS_T	2	1E+05	B8440	2019X	2019X	N	C-Fair	Presun	Non-sp	30	Unknow	Natura	Humbo	Ruth R	700	40.65	-124	Zone-1	T03N,	MAD R	MAPP	UPSTF	Loggin	HIGH V	IN THE	PVT, U	#####	Mad Ri	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threate	None	G5T3Q	S3		AFS_T	13	1E+05	B8533	2E+07	2E+07	N	D-Poor	Presun	Non-sp	30	Unknow	Natura	Humbo	McWhi	16	40.77	-124	Zone-1	T05N,	FRESH	INCLUDES P(		Develo	THIS IS	THE 5	PVT, H	#####	Arcata	10	4E+05	5E+06
Oncorh	steelhe	Fish	AFCHA	Threate	None	G5T3Q	S3		AFS_T	14	1E+05	B8534	2E+07	2E+07	N	C-Fair	Presun	Non-sp	30	Unknow	Natura	Humbo	Iaqua B	80	40.7	-124	Zone-1	T04N,	ELK RI	INCLUDES TH		Develo	IMPAC	SMALL	PVT, B	#####	McWhi	10	4E+05	5E+06

ScientificN	CommonN	Famil	Lifefo	CRPF	CRPF	GRar	SRan	Other	CESA	FESA	Bloom	Habit	Micro	Micro	Eleva	Eleva	Eleva	Eleva	CAEr	State	Coun	Quad	EOTc	EOA	EOB	EOC	EOD	EOX	EOU	EOHi	EORe	EOEx	EOPc	EOEx	EOTh	Threa	Threa	Notes	Threa	Taxor	FullS	Syno	Elem	USDA	CBRF	DateA	LastUpdate
Abronia ui	pink sand-	Nycta	annu	1B.1		G4G5	S2	BLM_	None	None	Jun-C	Coastal dunes			0	0	10	35	####	CA, (	DNT	Arca	61	2	22	11	6	1	19	31	30	60	1	0	45	12	Alter	Most occurrences			Abror	Abro	PDNYC010N4			####	####
Angelica l	sea-watch	Apiac	perer	4.2		G5	S3	SB_L	None	None	Apr-S	Coastal bluff scru			0	0	150	490	####	AK, (	DNT	Albic	0	0	0	0	0	0	0	0	0	0	0	0		0		Possibly threaten			Angelica lu		PDAF	ANLU		####	####
Astragalus	coastal ma	Faba	perer	1B.2		G2T2	S2	BLM_	None	None	(Apr-I	Coastal dunes (r			0	0	55	180	####	CA	HUM	Bolin	25	0	11	3	1	2	8	17	8	23	2	0	20	16	Alter	Possibly threaten			Astragalus		PDFA	ASPYP		####	####
Astragalus	Rattan's m	Faba	perer	4.3		G4T4	S4		None	None	Apr-J	Chaparral,		Grav	30	100	825	2705	####	CA	COL	Arca	0	0	0	0	0	0	0	0	0	0	0	0		0					Astragalus		PDFA	ASRAR3		####	####
Calamagr	Bolander's	Poac	perer	4.2	####	G4	S4		None	None	May-/	Bogs and f		Mesi	0	0	455	1495	####	CA	HUM	Anna	0	0	0	0	0	0	0	0	0	0	0	0		0		Possibly threaten			Calamagro		PMP(	CABO		####	####
Cardamine	seaside bi	Brass	perer	2B.2	####	G4G5	S3		None	None	(Jan)I	Lowe	wet a	Strea	15	50	915	3000	####	AK, (	DNT	Ah P	38	7	15	5	2	0	9	4	34	38	0	0	24	7	Alter	Many occurrence			Cardamine		PDBF	CAAN5		####	####
Carex arc	northern c	Cype	perer	2B.2	####	G5	S1	IUCN	None	None	Jun-S	Bogs and fens, N			60	195	1400	4595	####	AK, (	DNT	Arca	13	1	2	5	0	0	5	4	9	13	0	0	8	6	Alter	Does	Possibly thi		Carex arcta		PMC'	CAAR2		####	####
Carex lept	bristle-stal	Cype	perer	2B.2	####	G5	S1	IUCN	None	None	Mar-J	Bogs and fens, N			0	0	700	2295	####	AK, /	DNT	Cant	8	0	2	1	0	2	3	6	2	6	1	1	5	7	Altered flo		Threatened		Carex lepta		PMC'	CALE10		####	####
Carex lyng	Lyngbye's	Cype	perer	2B.2	####	G5	S3	IUCN	None	None	Apr-A	Marshes and sw			0	0	10	35	####	AK, (	DNT	Arca	37	5	6	11	0	0	15	16	21	37	0	0	18	6	Deve	Possibly threaten			Carex lyngb		PMC'	CALY3		####	####
Carex pra	northern n	Cype	perer	2B.2	####	G5	S2		None	None	May-J	Meadows and se			0	0	3200	####	####	AK, (	DNT	Arca	14	0	2	0	0	0	12	12	2	14	0	0	1	2	Graz	On review list in (			Carex prati		PMC'	CAPR7		####	####
Castilleja a	Humboldt	Orob	annu	1B.2		G4T2	S2	BLM_	None	None	Apr-A	Marshes and sw			0	0	3	10	####	CA	HUM	Arca	31	5	11	4	0	0	11	20	11	31	0	0	17	12	Agric	Threatened by co			Castil	Cast	PDSCR0D402			####	####
Castilleja l	Oregon cc	Orob	perer	2B.2	####	G3	S3		None	None	Jun	Coastal blu		Sand	15	50	100	330	####	CA, (	DNT	Albic	44	0	7	6	0	0	31	24	20	44	0	0	11	6	Eros	Threatened by de			Castil	Cast	PDSCR0D012			####	####
Chloropyr	Point Rey	Orob	annu	1B.2		G4?T	S2	BLM_	None	None	Jun-C	Marshes and sw			0	0	10	35	####	CA, (	ALA,	Arca	80	7	32	5	4	11	21	37	43	69	10	1	33	16	Alter	Once rather comi			Chlor	Cord	PDSCR0J0C3			####	####
Chrysospl	Pacific gol	Saxifı	perer	4.3	####	G5?	S3		None	None	Feb-J	North Coas		Road	10	35	540	1770	####	CA, (	DNT	Ah P	0	0	0	0	0	0	0	0	0	0	0	0		0					Chrysosple		PDS/	CHGL5		####	####
Collinsia c	round-hea	Plant	annu	1B.2		G1	S1	SB_C	None	None	Apr-J	Coastal dunes			0	0	20	65	####	CA	HUM	Bolin	13	0	1	0	0	2	10	11	2	11	0	2	5	4	Deve	Scattered distribu			Collinsia cc		PDS(	COCO2		####	####
Coptis lac	Oregon gc	Ranu	perer	4.2	####	G4?	S3?		None	None	(Feb)	Meadows a		Mesi	0	0	1000	3280	####	CA, (	DNT	Albic	122	17	53	20	5	0	27	13	109	122	0	0	84	10	Alter	Previously CRPR			Coptis lacir		PDR/	COLA3		####	####
Eleocharis	small spik	Cype	perer	4.3		G5	S3		None	None	(Apr)	Marshes and sw			1	5	3020	9910	####	AL, /	ALA,	Antic	0	0	0	0	0	0	0	0	0	0	0	0		0		See Wasmann Jc			Eleoc	Hele	PMC'	ELPA5		####	####
Epilobium	Humboldt	Onag	perer	4.3	####	G4	S4		None	None	Jul-S	Broadleafe		Rock	45	150	1800	5905	####	CA	HUM	Boul	0	0	0	0	0	0	0	0	0	0	0	0		0		See Carnegie Ins			Epilot	Epilc	PDOI	EPSE3		####	####
Erysimum	Menzies' v	Brass	perer	1B.1	####	G1	S1	SB_C	CE	FE	Mar-S	Coastal dunes			0	0	35	115	####	CA	HUM	Canr	19	3	8	3	2	3	0	7	12	16	3	0	17	10	Deve	Plants treated as			Erysir	Erysi	PDBF	ERME5		####	####
Erythroniu	giant fawn	Liliac	perer	2B.2	####	G5	S2	SB_L	None	None	Mar-J	Cismontan		Oper	100	330	1150	3775	####	CA, (	DNT	Blue	38	4	10	4	0	0	20	16	22	38	0	0	17	9	Eros	Need quad for TF			Erythroniun		PMLI	EROR4		####	####
Erythroniu	coast fawr	Liliac	perer	2B.2	####	G4G5	S3	SB_L	None	None	Mar-J	Bogs and f		Mesi	0	0	1600	5250	####	CA, (	DNT	Ah P	172	24	80	41	8	0	19	23	149	172	0	0	148	12	Alter	On w	Threatened		Erythroniun		PMLI	ERRE5		####	####
Fissidens	minute po	Fissic	moss	1B.2		G3?	S2	USFS	None	None		North Coast con			10	35	1024	3360	####	CA, (	ALA,	Arca	22	0	3	1	0	0	18	17	5	22	0	0	5	4	Eros	See Erythea 2:97			Fissidens p		NBM(	FIPA5		####	####
Fritillaria p	Purdy's fri	Liliac	perer	4.3		G4	S4	SB_L	None	None	Mar-J	Chaparral,		Serp	175	575	2255	7400	####	CA, (	COL	Aetn	0	0	0	0	0	0	0	0	0	0	0	0		0		Enda	Threatened		Fritillaria pu		PMLI	FRPU3		####	####
Gilia capit	Pacific gili	Poler	annu	1B.2		G5T3	S3	SB_C	None	None	Apr-A	Chaparral (openi			5	15	1665	5465	####	CA, (	DNT	Albic	92	13	30	5	1	0	43	33	59	92	0	0	47	12	Developme		Threatened		Gilia capita		PDPL	GICAP		####	####
Gilia millet	dark-eyed	Poler	annu	1B.2		G2	S2	BLM_	None	None	Apr-J	Coastal dunes			2	5	30	100	####	CA, (	ALA,	Bode	54	1	9	17	1	4	22	40	14	50	2	2	32	7	Deve	Threatened by de			Gilia millefc		PDPL	GIMI		####	####
Glehnia lit	American	Apiac	perer	4.2		G5T5	S2S3	SB_C	None	None	May-/	Coastal dunes			0	0	20	65	####	AK, (	DNT	Arca	0	0	0	0	0	0	0	0	0	0	0	0		0		Threatened by nc			Glehnia littc		PDAF	GLLIL		####	####
Hemizonia	Tracy's tar	Aster	annu	4.3		G5T4	S4		None	None	(Mar-	Coastal pra		Oper	120	395	1200	3935	####	CA	HUM	Alde	0	0	0	0	0	0	0	0	0	0	0	0		0					Hemi	Hem	PDAS	HECOT		####	####
Hesperev	short-leav	Aster	annu	1B.2	####	G4T3	S3	BLM_	None	None	Mar-J	Coastal bluff scru			0	0	215	705	####	CA, (	DNT	Albic	72	4	26	12	1	1	28	23	49	71	1	0	42	9	Deve	Threatened by de			Hesperevax		PDAS	HESPB		####	####
Hosackia	harlequin	Faba	perer	4.2		G3G4	S3	SB_C	None	None	Mar-J	Broa	wetla	Road	0	0	700	2295	####	CA, (	DNT	Albic	0	0	0	0	0	0	0	0	0	0	0	0		0		Desig	Threatened		Hosa	Lotus	PDFAB2A0D0			####	####
Iliamna lat	California	Malva	perer	1B.2	####	G2G3	S2	SB_C	None	None	Jun-A	Chaparral		Burn	60	195	2000	6560	####	CA, (	DNT	Taki	42	2	8	6	1	0	25	15	27	42	0	0	28	9	Foot	Enda	Possibly thi		Iliamna latil		PDM/	ILLA2		####	####
Lasthenia	perennial	Aster	perer	1B.2		G3T2	S2	BLM_	None	None	Jan-N	Coastal bluff scru			5	15	520	1705	####	CA	DNT	Albic	59	1	16	3	3	0	36	38	21	59	0	0	23	7	Eros	Threatened by co			Lasth	Lastl	PDAS	LACAM3		####	####
Lathyrus g	sticky pea	Faba	perer	4.3		G3	S3	SB_E	None	None	Apr-J	Cismontane woc			300	985	800	2625	####	CA	HUM	Arca	0	0	0	0	0	0	0	0	0	0	0	0		0		See Madrono 33(			Lathyrus gl		PDFA	LAGL8		####	####
Lathyrus j	seaside pe	Faba	perer	2B.1	####	G5	S2	IUCN	None	None	May-/	Coastal dunes			1	5	30	100	####	AK, (	DNT	Arca	24	1	5	4	3	0	11	7	17	24	0	0	13	9	Deve	Threatened by nc			Lathyrus ja		PDFA	LAJA		####	####
Lathyrus p	marsh pea	Faba	perer	2B.2	####	G5	S2		None	None	Mar-/	Bogs and f		Mesi	1	5	100	330	####	AK, (	DNT	Arch	13	1	3	1	0	0	8	8	5	13	0	0	5	6	Alter	See University of			Lathyrus pa		PDFA	LAPA4		####	####
Layia carr	beach layi	Aster	annu	1B.1		G2	S2	SB_C	CE	FT	Mar-J	Coastal dunes, C			0	0	60	195	####	CA, (	HUM	Canr	25	2	10	6	0	4	3	12	13	21	2	2	23	12	Bioci	Recla	Threatened		Layia carnc		PDAS	LACA4		####	####
Lilium kell	Kellogg's l	Liliac	perer	4.3		G3	S3		None	None	(Feb)	Lower mor		Oper	3	10	1300	4265	####	CA, (	DNT	Arca	0	0	0	0	0	0	0	0	0	0	0	0		0		Enda	Possibly thi		Lilium kello		PMLI	LIKE2		####	####
Lilium occ	western lil	Liliac	perer	1B.1		G1G2	S1	SB_E	CE	FE	Jun-J	Bogs and fens, C			2	5	185	605	####	CA, (	DNT	Arca	16	0	4	5	3	3	1	7	9	13	3	0	13	7	Deve	Most CA occurrei			Lilium occic		PMLI	LIOC2		####	####
Listera co	heart-leav	Orchi	perer	4.2		G5	S4		None	None	Feb-J	Bogs and fens, L			5	15	1370	4495	####	AK, (	DNT	Ah P	0	0	0	0	0	0	0	0	0	0	0	0		0		Easily overlooked			Lister	Liste	PMO	LICO6		####	####
Lycopodiu	running-pi	Lycop	perer	4.1	####	G5	S3		None	None	Jun-A	Lower mor		Edge	45	150	1225	4020	####	AK, (	DNT	Arca	120	6	28	43	18	0	25	120	0	120	0	0	105	9	Altered flo		Threatened		Lycopodiun		PPLY	LYCL		####	####
Mitellastra	leafy-stem	Saxifı	perer	4.2	####	G5	S4		None	None	(Mar)	Broadleafe		Mesi	5	15	1700	5580	####	CA, I	DNT	Ah P	21	3	4	1	1	0	12	21	0	21	0	0	9	4	Foot	Threatened by lo			Mitell	Mitel	PDSAX0N020			####	####
Monotropa	ghost-pipe	Erica	perer	2B.2	####	G5	S2	SB_C	None	None	Jun-A	Broadleafed upla			10	35	550	1805	####	AK, /	DNT	Ah P	117	2	28	53	16	0	18	8	109	117	0	0	102	11	Biocides, D		Threatened		Monotropa		PDM(	MOUN3		####	####
Montia ho	Howell's m	Monti	annu	2B.2	####	G3G4	S2		None	None	(Feb)	Meadows a		Road	0	0	835	2740	####	CA, (	DNT	Arca	123	11	55	32	12	6	7	23	100	117	5	1	109	14	Alter	Redis	Threa	Some	Montia how		PDP(	MOHO		####	####
Oenothera	Wolf's eve	Onag	perer	1B.1		G2	S1	SB_E	None	None	May-(	Coastal blu		Mesi	3	10	800	2625	####	CA, (	DNT	Ah P	29	1	9	5	2	0	12	20	9	29	0	0	18	14	Altered flo		Threatened		Oeno	Oen	PDOI	OEWO		####	####
Packera b	seacoast r	Aster	perer	2B.2	####	G4T4	S2S3		None	None	(Jan-/	Coastal sc		Road	30	100	650	2135	####	CA, (	DNT	Cant	72	7	29	6	2	0	28	17	55	72	0	0	39	8	Biocides, E		Possibly thi		Packe	Sene	PDAS	PABOB		####	####
Piperia ca	white-flow	Orchi	perer	1B.2	####	G3?	S3	SB_C	None	None	(Mar-	Broadleafe		Serp	30	100	1310	4300	####	CA, (	DNT	Anna	222	7	83	65	13	1	53	39	183	221	1	0	154	14	Alter	Diffic	Threatened		Piperia can		PMO	PICA13		####	####
Pityopus c	California	Erica	perer	4.2		G4G5	S4		None	None	(Mar-	Broadleafe		Mesi	15	50	2225	7300	####	CA, (	DNT	Ah P	0	0	0	0	0	0	0	0	0	0	0	0		0		State	Threatened		Pityopus ca		PDMON05010			####	####
Pleuropog	nodding s	Poac	perer	4.2		G4	S4	IUCN	None	None	(Feb-	Lower mor		Mesi	0	0	1600	5250	####	CA, (	DNT	Taki	0	0	0	0	0	0	0	0	0	0	0	0		0			Threatened		Pleur	Loph	PMP(	PLRE2		####	####
Ribes laxi	trailing bla	Gross	perer	4.3		G5?	S3		None	None	Mar-J	North Coas		Road	5	15	1395	4575	####	AK, (	DNT	Ah P	0	0	0	0	0	0	0	0	0	0	0	0		0			Threatened		Ribes laxifl		PDGI	RILA3		####	####
Sidalcea r	maple-leaf	Malva	perer	4.2	####	G3	S3		None	None	(Mar)	Broadleafe		Distu	0	0	730	2395	####	CA, (	DNT	Ah P	136	4	15	41	43	2	31	136	0	134	2	0	109	13	Alter	SCL Co. (427A) c			Sidalcea m		PDM/	SIMA		####	####
Sidalcea r	Siskiyou c	Malva	perer	1B.2		G4G5	S2	SB_L	None	None	(Mar-	Coas	often	Road	15	50	1230	4035	####	CA, (	DNT	Albic	60	10	22	11	1	0	16	14	46	60	0	0	41	11	Agriculture		Threatened		Sidalcea m		PDM/	SIMAP		####	####
Sidalcea c	coast chec	Malva	perer	1B.2		G5T1	S1		None	None	Jun-A	Lower montane (			5	15	1340	4395	####	CA	DNT	Arca	19	0	1	5	1	0	12	15	4	19	0	0	8	8	Bioci	Known from appr			Sidalcea or		PDM/	SIORE		####	####
Silene scc	Scouler's (	Caryc	perer	2B.2	####	G5T4	S2S3		None	None	(Mar-	Coastal bluff scru			0	0	600	1970	####	CA, I	DNT	Bode	23	0	0	0	0	0	23	15	8	23	0	0	2	4	Graz	Potentially threat			Silene scou		PDC/	SISCS2		####	####
Spergulari	western sa	Caryc	annu	2B.1	####	G5T4	S1		None	None	Jun-A	Marshes and sw			0	0	3	10	####	AK, (	HUM	Arca	4	0	0	1	0	0	3	3	1	4	0	0	2	5	Deve	Known in CA only			Spergularia		PDC/	SPCAO		####	####
Sulcaria s	twisted ho	Parm	frutic	1B.2	####	G3G4	S2	BLM_	None	None		Coas	Usually on		0	0	90	295	####	CA, (	DNT	Anna	18	0	1	0	0	0	17	12	6	18	0	0	3	4	Deve	Largest known pc			Sulca	Bryo	NLT0042560			####	####
Tiarella tri	trifoliate la	Saxifı	perer	3.2	####	G5T5	S2S3		None	None	(May)	Lowe	moist	Edge	170	560	1500	4920	####	AK, (	DNT	Ah P	0	0	0	0	0	0	0	0	0	0	0	0		0		Move to CRPR 2			Tiarella trifc		PDS/	TITRT		####	####
Trichodon	cylindrical	Ditric	moss	2B.2	####	G4G5	S2		None	None		Broa	expos	Road	50	165	2002	6570	####	AK, (	HUM	Arca	14	0	3	0	1	0	10	7	7	14	0	0	5	3	Logg	Threatened by lo			Trichodon c		NBM(	TRCY6		####	####
Usnea lon	Methusela	Parm	frutic	4.2	####	G4	S4	BLM_	None	None		Broa	On tree bra		50	165	1460	4790	####	AK, (	DNT	Ah P	206	14	34	57	47	2	52	206	0	204	1	1	161	6	Agric	Threatened by de			Usnea long		NLLE	USLO50		####	####
Viola palu	alpine mai	Viola	perer	2B.2	####	G5	S1S2		None	None	Mar-A	Bogs and fens (c			0	0	150	490	####	AK, /	DNT	Arca	10	1	1	0	0	0	8	10	0	10	0	0	1	2	Othe	Often overlooked			Viola palus		PDVI	VIPA4		####	####

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
Phone: (707) 822-7201 Fax: (707) 822-8411

In Reply Refer To: 07/09/2024 19:03:50 UTC
Project Code: 2024-0113492
Project Name: McKinleyville Community Services District Wastewater Recycling Expansion Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
(707) 822-7201

PROJECT SUMMARY

Project Code: 2024-0113492

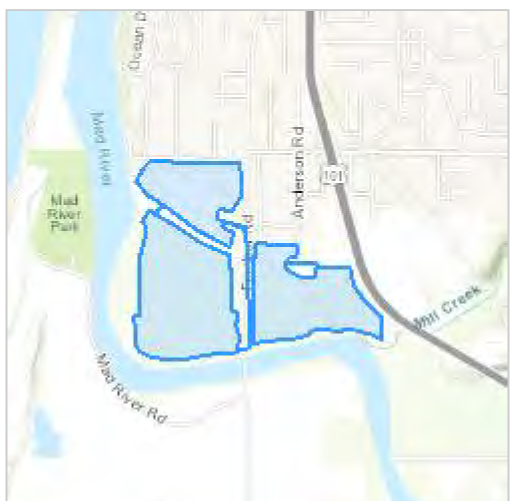
Project Name: McKinleyville Community Services District Wastewater Recycling Expansion Project

Project Type: Wastewater Pipeline - New Constr - Below Ground

Project Description: The Project includes the installation of ten flood cells of equal area (100-ft by 200-ft; 4.6 acres) on the northeast section of the Pialorsi Ranch – East upper bench, replacement of 2,075 linear feet (lf) of RW pipe along Fischer Road, installation of 1,775 lf of new RW pipe to tee off of the replacement piping towards the northwest (towards Pivot Sprinkler 3) and to the east (towards the flood cells), installation of 340 lf feet of new RW pipe to connect Pivot Sprinklers #1 and #2 to the recycled water main, and installation of three pivot sprinkler irrigation systems (Pivot #1-3). In total, Project implementation will result in approximately 5.25 acres of ground disturbance would occur.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.9291798999994,-124.12410704219351,14z



Counties: Humboldt County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment *Martes caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9081	Threatened

BIRDS

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
Green Sea Turtle *Chelonia mydas* Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

FISHES

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

FLOWERING PLANTS

NAME	STATUS
Lassics Lupine *Lupinus constancei* Population: There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7976	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: GHD Inc.
Name: Christian Hernande
Address: 718 Third Street
City: Eureka
State: CA
Zip: 95501
Email christian.hernandez@ghd.com
Phone: 7072672208

From:	Christian Hernandez
To:	NMFS SpeciesList - NOAA Service Account
Subject:	McKinleyville Community Services District Wastewater Recycling Expansion Project
Date:	Tuesday, July 9, 2024 1:07:00 PM

Quad Name **Arcata North**

Quad Number **40124-H1**

ESA Anadromous Fish

SONCC Coho ESU (T) -	**X**
CCC Coho ESU (E) -	
CC Chinook Salmon ESU (T) -	**X**
CVSR Chinook Salmon ESU (T) -	
SRWR Chinook Salmon ESU (E) -	
NC Steelhead DPS (T) -	**X**
CCC Steelhead DPS (T) -	
SCCC Steelhead DPS (T) -	
SC Steelhead DPS (E) -	
CCV Steelhead DPS (T) -	
Eulachon (T) -	**X**
sDPS Green Sturgeon (T) -	**X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -	**X**
CCC Coho Critical Habitat -	
CC Chinook Salmon Critical Habitat -	**X**
CVSR Chinook Salmon Critical Habitat -	
SRWR Chinook Salmon Critical Habitat -	
NC Steelhead Critical Habitat -	**X**
CCC Steelhead Critical Habitat -	
SCCC Steelhead Critical Habitat -	
SC Steelhead Critical Habitat -	
CCV Steelhead Critical Habitat -	
Eulachon Critical Habitat -	**X**
sDPS Green Sturgeon Critical Habitat -	**X**

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X

Olive Ridley Sea Turtle (T/E) - X

Leatherback Sea Turtle (E) - X

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) - X

Fin Whale (E) - X

Humpback Whale (E) - X

Southern Resident Killer Whale (E) - X

North Pacific Right Whale (E) - X

Sei Whale (E) - X

Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Essential Fish Habitat

Coho EFH - X

Chinook Salmon EFH - X

Groundfish EFH - X

Coastal Pelagics EFH - X

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans - X

MMPA Pinnipeds - X

Christian Hernandez
Graduate Environmental Scientist
GHD
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Office Mailing Address – PO Box 1010, Eureka, CA 95502 USA
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Appendix C

Plant Species Observed

Scientific Name	Common Name	Status	Form	Family
Conium maculatum	Poison hemlock	invasive non-native	Perennial herb	Apiaceae
Daucus carota	Carrot	non-native	Perennial herb	Apiaceae
Artemisia douglasiana	California mugwort	native	Perennial herb	Asteraceae
Baccharis pilularis	Coyote brush	native	Shrub	Asteraceae
Bellis perennis	English lawn daisy	non-native	Perennial herb	Asteraceae
Carduus pycnocephalus	Italian thistle	invasive non-native	Annual herb	Asteraceae
Cirsium arvense	Canada thistle	invasive non-native	Perennial herb	Asteraceae
Cirsium vulgare	Bullthistle	invasive non-native	Perennial herb	Asteraceae
Gnaphalium palustre	Lowland cudweed	native	Annual herb	Asteraceae
Helminthotheca echioides	Bristly ox-tongue	invasive non-native	Annual, Perennial herb	Asteraceae
Hypochaeris radicata	Hairy cats ear	invasive non-native	Perennial herb	Asteraceae
Leucanthemum vulgare	Oxe eye daisy	invasive non-native	Perennial herb	Asteraceae
Matricaria discoidea	Pineapple weed	native	Annual herb	Asteraceae
Osteospermum sp.	African daisy	non-native	Perennial herb	Asteraceae
Senecio minimus	Coastal burnweed	non-native	Annual, Perennial herb	Asteraceae
Silybum marianum	Milk thistle	invasive non-native	Annual, Perennial herb	Asteraceae
Soliva sessilis	South american soliva	non-native	Annual herb	Asteraceae
Sonchus asper	Spiny sowthistle	non-native	Annual herb	Asteraceae
Taraxacum officinale	Red seeded dandelion	non-native	Perennial herb	Asteraceae
Borago officinalis	Common borage	non-native	Annual herb	Boraginaceae
Capsella bursa-pastoris	Shepherd's purse	non-native	Annual herb	Brassicaceae
Lepidium strictum	Peppergrass	native	Annual herb	Brassicaceae
Raphanus raphanistrum	Jointed charlock	non-native	Annual, Perennial herb	Brassicaceae
Rorippa palustris	Bog yellow cress	native	Annual, Perennial herb	Brassicaceae
Sisymbrium officinale	Hedge mustard	non-native	Annual herb	Brassicaceae
Cardionema ramosissimum	Sand mat	native	Perennial herb	Caryophyllaceae
Cerastium glomeratum	Large mouse ears	non-native	Annual herb	Caryophyllaceae
Spergula arvensis	Corn spurry	non-native	Annual herb	Caryophyllaceae
Spergularia rubra	Purple sand spurry	non-native	Annual, Perennial herb	Caryophyllaceae
Stellaria media	Chickweed	non-native	Annual herb	Caryophyllaceae

Scientific Name	Common Name	Status	Form	Family
Euonymus japonicus	Japanese euonymus	non-native	Shrub	Celastraceae
Eleocharis macrostachya	Spike rush	native	Perennial grasslike herb	Cyperaceae
Scirpus microcarpus	Mountain bog bulrush	native	Perennial grasslike herb	Cyperaceae
Dipsacus fullonum	Wild teasel	invasive non-native	Perennial herb	Dipsacaceae
Equisetum telmateia	Giant horsetail	native	Fern	Equisetaceae
Lotus corniculatus	Bird's foot trefoil	non-native	Perennial herb	Fabaceae
Medicago polymorpha	California burclover	invasive non-native	Annual herb	Fabaceae
Trifolium dubium	Shamrock	non-native	Annual herb	Fabaceae
Trifolium pratense	Red clover	non-native	Perennial herb	Fabaceae
Trifolium repens	White clover	non-native	Perennial herb	Fabaceae
Vicia americana	American vetch	native	Perennial herb, Vine	Fabaceae
Erodium cicutarium	Coastal heron's bill	invasive non-native	Annual herb	Geraniaceae
Geranium dissectum	Wild geranium	invasive non-native	Annual herb	Geraniaceae
Geranium molle	Crane's bill geranium	non-native	Annual, Perennial herb	Geraniaceae
Juncus balticus	Wire rush	native	Perennial grasslike herb	Juncaceae
Juncus bufonius	Common toad rush	native	Annual grasslike herb	Juncaceae
Juncus effusus	Common bog rush	native	Perennial grasslike herb	Juncaceae
Juncus patens	Rush	native	Perennial grasslike herb	Juncaceae
Stachys bullata	Southern hedge nettle	native	Perennial herb	Lamiaceae
Linum bienne	Flax	non-native	Annual herb	Linaceae
Malva parviflora	Cheeseweed	non-native	Annual herb	Malvaceae
Eschscholzia californica	California poppy	native	Annual, Perennial herb	Papaveraceae
Plantago lanceolata	Ribwort	invasive non-native	Perennial herb	Plantaginaceae
Plantago major	Common plantain	non-native	Perennial herb	Plantaginaceae
Agropyron christatum	crested wheatgrass	non-native	Annual grass	Poaceae
Agrostis stolonifera	Redtop	invasive non-native	Perennial grass	Poaceae
Alopecurus saccatus	Foxtail	native	Annual grass	Poaceae
Avena barbata	Slim oat	invasive non-native	Annual, Perennial grass	Poaceae

Scientific Name	Common Name	Status	Form	Family
Briza maxima	Rattlesnake grass	invasive non-native	Annual grass	Poaceae
Bromus carinatus	California bromegrass	native	Perennial grass	Poaceae
Bromus catharticus	Rescue grass	non-native	Annual, Perennial grass	Poaceae
Bromus diandrus	Ripgut brome	invasive non-native	Annual grass	Poaceae
Bromus hordeaceus	Soft chess	invasive non-native	Annual grass	Poaceae
Dactylis glomerata	Orchardgrass	invasive non-native	Perennial grass	Poaceae
Festuca arundinacea	Reed fescue	invasive non-native	Perennial grass	Poaceae
Festuca bromoides	Brome fescue	non-native	Annual grass	Poaceae
Festuca myuros	Rattail sixweeks grass	invasive non-native	Annual grass	Poaceae
Festuca perennis	Italian rye grass	invasive non-native	Annual, Perennial grass	Poaceae
Holcus lanatus	Common velvetgrass	invasive non-native	Perennial grass	Poaceae
Hordeum murinum	Foxtail barley	invasive non-native	Annual grass	Poaceae
Phalaris arundinacea	Reed canarygrass	native	Perennial grass	Poaceae
Poa annua	Annual blue grass	non-native	Annual grass	Poaceae
Poa pratensis	Kentucky blue grass	invasive non-native	Perennial grass	Poaceae
Polypogon monspeliensis	Annual beard grass	invasive non-native	Annual grass	Poaceae
Rumex acetosella	Sheep sorrel	invasive non-native	Perennial herb	Polygonaceae
Rumex crispus	Curly dock	invasive non-native	Perennial herb	Polygonaceae
Ranunculus repens	Crowfoot, creeping buttercup	invasive non-native	Perennial herb	Ranunculaceae
Potentilla anserina	Silver weed cinquefoil	native	Perennial herb	Rosaceae
Rosa sp.	rose	native	Shrub/vine	Rosaceae
Rubus armeniacus	Himalayan blackberry	invasive non-native	Shrub	Rosaceae
Rubus ursinus	California blackberry	native	Vine, Shrub	Rosaceae
Galium aparine	Cleavers	native	Annual herb	Rubiaceae

Appendix D

Wetland Delineation Report – Highway 101 Sewer Crossings Retrofit and Wastewater Recycling Expansion Project

McKinleyville Community Services District

Highway 101 Sewer Crossings Retrofit and Wastewater Recycling Expansion Project

Wetland Delineation Report

October 2024

Table of Contents

Appendices

1. Introduction

GHD prepared this wetland delineation report and accompanying appendices on behalf of the McKinleyville Community Services District, in support of the proposed Highway 101 Sewer Crossings Retrofit Project and nearby Wastewater Recycling Expansion Project within the community of McKinleyville (**Appendix A, Figure 1.1 and Figure 1.2**). This report supports the Project's environmental documentation, permitting, and construction planning as deemed appropriate. The proposed Project Area includes the area around access routes, staging areas, and excavation to retrofit the sewer line and install the recycled water piping and flood cells (**Appendix A, Figure 2.1 through 2.5**). This report is subject to, and must be read in conjunction with, the limitations set out in Section 6, Special Terms and Conditions, and the assumptions and qualifications contained throughout the report.

1.1 Project Description

The McKinleyville Community Services District (MCSD) proposes to retrofit three sewer crossings that run beneath Highway 101 to increase earthquake resilience and prevent potential contamination discharge to surface water or groundwater. The northern crossing is within the Widow White Creek/Norton Creek riparian area. The central crossing runs from Thiel Avenue to the MCSD settling pond area in Hiller Park. The southern crossing is located in pasture north of Mill Creek. The Project Area includes areas of Horizontal Auger Boring (HAB) beneath Highway 101, HDPE pipe installation, access for heavy equipment, and staging areas (see **Appendix A, Figures 2.1 through 2.3**). MCSD also proposes to expand existing recycled wastewater infrastructure including the installation of 2,075 linear feet of replacement recycled water pipe, 2,080 linear feet of new recycled water pipe, three pivot sprinkler irrigation systems, and ten flood cells (see **Appendix A, Figure 2.4 & 2.5**).

1.2 Summary

GHD conducted the wetland delineation fieldwork on October 8th and 14th, 2020 for the Highway 101 Sewer Crossings Retrofit Project, and on April 18th, 2024, for the Wastewater Recycling Expansion Project. The delineation was conducted within the Project Area per project, as shown in **Appendix A Figures 2.1, through 2.5**. United States Army Corps of Engineers (USACE) three-parameter wetlands were mapped based on wetland indicative vegetation, hydric soils, and wetland hydrology (**Appendix A Figure 3.1, 3.2 and 3.3**). The Project overlaps the Coastal Zone, and one-parameter wetlands were also mapped per California Coastal Commission (CCC), McKinleyville Area Local Coastal Plan (LCP), and McKinleyville Community Plan requirements (**Appendix A Figures 4.1, 4.2, 4.3**).

1.2.1 Highway Crossing Project

Within the Highway Crossing Project, the wetland delineation resulted in two USACE-jurisdictional wetlands (three-parameter) in and along the sewer line access road to the northern crossing in the Widow White Creek/Norton Creek riparian area east of Highway 101, and one potential USACE-jurisdictional wetland in the Norton Creek riparian area west of Highway 101 at the northern crossing. The total area of 3-parameter wetlands within the Project Area is 1,157.3 ft^2 (**Figure 3.1 and 3.2**). A fork of Norton Creek flowing through a culvert under the Project's access road was delineated by marking Ordinary High Water indicators in the field on either side of the culvert.

The Project Area also contains potential one-parameter wetlands based on the dominance of Facultative (FAC) or wetter vegetation. Vegetation communities overlapping the Project Area with a dominance of FAC or wetter vegetation include Sitka spruce (*Picea sitchensis*) forest, a coastal willow (*Salix hookeriana*) thicket, and red alder (*Alnus rubra*) forest (**Appendix A Figures 4.1, 4.2, 4.3**). Sitka spruce forest and coastal willow thickets are also considered Sensitive Natural Communities (SNCs). Areas with FAC or wetter dominant vegetation may be regulated under the Coastal Act and the McKinleyville Community Plan as one-parameter wetlands. Sensitive Natural Communities and wetland or riparian areas may also be regulated as ESHA when they are within the Coastal Zone.

1.2.2 Wastewater Recycling Expansion Project

Within the Wastewater Recycling Expansion Project, the wetland delineation resulted in two USACE-jurisdictional wetlands (three-parameter) located in pastoral land within the central PSB and along a drainage ditch in the northwest extent of the PSB. The total area of three-parameter wetlands is 21,380 ft^2 (0.491 ac), and one-parameter wetlands total 3,955 ft^2 (0.091 ac) in the Project Area (see **Appendix A, Figure 3.3**). Areas with hydrophytic vegetation (one-parameter wetlands) are regulated under the Coastal Act and the McKinleyville Community Plan as one-parameter wetlands. A 650 ft^2 (0.015 ac) area of SNC was observed in the southern PSB, however this area is not considered a one-parameter wetland due to the absence of hydrophytic vegetation.

1.3 Regulatory Background

1.3.1 Federal

Waters of the United States

The Code of Federal Regulations (CFR), 40 CFR § 120.2 states the following:

a) Waters of the United States means:

1) Waters which are:

i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

ii) The territorial seas; or

iii) Interstate waters, including interstate wetlands;

2) Impoundments of waters otherwise defined as Waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section.

3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section:

i) That are relatively permanent, standing or continuously flowing bodies of water;

4) Wetlands adjacent to the following waters:

i) Waters identified in paragraph (a)(1) of this section; or

ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection[1] to those waters

[1] The duration of the surface connection is undefined and considered on a case by case basis; however, the wetland does not have to hydrologically connected every day of the year to be

considered waters of the United States, just continuous seasonal flow…wetlands within the floodplain of Waters of the United States will likely be considered jurisdictional (sourced from pers. comm. with W. Connor, USACE North Branch Chief).

5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

Wetlands Delineation Manual

The 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual provides guidelines and methods to determine whether an area is a wetland subject to federal regulation under Section 404 of the Clean Water Act. The manual specifies that wetland hydrology, soil, and vegetation indicators must be present to identify a wetland (USACE 1987, p. 10). In addition, the Wetlands Delineation Manual states, "If hydrophytic vegetation is being maintained only because of man-induced wetland hydrology that would no longer exist if the activity (e.g., irrigation) were to be terminated, the area should not be considered a wetland," (USACE 1987).

Federal Geographic Data Committee (FGDC) Wetland Classification Standard

The Classification of Wetlands and Deepwater Habitats of the United States (FGDC 2013), based on Cowardin et al. (1979), states that wetlands must have at least one of the three wetland attributes: predominantly hydrophytic vegetation, predominantly hydric soil, and hydrology.

However, they state that all available information should be used, and all three attributes should be considered if they are present (FGDC 2013).

1.3.2 State

The State Water Resources Control Board's (SWRCB) April 2019 *Procedures for Discharges of Dredged or Fill Material to Waters of the State* says the following:

> *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*
>
> *The Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the state" includes all "waters of the U.S." The following wetlands are waters of the state:*
>
> *1. Natural wetlands,*
> *2. Wetlands created by modification of a surface water of the state, and*
> *3. Artificial wetlands that meet any of the following criteria:*
> *a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;*
> *b. Specifically identified in a water quality control plan as a wetland or other water of the state;*
> *c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or*
> *d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):*
> *i. Industrial or municipal wastewater treatment or disposal,*
> *ii. Settling of sediment,*
> *iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,*
> *iv. Treatment of surface waters,*
> *v. Agricultural crop irrigation or stock watering,*
> *vi. Fire suppression,*
> *vii. Industrial processing or cooling,*
> *viii. Active surface mining – even if the site is managed for interim wetlands functions and values,*
> *ix. Log storage,*
> *x. Treatment, storage, or distribution of recycled water, or*
> *xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or*
> *xii. Fields flooded for rice growing.*
>
> *All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state*" (SWRCB 2019).

The February 2020 *Draft Guidance State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* further clarifies as follows:

> *Human activity can cause changes to the surrounding landscape (e.g., grading activities, road construction, direct hydromodification) such that wetlands form where wetlands did not previously exist. Where such artificial wetlands are now a relatively permanent part of the natural landscape, and are not subject to ongoing operation and maintenance, they are waters of the state. By requiring that the wetlands are relatively permanent, the framework excludes wetlands that are temporary or transitory. That they are part of the natural landscape also indicates the relative permanence of the wetlands and suggests that the wetland is self-sustaining without ongoing operation and maintenance activities, and provides similar ecosystem services as natural wetlands. By way of example, this category of wetlands includes situations where water flow is permanently redirected as the result of human activity, such as grading in another area, such that new wetlands form in areas that were previously dry. These wetlands may not be natural wetlands because they result from human activity and they were not formed by modifying a water of the state (rather they were an indirect result), but nevertheless they take on the function of natural wetlands such that they should be considered waters of the state. This category would not include artificial wetlands constructed for specific purposes listed in section II.3.d because the construction of the artificial wetlands would be too recent to be deemed "historic" and the artificial wetland would likely require ongoing maintenance such that they would not be deemed "relatively permanent," and/or the artificial wetland is not part of the "natural landscape"* (SWRCB 2020).

1.3.3 California Coastal Commission

The California Coastal Act Section 30121 defines wetlands as "[L]ands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens" (CCC 2011).

The Coastal Commission's "one-parameter definition" is outlined in the California Code of Regulations, Title 14 Section 13577 where it states:

> *Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats* (14 CCR §13577) (CCC 2011).

California Code of Regulations Title 14 Section 30233, "limits the filling of wetlands to identified high priority uses, including certain boating facilities, public recreational piers, restoration, nature study, and incidental public services (such as burying cables or pipes). Any wetland fill must be avoided unless there is no feasible less environmentally damaging alternative, and authorized fill must be *fully mitigated" (14 CCR §30233)* (CCC 2011).

1.3.4 McKinleyville Area Local Coastal Plan

The McKinleyville Area Local Coastal Plan (certified in 1982, revised 2014) uses the Coastal Act definition of wetlands, and states "No land use or development shall be permitted in areas adjacent to coastal wetlands, called Wetland Buffer Areas, which degrade the wetland or detract from the natural resource value" (p.27). Wetland Buffer Areas are further defined as:

a. *The area between a wetland and the nearest paved road or the 40 foot contour line (as determined from the 7.5' USGS contour maps), whichever is the shortest distance, or*

b. *450 feet from the boundary of the wetland, where the nearest paved road or 40 foot contour exceeds this distance.*

c. *Transitional agricultural lands designated Agriculture Exclusive shall be excluded from Wetland Buffer Areas. (Amended by Res. No. 83-58, 3/15/83)*

Lands in the Project Area are zoned Agriculture Exclusive and can be considered transitional agricultural lands and are therefore not considered Wetland Buffer Areas.

1.3.5 McKinleyville Community Plan

The McKinleyville Community Plan (2002, updated 2017) defines wetland areas using a one-parameter definition as follows (p. 49):

Wetland Areas shall be defined according to the criteria utilized by the CA Dept. of Fish and Game (also included in the County's Open Space Implementation Standards). In summary, the definition requires that a given area satisfy at least one of the following three criteria:

- *the presence of at least periodic predominance of hydrophytic vegetation; or,*
- *predominately hydric soils; or,*
- *periodic inundation for seven (7) consecutive days*

2. Methodology

2.1 Wetland Delineation Approach

A GHD botanist and a GHD soil scientist conducted the wetland delineation fieldwork on October 8th and 14th, 2020 for the Highway 101 Sewer Crossings Retrofit Project, and on April 18th, 2024 for the Wastewater Recycling Expansion Project. To define a wetland, the USACE requires that vegetation, soil, and hydrology (three-parameters) all show wetland attributes (USACE 1987; USACE 2010). The CCC requires only hydrophytic vegetation or hydric soils to be present in order to define the site as a wetland (14 CCR 13577). The wetland delineation used USACE criteria from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (USACE 2010). The current standard field forms provided by the USACE (2010) were used to collect vegetation, soils, and hydrology data (**Appendix B)**.

In potential three-parameter wetland areas, vegetation, soil, and hydrology data were collected in a transect across the upland/wetland boundary with two plots (upland/wetland) per transect. The naming convention used on datasheets to designate upland or wetland plots associated with a transect is -U or -W, respectively.

One-parameter and three-parameter wetland/upland boundaries and plots were mapped in the field with an Eos Arrow 100 Submeter Global Positioning System (GPS) Receiver with Global Navigation Satellite System (GNSS) and an iPad running ArcGIS Collector software. The wetland/upland boundary was recorded with the GPS unit as needed to map the wetland's spatial extent. The points were then connected in the office using ArcMap software for figure creation and the boundaries were clipped to the extent of the Project Area.

Each three-parameter wetland area was designated with a number (e.g., W1). The wetland points were also labeled with their respective wetland number. In addition to the wetland sampling points, two upland sampling points were described. These were labeled beginning with a "U" and numbered in sequence (e.g., U1, U2). The upland sampling points were completed to confirm and document the absence of any wetland indicators (soils, hydrology, and vegetation). **Appendix B** contains all datasheets recorded during the delineation.

2.2 Botanical methodology

Vegetation data collection consisted of listing the dominant species in the herbaceous, shrub, and tree layer within a standard-sized plot determined by the strata layer. Nomenclature follows *The Jepson Manual* (Baldwin et al. 2012), which was cross walked to federal standard nomenclature to identify the indicator status. The species' wetland indicator status for the Western Mountains, Valleys, and Coast Region was denoted in the respective column, using the standard reference: *State of California 2016 Wetland Plant List* (Lichvar et al. 2016). This list classifies species based on the probability that they are found in wetlands (USACE 1987) as follows:

- Obligate (OBL): almost always in wetlands (99% probability)
- Facultative Wetland (FACW): usually occurring in wetlands (67% to 99% probability)
- Facultative (FAC): commonly occurring in wetlands and uplands (34% to 66% probability of occurring in wetlands)
- Facultative Upland (FACU): usually occurring in uplands (1% to 33% probability of occurring in wetlands)
- Upland (UPL): upland obligate, rarely in wetlands (1% in wetlands)

Species that do not appear on the list are considered to be in the upland category (Lichvar et al. 2016). Standard procedures for documenting hydrophytic vegetation indicators were used per the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010). A complete list of plants documented at the site with respective wetland indicator status is included as **Appendix C**. Vegetation communities that may be regulated under the Coastal Act, the Humboldt Bay Area Plan and/or the McKinleyville Community Plan were mapped according to the Manual of California Vegetation at the Alliance level (**Appendix A Figures 4.1, 4.2, and 4.3**) (Sawyer et al. 2009). Sensitive Natural Communities overlapping the Project Area that may qualify as one-parameter wetlands were characterized using Rapid Assessment protocol (**Appendix D**). Site photographs have been included as **Appendix E.**

2.3 Soils Methodology

Hydric soils were defined based on the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010) procedures in combination with the Natural Resources Conservation Service's (NRCS) definitions presented in *Field Indicators of Hydric Soils in the United States* (USDA/NRCS 2018). Soil pits were dug to an approximate depth of 16 inches. Data on soil color, texture, and redoximorphic features were recorded. Any observed redoximorphic features (iron concentrations) were noted along with their percentage within the soil matrix, and care was taken to distinguish chromas of 1 and 2 indicative of an iron-depleted soil within 12 inches of the soil surface (USACE 2010; USDA/NRCS 2016).

The *Munsell Soil Color Book* (COLOR, M. 2000) was used to describe the soil colors for the entire depth of the test pit. Moist, natural soil aggregate (ped) surfaces, which had not been crushed, were used to determine the soil's color. Soils with low chroma were verified as being hydric or upland with *Field Indicators of Hydric Soils in the United States* (Version 8.2, 2018).

2.3.1 Existing Soils Information

Highway Crossing Project

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) identifies five soil units within the Project Area (**Figures 5.1, 5.2, and 5.3** and NRCS report in **Appendix F**). A brief map unit description, as generated by the NRCS, is provided for each soil unit below (NRCS 2020). Although NRCS soil mapping is informative, the scale is generally too broad to definitively characterize potential wetlands. Please see the full report included as **Appendix F** for complete details.

Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes

The Halfbluff-Tepona-Urban Land 0 to 2 percent slopes map unit composition is as follows: 35% Halfbluff and similar soils, 30% Tepona and similar soils, 25% Urban land, and 10% minor components. Halfbluff and Tepona soils can be found on marine terraces and the parent material is marine deposits derived from sedimentary rock. Halfbluff consists of fine sandy loam and sandy loam in the top horizons. Tepona is characterized by an organic layer overlaying loam and sandy loam. Halfbluff and Tepona are not rated as hydric soils. They are moderately well drained, and depth to water table is 30-39 inches.

Halfbluff-Tepona-Urban Land, 2 to 9 percent slopes

The map unit composition is as follows: 35% Halfbluff and similar soils, 40% Tepona and similar soils, 15% Urban land, and 10% minor components. Halfbluff and Tepona soils can be found on marine terraces, and the parent material is marine deposits derived from sedimentary rock. Halfbluff consists of loam and fine sandy loam in the top horizons. Tepona is characterized by an organic layer overlaying sandy loam. Halfbluff and Tepona are not rated as hydric soils. They are moderately well drained, and depth to water table is 30-39 inches.

Megwill and Cannonball soils, 0 to 5 percent slopes

The map unit composition is as follows: 50% Megwill and similar soils, 35% Cannonball and similar soils, and 15% minor components. Megwill and cannonball occur on marine terraces and originate from mixed marine deposits. The typical profile of Megwill includes loam, clay loam and sandy clay loam. Cannonball is typically composed of an organic horizon above loam and sandy clay loam. Megwil and Cannonball are not hydric soils, and typical depth to water table is 20-39 inches.

Arcata and Candymountain soils, 2 to 9 percent slopes

The map unit composition is as follows: 50% Arcata and similar soils, 35% Candymountain and similar soils, and 15% minor components. This area is considered farmland of statewide importance. Arcata and Candymountain soils originate from marine deposits derived from sedimentary rock. They are not rated as hydric soils, and the depth to water table is typically greater than 80 inches. Arcata soil profile is typically composed of loam and sandy loam, and the top horizons of Candymountain consist of fine sandy loam.

Lepoil-Candymountain complex, 2 to 15 percent slopes

The map unit composition is as follows: 45% Lepoil and similar soils, 40% Candymountain and similar soils, and 15% minor components. Lepoil and Candymountain soils originate from marine deposits derived from sedimentary rock. Lepoil soil profile typically consists of an organic layer overlaying loam and clay loam in the top horizons. Candymountain is typically composed of an organic layer overlaying fine sandy loam. Lepoil and Candymountain are not rated as hydric soils, and the depth to water table is typically greater than 80 inches.

Wastewater Recycling Expansion Project

The NRCS identifies four soil units within the Project Area (**Figures 5.4** and NRCS report in **Appendix F**). A brief map unit description, as generated by the NRCS, is provided for each soil unit below (NRCS 2024). Although NRCS soil mapping is informative, the scale is generally too broad to definitively characterize potential wetlands. Please see the full report included as **Appendix F** for complete details.

Arlynda 0 to 2 percent slopes

The map unit composition is as follows: 85% Arlynda and similar soils, and 15% minor components. This area is considered prime farmland if irrigated and drained. Arlynda soils originate from alluvium derived from mixed sources. They are rated as hydric soils, and the depth to water table is typically 0 to 4 inches. The Arlynda soil profile is typically composed of silty clay loam.

Madriver, 0 to 2 percent slopes

The map unit composition is as follows: 85% Madriver and similar soils, and 15% minor components. This area is considered prime farmland if irrigated. Madriver soils originate from alluvium derived from mixed sources. They are not rated as hydric soils, and the depth to water table is typically 20 to 39 inches. The Arlynda soil profile is typically composed of loam in the upper horizons (to 17 inches below ground surface), sandy loam at 17 to 28 inches, and underlain by silt loam in the lower horizons (to 67 inches below round surface).

Megwill and Cannonball soils, 0 to 5 percent slopes

Described above.

Arcata and candymountain soils, 2 to 9 percent slopes

Described above.

Lepoil-candymountain complex, 2 to 15 percent slopes

Described above.

2.4 Hydrology Methodology

GHD delineated wetlands within the Highway Crossing Project Area on October 8th and 14th 2020, near the end of the dry season, and within the Wastewater Recycling Expansion Project on April 18th, 2024, which is within the wet season. A WETS table showing climate data for both projects from the Woodley Island, Eureka Station is provided in **Appendix G**. Aerial photography and the

National Wetland Inventory Mapper were referenced before conducting fieldwork (**Appendix A Figures 6.1, 6.2, 6.3, and 6.4**) (USFWS 2020; USFWS 2024). The flood hazard map for both projects is also included in **Appendix A Figures 7.1, 7.2, 7.3, and 7.4**. Wetland hydrology indicators, such as drainage patterns, material deposits, soil saturation, high water table, or surface water presence, were recorded in the field.

The Highway Crossing Project Area is hydrologically connected to the lower Mad River watershed via the Widow White Creek and Norton Creek confluence at the northern crossing, an unnamed tributary at the central crossing, and the nearby Mill Creek riparian area at the southern crossing. The Wastewater Recycling Expansion Project is hydrologically connected to the Mad River via the drainage ditch in the northwest extent of the Project Area.

3. Highway Crossing Project Results

During the Highway Crossing Project delineation on October 8th and 14th, 2020, the weather was mostly clear and sunny, and conditions were fairly dry (0.39 inches of precipitation recorded within the last two weeks). The Project Area contains three-parameter, USACE jurisdictional wetlands. The Project Area also contains one-parameter wetlands that meet CCC, and local requirements based on only hydrophytic vegetation (FAC or wetter). Red alder (*Alnus rubra,* FAC) forest, Sitka spruce (*Picea sitchensis*, FAC) forest, and coastal willow (*Salix hookeriana,* FACW) thickets were mapped as one-parameter wetlands based on the dominant vegetation. The one-parameter wetlands were mapped to the outer extent of the canopy within the Project Area, which was overhanging access roads and other areas of likely disturbance in several areas. Upland sampling points were also described within areas of planned disturbance to confirm and document the absence of any wetland indicators in these areas**. Appendix A Figures 3.1, 3.2, and 3.3** show the results of the three-parameter wetland delineation, and **Appendix A Figures 4.1 and 4.2** show one-parameter wetlands based on the dominant vegetation alliance.

3.1 USACE Three-Parameter Wetlands and Other Waters

Three-parameter wetlands occur in the northern portion of the study area, around Widow White Creek. Summaries of each three-parameter wetland are provided below, and square footage is provided in **Table 3.1**. Please see the USACE Data Forms in **Appendix B** for more details.

3.1.1 Wetland 1

Wetland 1 was identified in and along the sewer access road in the northeast corner of the Project Area. Wetland 1 occupies 1,016.31 ft^2 of the Project Area. The area along the access road is free of rooted woody vegetation and is classified according to Cowardin classification system as a Palustrine Emergent wetland with persistent vegetation (PEM1) (FGDC 2013). The emergent wetland in the access road is hydrologically connected to the forested riparian wetland surrounding the confluence of Widow White and Norton Creek, and this area may be classified as a Palustrine Forested Deciduous wetland (PFO1) (FGDC 2013). Wetland 1 consisted of saturated soil with hydrophytic vegetation along the road cut in the riparian area surrounding Widow White Creek. The vegetation was characterized by California blackberry (*Rubus ursinus*, FACU), small-fruited bulrush (*Scirpus microcarpus*, OBL), common ladyfern (*Athyrium filix-femina*, FAC), and pig-a-back plant (*Tolmiea diplomenziesii*, FAC). Soil in Wetland 1 consisted of a Sandy Gleyed Matrix (S4) with a top horizon (0-6”) of silt loam with a matrix color of 10YR 2/1 above a horizon (6-14”) of sandy loam with a matrix color of Gley1 3/N and 10% redoximorphic features with a color 7.5YR 4/6. Indicators of wetland hydrology at the site included a high water table, saturation, hydrogen sulphide odor, and reduced iron shown by testing with alpha-alpha-Dipyridyl. Please see attached data form for sample point W1T1-W in **Appendix B** for additional details.

3.1.2 Wetland 2

Wetland 2 was located along the sewer access road southeast of Wetland 1, and it occupies 72.69 ft^2 of the Project Area. The area along the access road is free of rooted woody vegetation and may be classified according to Cowardin classification system as a Palustrine Emergent wetland with persistent vegetation (PEM1) (FGDC 2013). The emergent wetland in the access road is hydrologically connected to the forested riparian wetland surrounding the confluence of Widow White and Norton Creek, and this area may be classified as a Palustrine Forested wetland (PFO) (FGDC 2013). The riparian area around Wetland 2 contained a mixed canopy of non-native blue gum (*Eucalyptus globulus*), red alder, and Sitka spruce. Wetland 2 also consisted of saturated soil with hydrophytic vegetation across the road cut in the riparian area surrounding Widow White Creek. The vegetation at the sample plot location was characterized by Sitka spruce (FAC), common ladyfern (FAC), small-fruited bulrush (OBL), giant horsetail (*Equisetum telmateia* ssp. *braunii*, FACW), and English ivy (*Hedera helix*, FACU). Wetland 2 met the criteria for the hydric soil indicator Loamy Gleyed Matrix (F2). Soil consisted of a top horizon (0-3”) of sandy loam with a matrix color of 2.5Y 3/2, a loam horizon (3-9”) with a matrix color of Gley 1 4/N and 15% redoximorphic features with a color of 7.5YR 4/4, and a sandy loam horizon (9-14”) with the same gley matrix color and 10% redoximorphic features. Wetland hydrology indicators included soil saturation, and reduced iron shown by testing with alpha-alpha-Dipyridyl. Please see attached data form for sample point W2T1-W in **Appendix B** for additional details.

3.1.3 Wetland 3

Wetland 3 was located in the northwestern extent of the project area and consisted of a small drainage to Widow White/Norton Creek starting outside the pump station fence. Wetland 3 covers 68.3 ft^2 of the Project Area. The wetland drainage within the project area is free of rooted trees and may be classified according to Cowardin classification system as a Palustrine Emergent wetland with persistent vegetation (PEM1) (FGDC 2013). The drainage is hydrologically connected to the larger Sitka-spruce dominated forested riparian wetland surrounding the Norton Creek, and this area may be classified as a Palustrine Forested Needle-Leaved Evergreen wetland (PFO4) (FGDC 2013). The vegetation in Wetland 3 consisted of Sitka spruce (FAC) and red alder (FAC) in the canopy and a sparse understory with Himalayan blackberry (*Rubus armeniacus*, FAC), common ladyfern (FAC), and western swordfern (*Polystichum munitum*, FACU). Soils met the criteria for hydric soil indicator Loamy Gleyed Matrix (F2). Beneath a 3” *O* horizon of decaying leaf litter, the top horizon (0-6”) consisted of a sandy clay loam with a matrix color of 2.5Y 3/2, and a horizon of silty clay loam (6-12”) with a Gley 1 3/10Y matrix color and 5% redoximorphic features. Wetland hydrology was indicated by the presence of saturated soil and a visible drainage pattern.

Table 3-1 USACE Wetlands within the Highway Crossing Project Area

Aquatic Resource Name	Location (lat/long)	Aquatic Resource Size
Wetland 1 (W1T1)	(40.959984, -124.115396)	1,016.3 ft^2
Wetland 2 (W2T1)	(40.959600, -124.115039)	72.7 ft^2
Wetland 3 (W3T1)	(40.960500, -124.116562)	68.3 ft^2
Total USACE Wetland in Project Area		**1,157.3 ft^2**

3.1.1 Perennial Stream

A fork of Norton Creek passes through a culvert under the access road near the confluence with Widow White Creek in the northeastern extent of the Project Area. Ordinary High Water (OHW) was mapped with GPS in the field on either side of the culvert based on slope-break and vegetation indicators to mark the extent of waters within the Project Area. A total of 233 ft^2 of perennial waters flow under the access road through a culvert within the Project Area, and this may be classified according to the Cowardin system as Riverine Lower Perennial Unconsolidated Bottom (R2UB).

3.2 CCC One-Parameter Wetlands

One-parameter wetlands overlapping the project area include red alder forest, Sitka spruce forest, and a coastal willow thicket. Areas with FAC or wetter dominant vegetation may be regulated under the Coastal Act, the Humboldt Bay Area Plan, and the McKinleyville Community Plan as one-parameter wetlands, and these areas may also be considered ESHA within the Coastal Zone.

3.2.1 Red Alder Forest

Red alder (FAC) forest occurs both in riparian areas and other portions of the Project Area near the northern and middle crossings with no associated riparian hydrology (**Appendix A Figures 4.1 and 4.2**). Red alder is a Facultative wetland indicator species and has an equal probability of occurring in wetland and non-wetland areas. Red alder dominates the canopy along much of Norton Creek, the northwestern portion of the Hammond Trail, and along the central-west portion of the Project Area. Associated understory vegetation included red elderberry (*Sambucus racemosa*, FACU), California blackberry (*Rubus ursinus*, FACU), Himalayan blackberry (FAC), and western brackenfern (*Pteridium aquilinum*, FACU). Some 3-parameter wetlands were mapped within red alder dominated canopy within the Widow White Creek/Norton Creek riparian area (**Appendix A Figure 3.1**). Red alders grow close to the margins of proposed access roads and ground disturbance areas, but do not appear to block access or proposed work. The red alder alliance is rated as “Apparently Secure” in the state (S4 G5), and it is not considered a Sensitive Natural Community. However, within the Coastal Zone and McKinleyville Community, red alder forest may be protected as a one-parameter wetland.

3.2.2 Sitka Spruce Forest

Sitka spruce (FAC) forest is a Sensitive Natural Community (S2G5). Sitka spruce is co-dominant with red alder along much of the Hammond Trail, which runs through the west side of the Project Area, near the northern and middle crossing sites (**Figures 4.1 and 4.2**). The Sitka spruce canopy overhangs the paved trail along the access road to the central-west portion of the Project Area along the Hammond Trail north of Hiller Park, but the trail is clear of vegetation and useable as an access route with no substantial alteration of the Sensitive Natural Community. Trail margins in the Sitka spruce forest contain an understory of dense brambles dominated by California blackberry (FACU) with some salmonberry (*Rubus spectabilis*, FAC) and invasive Himalayan blackberry (FAC). Sitka spruce forest also occurs in the Norton Creek riparian area, adjacent to the northwest portion of the Project Area in the vicinity of Wetland 3.

3.2.3 Coastal Willow Thickets

Coastal willow thickets are a Sensitive Natural Community (S3G4). Coastal willow (FACW) overlaps the central-west portion of the Project Area, east of the Hammond Trail and west of the proposed staging area, near the middle crossing (**Appendix A Figure 4.2**). The area is strongly dominated by dense coastal willow, with some invasive Himalayan blackberry (FAC) present. The thicket occurs between ditch drainage from the settling ponds and the Hammond Trail.

Table 3-1.2 One-Parameter Wetlands within the Project Area

Vegetation Alliance	Area (ft^2)
Red Alder Forest	29,002 ft^2
Sitka Spruce Forest	14,863 ft^2
Coastal Willow Thickets	182 ft^2
Total 1-Parameter Wetlands	44,048 ft^2

3.3 Uplands Sampling Points

Upland sampling points were also collected to characterize areas that are likely to be affected by the project. No wetlands were detected within the areas characterized by the following upland points (**Table 3.3**).

3.3.1 Upland 1

The Upland 1 sample point was located near the planned drilling location in the southwestern extent of the Project Area. This area was a grazed pasture dominated by non-native grasses including purple velvetgrass (*Holcus lanatus*, FAC) and sweet vernal grass (*Anthoxanthum odoratum*, FACU) with Queen Anne's lace (*Daucus carota*, FACU), tall fescue (*Festuca arundinacea*, FAC), bull thistle (*Cirsium vulgare,* UPL), English plantain (*Plantago lanceolata*, FACU), pale flax (*Linum bienne*, UPL), sheep sorrel (*Rumex acetosella*, FACU), and hill lotus (*Acmispon parviflorus,* UPL). Soils did not show hydric soil characteristics, with a matrix color of 10YR 3/3, and the site did not show any signs of wetland hydrology.

3.3.2 Upland 2

The Upland 2 sample point was located near the planned drilling site in the southeastern extent of the Project Area. This site was also a grazed pasture with non-native grasses. The sample point was dominated by creeping bentgrass (*Agrostis stolonifera*, FAC) and California plantain (*Plantago erecta*, UPL) with hairy cat's ear (*Hypochaeris radicata*, FACU), sheep sorrel (FACU), sweet vernal grass (FACU), and purple velvetgrass (FAC). The soil consisted of loam with a color of 10YR 3/3 with no redoximorphic features, and it did not show hydric soil indicators. No hydrological indicators were present.

Table 3.3 Upland Sampling Point Locations

Sampling Point Name	Location (lat/long)
Upland 1 (Up1)	(40.926054, -124.111072)
Upland 2 (Up2)	(40.926547, -124.109632)

4. Wastewater Recycling Expansion Project Results

During the Wastewater Recycling Expansion Project delineation on April 18th, 2024, the weather was partly sunny, and conditions were fairly normal (0.78 inches of precipitation recorded within the last two weeks). The Project Area contains three-parameter USACE jurisdictional wetlands (Wetland 1 and Wetland 4) and one-parameter wetlands that meet CCC and local requirements based on the dominance of hydrophytic vegetation (Wetland 2 and Wetland 3). Upland sampling points were also described within areas of planned disturbance to confirm and document the absence of any wetland indicators in these areas. **Appendix A, Figure 3.3** show the results of the three-parameter and one-parameter wetland delineation.

4.1 USACE Three-Parameter Wetlands and Other Waters

Three-parameter wetlands occur in the central and northwestern portion of the PSB, along drainage swales. Summaries of each three-parameter wetland are provided below, and square footage is provided in **Table 4.1**. Please see the USACE Data Forms in **Appendix B** for more details.

4.1.1 Wetland 1

Wetland 1 (20,925 ft^2; 0.480 ac) was identified along the eastern shoulder of Fischer Ave within the inward side of agricultural fencing. Wetland 1 was flat however slightly topographically lower than its surroundings and appears to be a settling place for runoff from Fischer Ave and groundwater movement. Standing water was observed in Wetland 1 in February during a site reconnaissance visit, and in April 2024 during the delineation (see **Appendix E** for photographs).

Wetland 1 is free of rooted woody vegetation and is classified according to Cowardin classification system as a Palustrine Emergent wetland with persistent vegetation (PEM1) (FGDC 2013). Vegetation was dominated by brome fescue (*Festuca bromoides,* FAC), and Kentucky blue grass (*Poa pratensis,* FAC). Soils met the Depleted Matrix (F3) hydric soil indicator and consist of an upper horizon (0-4 inches) of 2.5Y4/1 sandy clay loam with no redoximorphic concentrations and a lower horizon (4-12 inches) of 5Y4/1 sandy clay loam with 15% redoximorphic concentrations. Wetland 1 contained pockets of Surface Water (A1) and the Geomorphic Position (D2) indicate wetlands hydrology are present. Wetland 1 is hydrologically connected to Wetland 4 via a culvert and is therefore connected to the Mad River. See datasheet W1-T1-3par in **Appendix B** for additional details.

The Project will not impact this wetland as the installation of the irrigation mainline pipe will be withing the road prism of Fischer Road, and under the stormwater culvert connecting the wetlands on the east and west sides of Fischer Road.

4.1.2 Wetland 4

Wetland 4 (410 ft^2; 0.009 ac) was identified in the northwestern extent of the PSB and is a ditch that is hydrologically connected to the Mad River approximately 150 feet downstream. Wetland 4 contained standing water with a vegetated channel bottom and the transect was located on the northern bank of the ditch (see **Appendix E** for photographs).

Wetland 4 is free of rooted woody vegetation and is classified according to Cowardin classification system as a Palustrine Emergent wetland with persistent vegetation (PEM1) (FGDC 2013). Vegetation was dominated by creeping buttercup (*Ranunculus repens,* FAC), and creeping bentgrass (*Agrostis stolonifera,* FAC), and contained smaller amounts of silverweed (*Potentilla anserina,* OBL). Soils met the Depleted Matrix (F3) hydric soil indicator and consist of an upper horizon (0-10 inches) of 5Y4/1 silty clay loam with 10% redoximorphic concentrations and a lower horizon (10-15 inches) of 5Y4/1 silty clay loam with 2% redoximorphic concentrations. Wetland 4 contained Surface Water (A1) and a High Water Table (A2) and therefore contains wetlands hydrology. See datasheet W4-T3-3par in **Appendix B** for additional details.

Table 4-1. Three-parameter Wetlands within the Wastewater Recycling Expansion Project

Aquatic Resource Name	Central lat/long	Aquatic Resource Size
Wetland 1	(40.929190, -124.120151)	20,925 ft^2; 0.480 ac
Wetland 4	(40.931537, -124.125600)	410 ft^2; 0.009 ac
Total USACE Wetland in Project Area		**21,335 ft^2; 0.490 ac**

4.2 CCC One-parameter Wetlands

One-parameter wetlands require either hydrophytic vegetation or hydric soils, both of which require wetlands hydrology to be present (CCR 14, Section 13577). These areas would be regulated under the Coastal Act, the McKinleyville Area Local Coastal Plan, and the McKinleyville Community Plan as one-parameter wetlands.

4.2.1 Wetland 2

Wetland 2 (130 ft^2; 0.003 ac) was identified in the central portion of the PSB along the eastern shoulder of Fischer Avenue. The area was flat and did not appear as a settling location for surface runoff (see **Appendix E** for photographs).

Vegetation in Wetland 2 was dominated by creeping bentgrass (FAC), creeping buttercup (FAC), and reed canary grass (*Phalaris arundinacea,* FACW). The prevalence index score was 2.84 which suggests that wetlands hydrology is present enough of the time to support hydrophytic vegetation. Soils were not considered hydric and consist of a single horizon (0-14 inches) of 10YR3/2 loam with no observed redoximorphic concentrations. Wetland 2 contained soil dampness in the lower portion of the horizon and at a broad scale exhibits suitable Geomorphic Position (D2), which is a secondary wetlands hydrology indicator. Due to the presence of hydrophytic vegetation Wetlands 2 is considered a one-parameter wetland. See datasheet W2-T2-1par in **Appendix B** for additional details.

4.2.2 Wetland 3

Wetland 3 (3,815 ft^2; 0.088 ac) was identified in the northwestern extent of the PSB and on the southern side of the Wetlands 4 ditch. Wetland 3 is predominantly flat and sloping towards Wetland 4 ditch (see **Appendix E** for photographs).

Vegetation in Wetland 3 was dominated by brome fescue (FAC), creeping bentgrass (FAC), and creeping buttercup (FAC). The prevalence index score was 3.00 which suggests that wetlands hydrology is present enough of the time to support hydrophytic vegetation. Soils were not considered hydric and consist of an upper horizon (0-4 inches) of 5Y4/1 silty clay loam, and a lower horizon (4-12 inches) of 2.5Y4/1 silty clay loam both with no observed redoximorphic concentrations. Wetland 3 at a broad scale exhibits suitable Geomorphic Position (D2) to provide a secondary indicator of wetlands hydrology. Due to the presence of hydrophytic vegetation Wetlands 3 is considered a one-parameter wetland. See datasheet W3-T3-1par in **Appendix B** for additional details.

Table 4-2. One-parameter Wetlands within the Wastewater Recycling Expansion Project

Aquatic Resource Name	Central lat/long	Aquatic Resource Size
Wetland 2	(40.929190, -124.120151)	130 ft^2; 0.003 ac
Wetland 3	(40.931411, -124.125747)	3,815 ft^2; 0.088 ac
Total CCC One-parameter Wetland in Project Area		**3,945 ft^2; 0.091 ac**

4.3 Uplands Sampling Points

Upland sampling points were collected to characterize areas that are likely to be affected by the Project. No wetlands were detected within the areas characterized by the following upland points (**Table 4-3**).

4.3.1 Upland 1

The Upland 1 (Up-1) sample point was located in the southeastern extent of the PSB. This area is grazed pasture dominated by non-native grasses including English plantain (*Plantago lanceolata*, FACU) tall fescue (*Festuca arundinaceus,* FAC), and common velvetgrass (*Holcus lanatus,* FAC), and had a Prevalence Index of 3.77. Soils did not show hydric soil characteristics, with a matrix color of 2.5Y2/3, and the site did not show signs of wetland hydrology.

4.3.2 Upland 2

The Upland 2 (Up-2) sample point was located in the southwestern extent of the PSB. This site is also a grazed pasture dominated by non-native grasses including creeping bentgrass (FAC) and tall fescue (FAC), and had a Prevalence Index of 3.03. The soil consisted of silty clay loam with a color of 2.5Y3/2 with no redoximorphic features, and it did not show hydric soil indicators. No hydrological indicators were present.

4.3.3 Upland 3

The Upland 3 (Up-3) sample point was located in the northeastern portion of the PSB, on top of the bluff. This site is also a grazed pasture dominated by non-native grasses including sweet vernal grass (*Anthoxanthum odoratum,* FACU), English plantain (FACU) and common sheep sorrel (*Rumex acetosella,* FACU). Up-3 had a Prevalence Index of 4.00. The soil consisted of sandy loam with a color of 10YR 2/2 with no redoximorphic features, and it did not show hydric soil indicators. No hydrological indicators were present.

5. Conclusions

The wetland delineation for the MCSD Sewer Crossings Retrofit, completed on October 14, 2020, and the Wastewater Recycling Expansion Project completed on April 18, 2024, determined the extent of USACE-jurisdictional wetlands within the Project Areas based on hydrophytic vegetation, hydric soils, and wetland hydrology using methods and indicators outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (USACE 2010). A total of 1,157.3 ft^2 of three-parameter wetlands occur within the Highway Crossing Project Area, and they are hydrologically connected to the Widow White creek/Norton Creek riparian area (**Appendix A, Figure 3.1**). Additionally, a perennial fork of Norton Creek flows through a culvert under the access road. A total of 21,335 ft^2 (0.490 acres) of three-parameter wetlands occur within the Wastewater Recycling Expansion Project Area, which are hydrologically connected to the Mad River (**Appendix A, Figure 3.3**). Data forms are attached showing sample plot data collected in transects across wetland boundaries and additional upland sampling points (**Appendix B**). Vegetation communities with hydrophytic vegetation are subject to Humboldt County and CCC jurisdiction as one-parameter wetlands under the Coastal Act, the Humboldt Bay Area Plan, and McKinleyville Community Plan. One-parameter wetlands in the Highway Crossing Project overlapping the Project Area include Sitka spruce forest, coastal willow thickets, and red alder forest (**Appendix A Figures 4.1 and 4.2**), and a total of 3,945 ft^2 (0.091 acres) of one parameter wetlands as herbaceous vegetated areas occur in the Wastewater Recycling Expansion Project as Wetlands 2 and 3 (**Appendix A, Figure 3.3**).

6. Special Terms and Conditions

6.1 Purpose of this Report

GHD prepared this report for the McKinleyville Community Services District (MCSD), and MCSD may only use and rely on this report for the purpose agreed upon between GHD and MCSD, as set out in the scope and contract for work effort reported herein. GHD Inc. is not liable for any action arising out of the reliance of any third party on the information contained within this report. GHD otherwise disclaims responsibility to any entity other than MCSD arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

6.1 Scope and Limitations

This report does not authorize any individuals to develop, fill, or alter the delineated wetlands. Verification of the delineation by jurisdictional agencies is necessary prior to the use of this report for planning and development purposes. A USACE, agency-stamped, delineation map, and a jurisdictional approval letter are required to signify confirmation of delineation results. In situations where a field investigation determines that no jurisdictional wetlands occur, jurisdictional concurrence with these findings is recommended.

The delineation conclusions were based on the information available during the period of the investigation, which took place October 8th and 14th, 2020, and April 18th, 2024. The opinions, conclusions, and any recommendations in this report are based on conditions encountered and information reviewed by the date of preparation of the report. Site conditions may change after the date of this report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change unless contracted to do so.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions, and any recommendations in this report are based on the information obtained from and testing undertaken at or in connection with specific sample points. Conditions at other locations of the site may be different from the conditions found at the specific sample points.

7. References

Baldwin, B. D. 2012. The Jepson Manual, Second Edition. University of California Press. Berkeley, CA.

CCC, California Coastal Commission. 2011. Definition and Delineation of Wetlands in the Coastal Zone. Briefing, San Francisco, CA: State of California—Natural Resources Agency.

CCC, California Coastal Commission. 2013. LCP Update Guide, Section 4. Environmentally Sensitive Habitats and Other Natural Resources. San Francisco, CA: State of California—Natural Resources Agency.

COLOR, M., 2000. Munsell Soil Color Charts. Year 2000 revised washable edition. GretagMacbeth

Federal Geographic Data Committee. 2013. Classification of Wetlands and Deepwater Habitats of the United States. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC. http://fws.gov/wetlands/Documents/Wetlands-and-Deepwater-Habitats-Classification-chart.pdf

Humboldt Bay Area Coastal Plan. 1982. Revised December 2014. Humboldt County Local Coastal Program. https://humboldtgov.org/1678/Local-Coastal-Plan-Update.

Lichvar et al. 2016. The National Wetland Plant List: 2016 wetland ratings. United States Army Corps of Engineers. http://acwc.sdp.sirsi.net/client/search/asset:asset?t:ac=$N/1012381.

McKinleyville Community Plan. 2002. Amended October 23, 2017. Humboldt County General Plan Community Plan Areas. https://humboldtgov.org/DocumentCenter/View/65033/McKinleyville-Community-Plan-as-amended-by-General-Plan-2017-PDF.

NOAA Regional Climate Centers. AgCIS. Accessed November 2020, June 2024. http://agacis.rcc-acis.org/

NRCS, Natural Resources Conservation Service. 2020/2024. Web Soil Survey. Accessed November 2020, June 2024. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

NWI, National Wetlands Inventory. 2020/2024. National Wetlands Inventory mapper. Accessed November 2020, June 2024. https://www.fws.gov/wetlands/data/Mapper.html.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evans. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society. Sacramento, CA.

SWRCB, State Water Resources Control Board. 2019. "Procedures for Discharges of Dredged or Fill Material to Waters of the State." Procedures, Sacramento, CA. https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_conformed.pdf.

SWRCB, State Water Resources Control Board. 2020. Draft Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Guidance, Sacramento, CA: State Water Resources Control Board. https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/guidance_02142020.pdf.

USACE. 1987. Wetlands Delineation Manual, Tech. Rep 4-87-1. Waterways Experiment Station, United States Department of the Army Corps of Engineers (USACE).

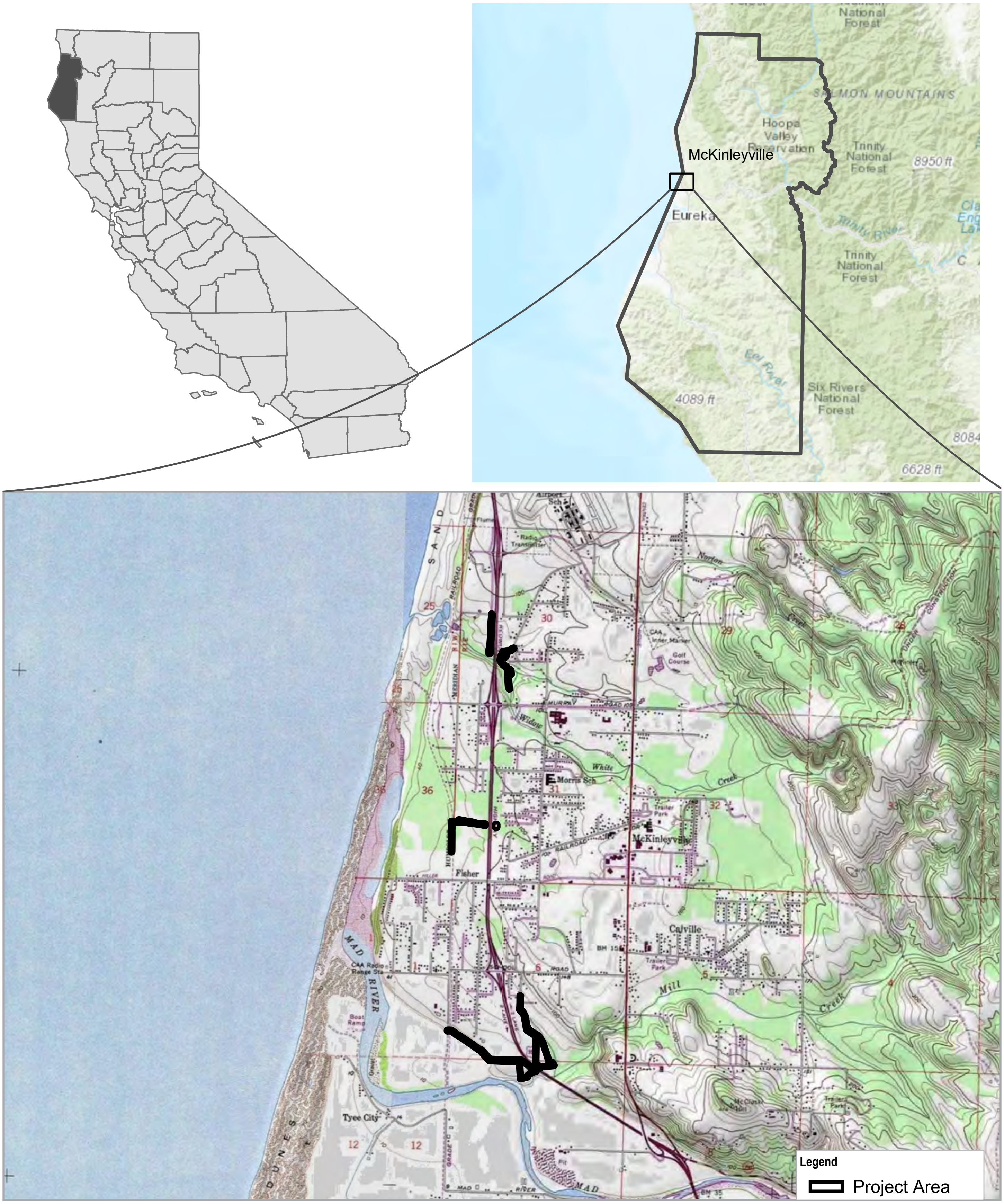
USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). U.S. Army Corps of Engineers.

USACE. U.S. Army Corps of Engineers. 2020. The Navigable Waters Protection Rule: Definition of “Waters of the United States”. Final Rule, Environmental Protection Agency

USDA/NRCS. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds). United States Department of Agriculture (USDA) and Natural Resources Conservation Service (NRCS) in cooperation with the National Technical Committee for Hydric Soils.

Appendices

Appendix A – Figures



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McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

Vicinity Map

FIGURE 1

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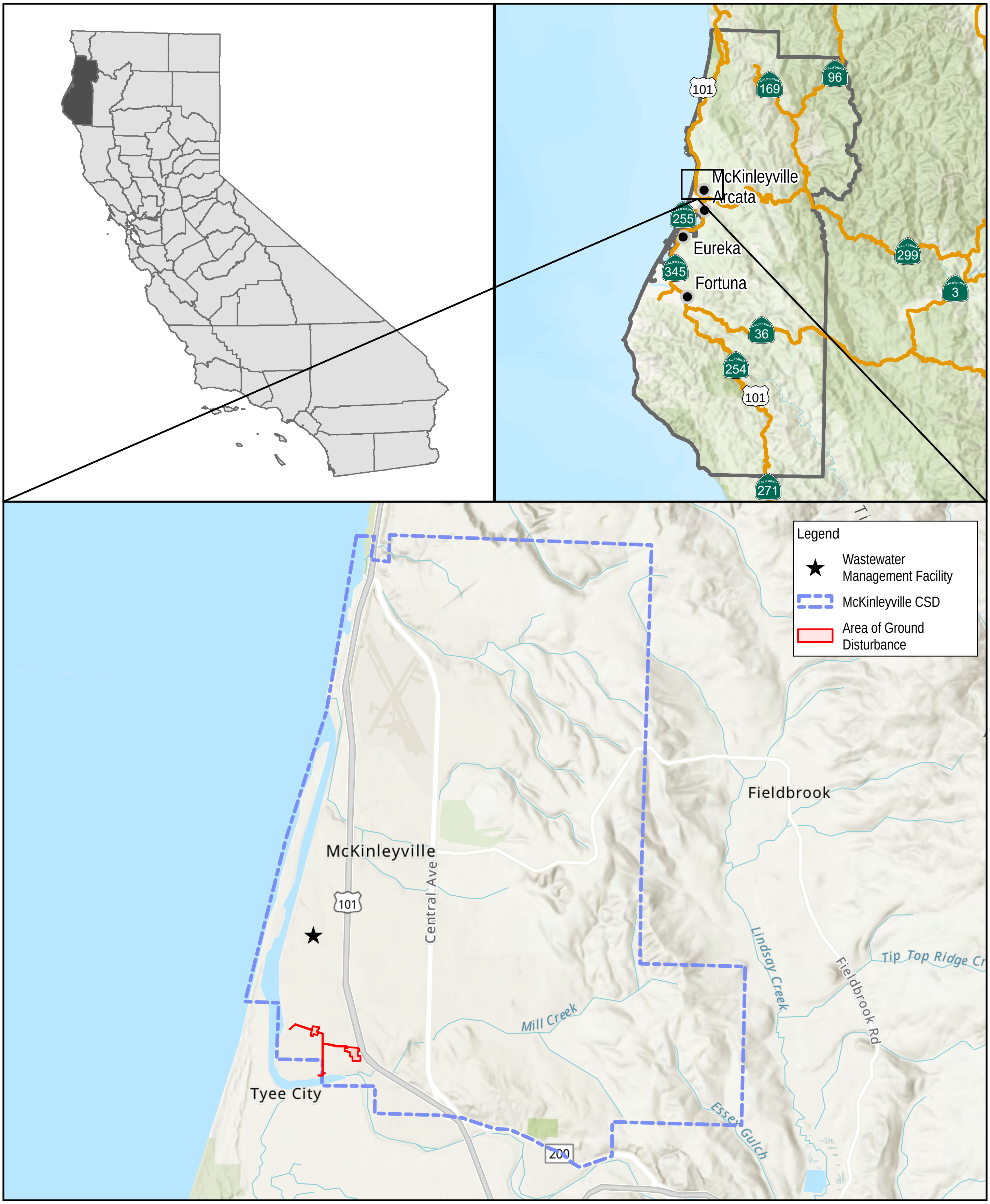

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

Project No. 12623402
Revision No. -
Date July 2024

Project Vicinity

FIGURE 1.2

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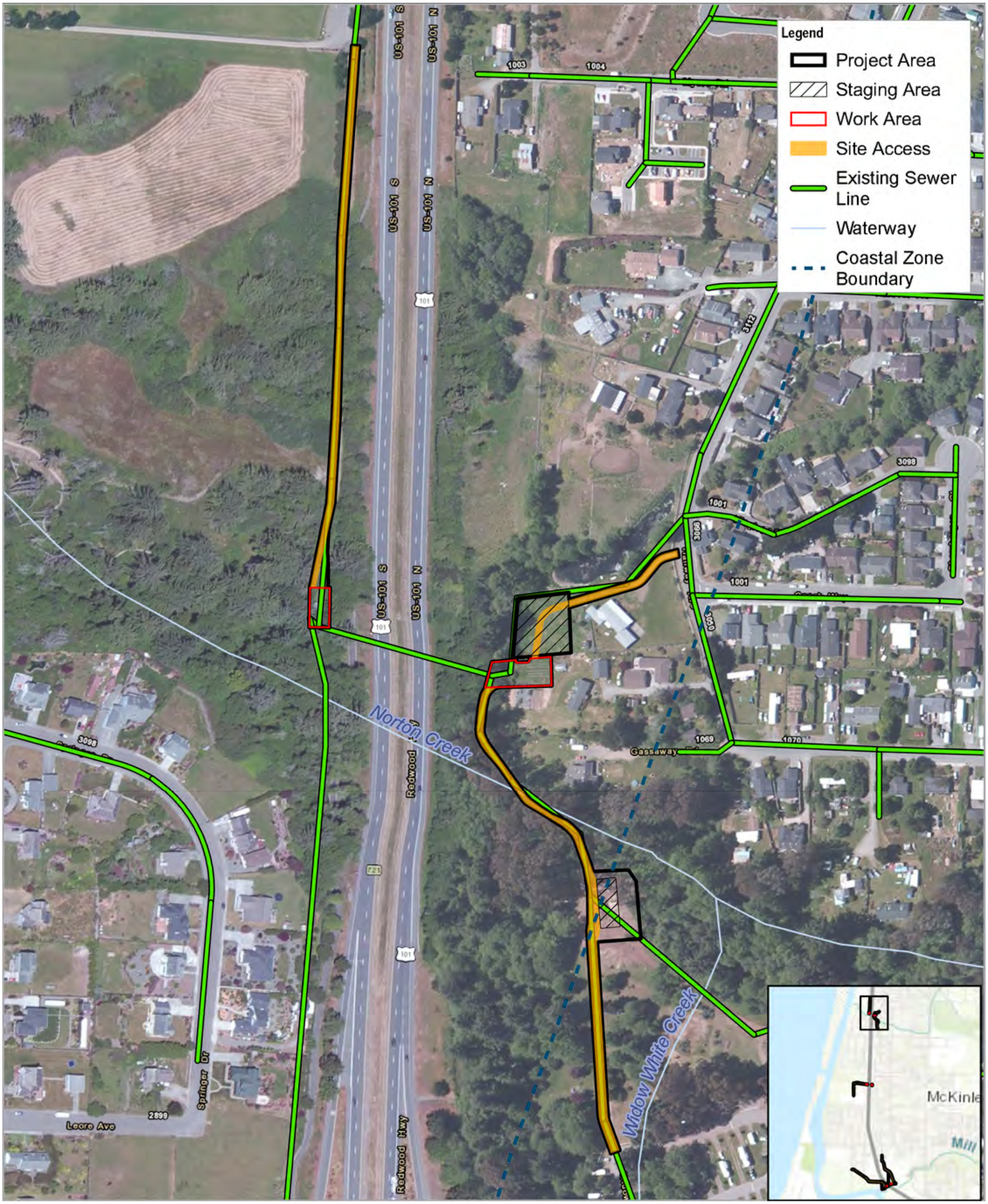

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McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

Project Area
Northern Crossing Site

FIGURE 2.1

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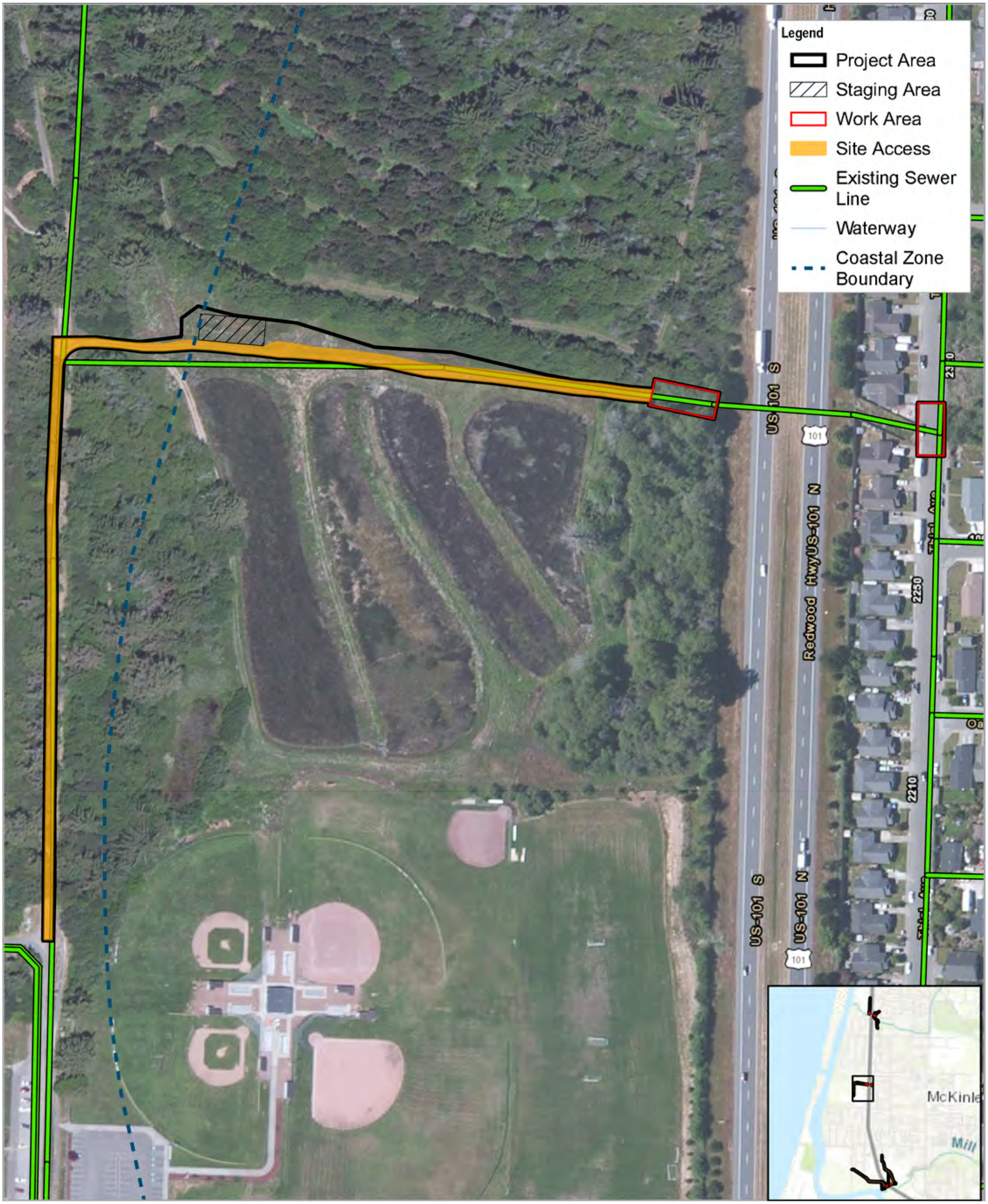
Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: zporteous



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McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

Project Area
Middle Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 2.2

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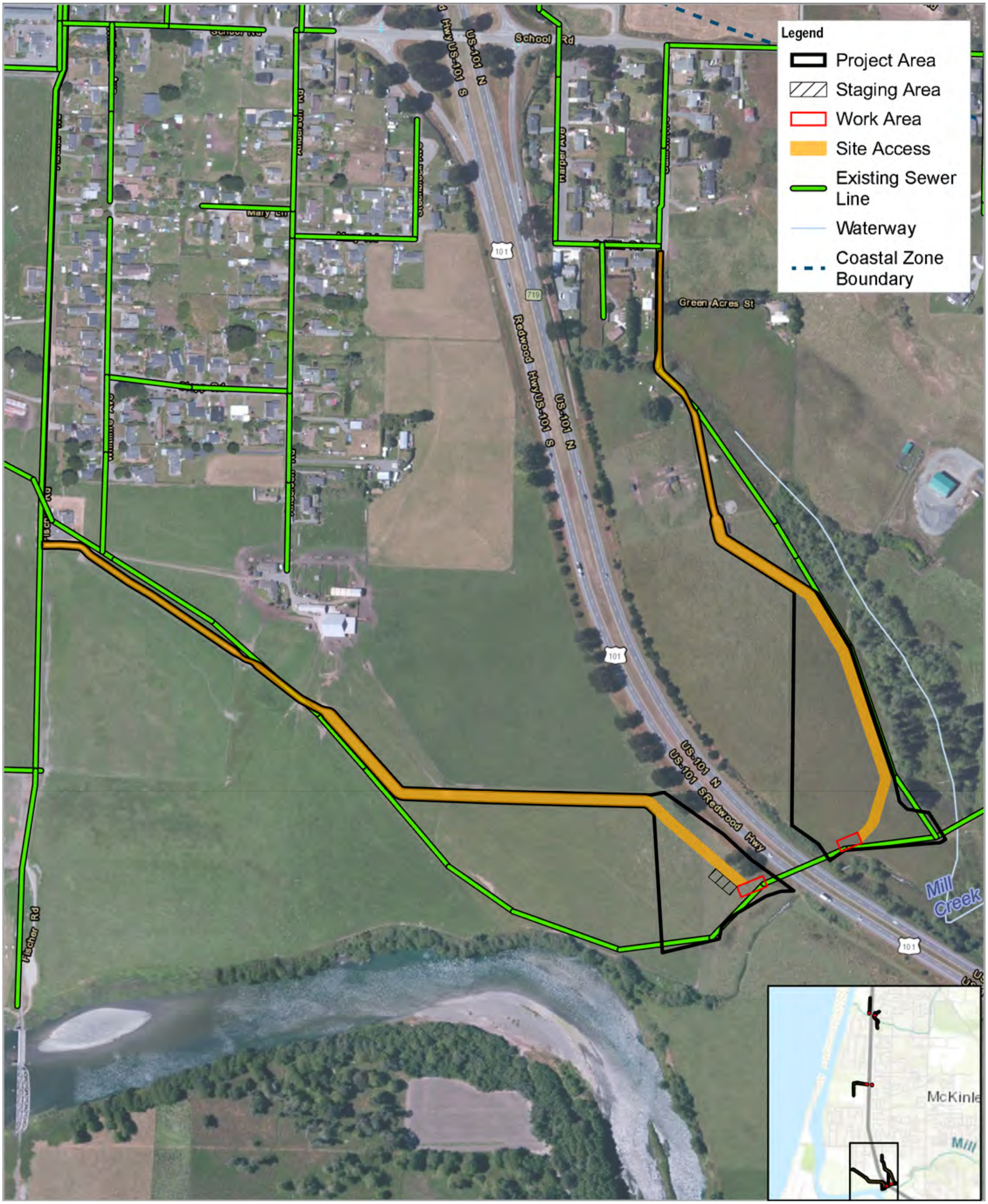

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McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

Project Area
Southern Crossing Site

Project No. **11216191**
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Date **Nov 2020**

FIGURE 2.3

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

Project No. 12623402
Revision No. -
Date Jul 2024

Project Area

FIGURE 2.4

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Road Names: Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

Project No. 12623402
Revision No. -
Date Jul 2024

Project Components

FIGURE 2.5

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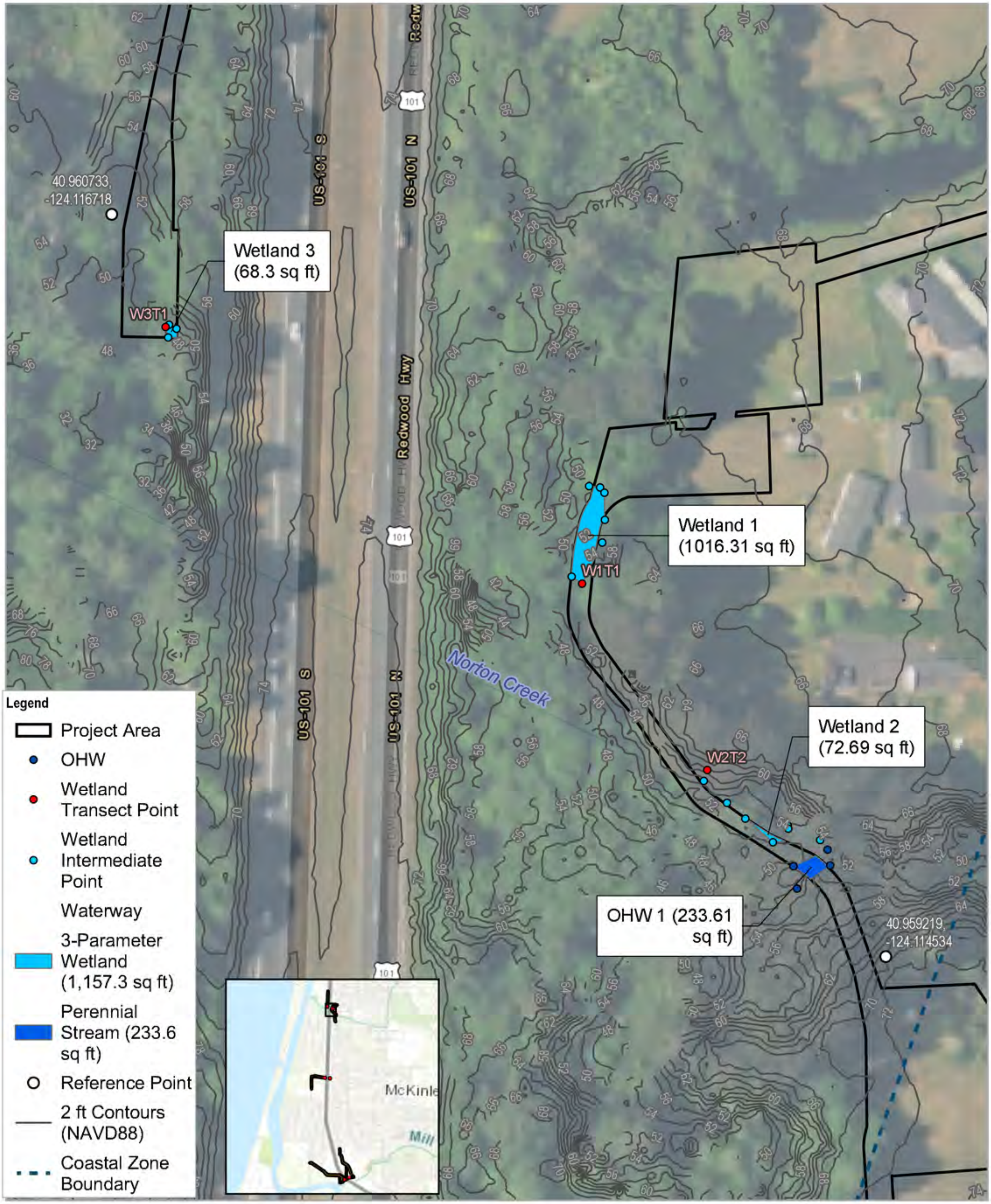

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McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

3-Parameter Wetlands

FIGURE 3.1

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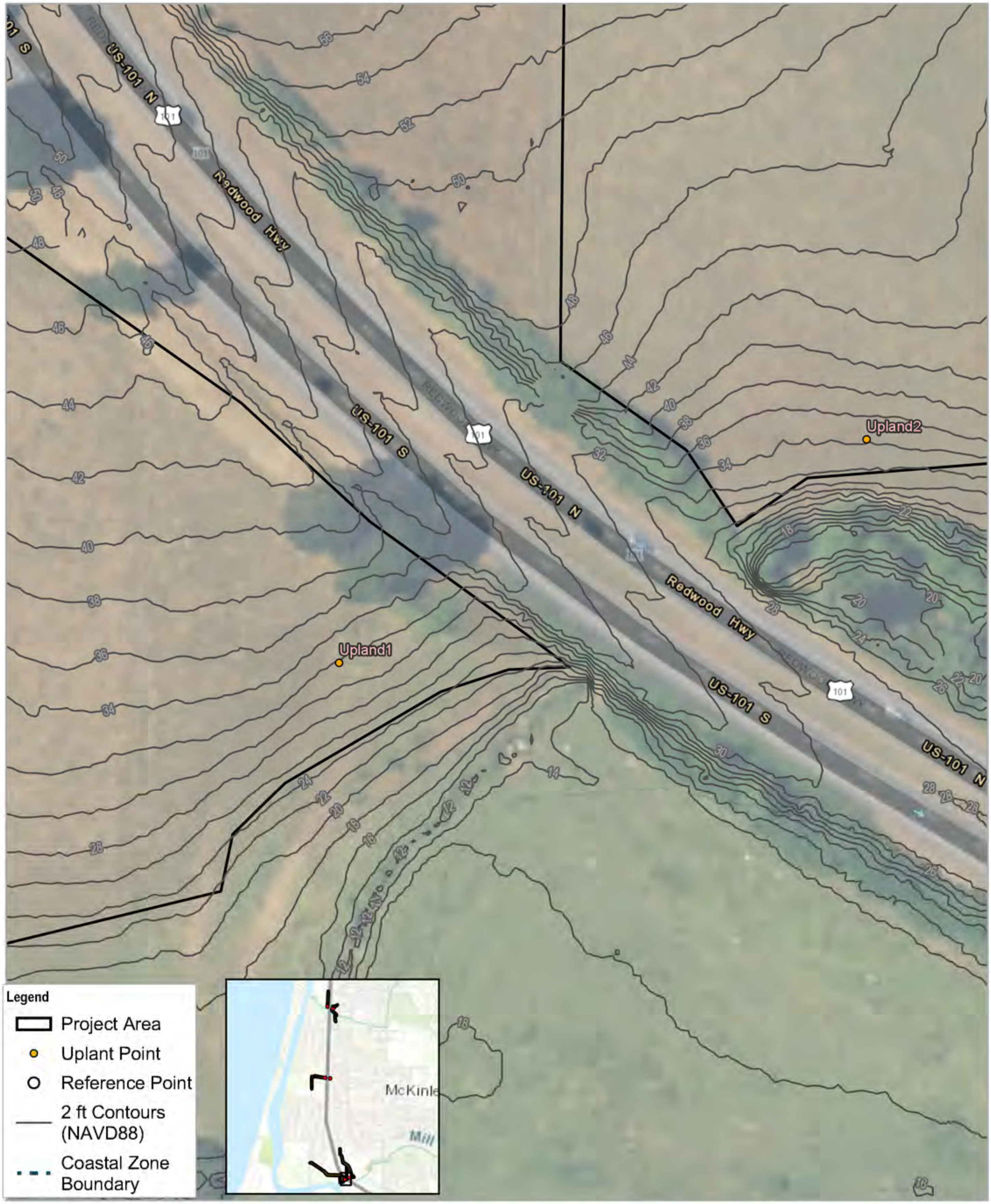

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Sewer Highway Crossings Retrofit
Wetland Delineation Report

Upland Points

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 3.2

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Print date: 20 Nov 2020 - 13:49

Data source: NAIP Imagery, 2020, World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community; World_Topo_Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community. Created by: zporteous

Paper Size ANSI A

0 100 200 300 400

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

McKinleyville Community Services District
Wastewater Recycling Expansion Project

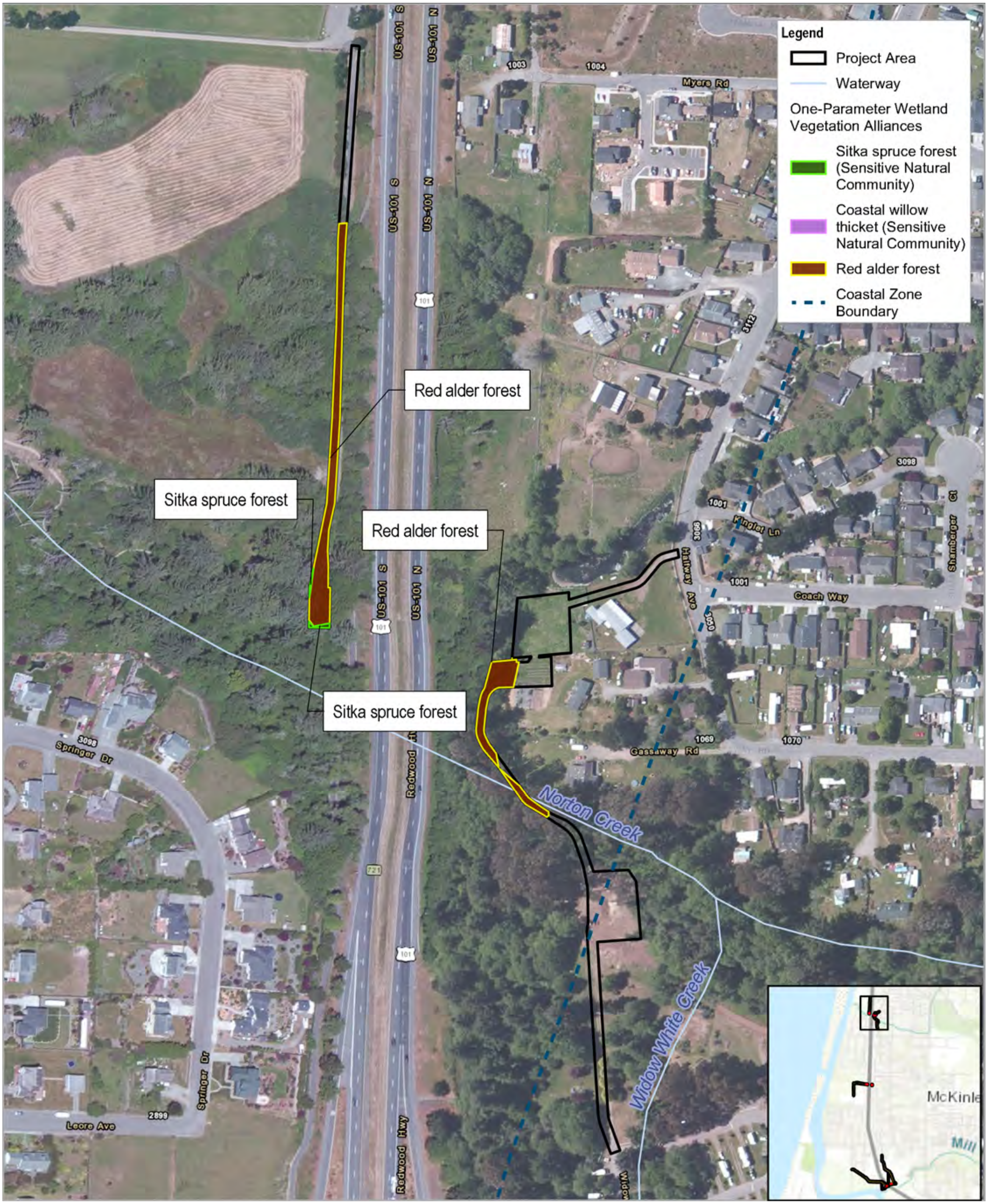
Wetland Delineation

Project No. 12623402
Revision No. -
Date Jul 2024

FIGURE 3.3

\\ghdnet\ghd\US\Eureka\Projects\561\12623402\GIS\Maps\Deliverables\1262340_ProjComponents_20240401.aprx - 12623402_03_03_Wetlands_RevB
Print date: 09 Jul 2024 - 12:01

Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3



Paper Size ANSI A

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Feet

Map Projection: Lambert Conformal Conic
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Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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GHD

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

One-Parameter Wetlands Northern Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 4.1

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Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community; World_Topo_Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp.,

Paper Size ANSI A

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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

One-Parameter Wetlands Middle Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 4.2

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Print date: 20 Nov 2020 - 13:52

Paper Size ANSI A

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

GHD

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

One-Parameter Wetlands
Southern Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 4.3

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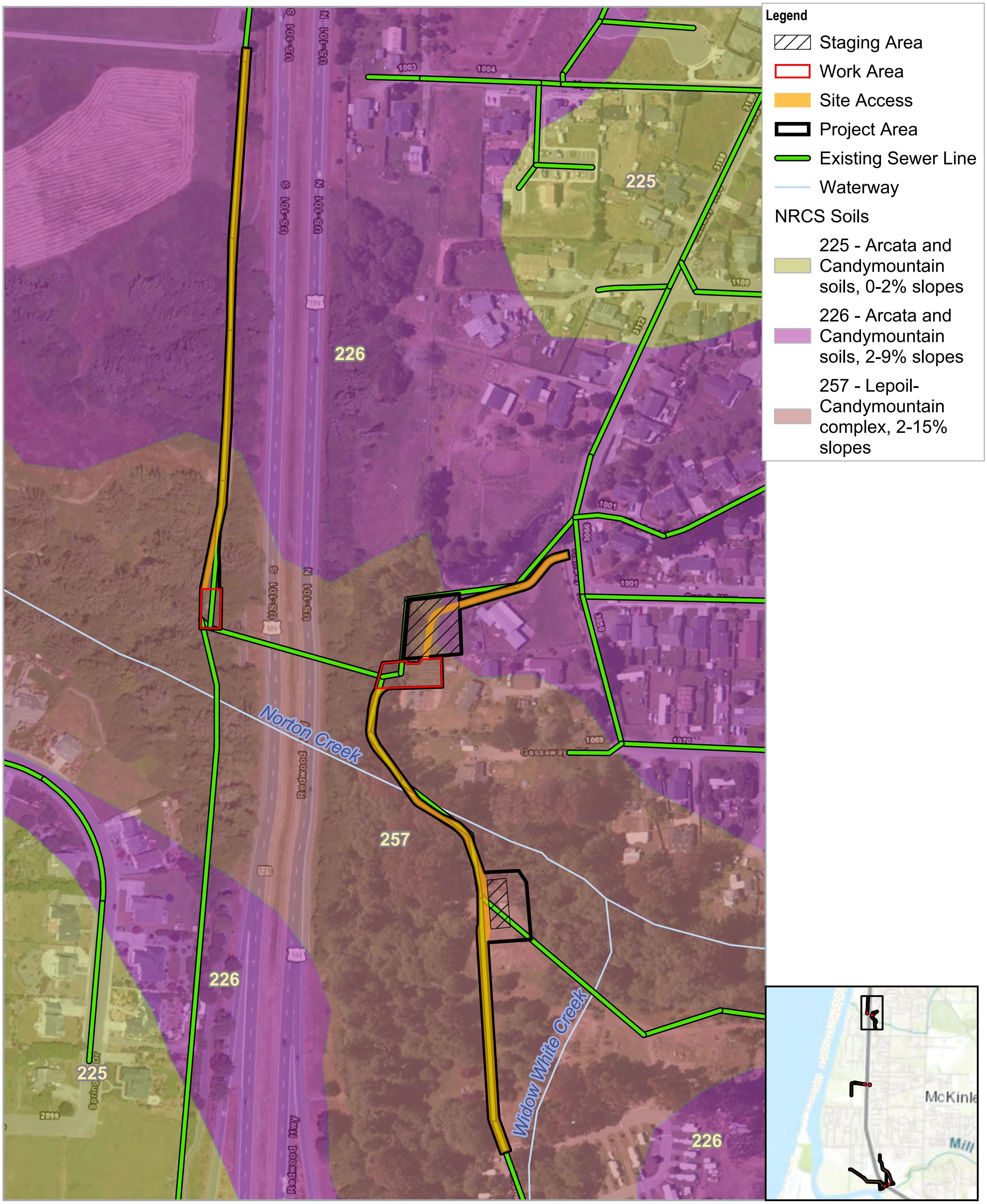
Print date: 20 Nov 2020 - 13:52

Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community; World_Topo_Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp.,



Paper Size ANSI A

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

GHD

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

NRCS Soils
Northern Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 5.1

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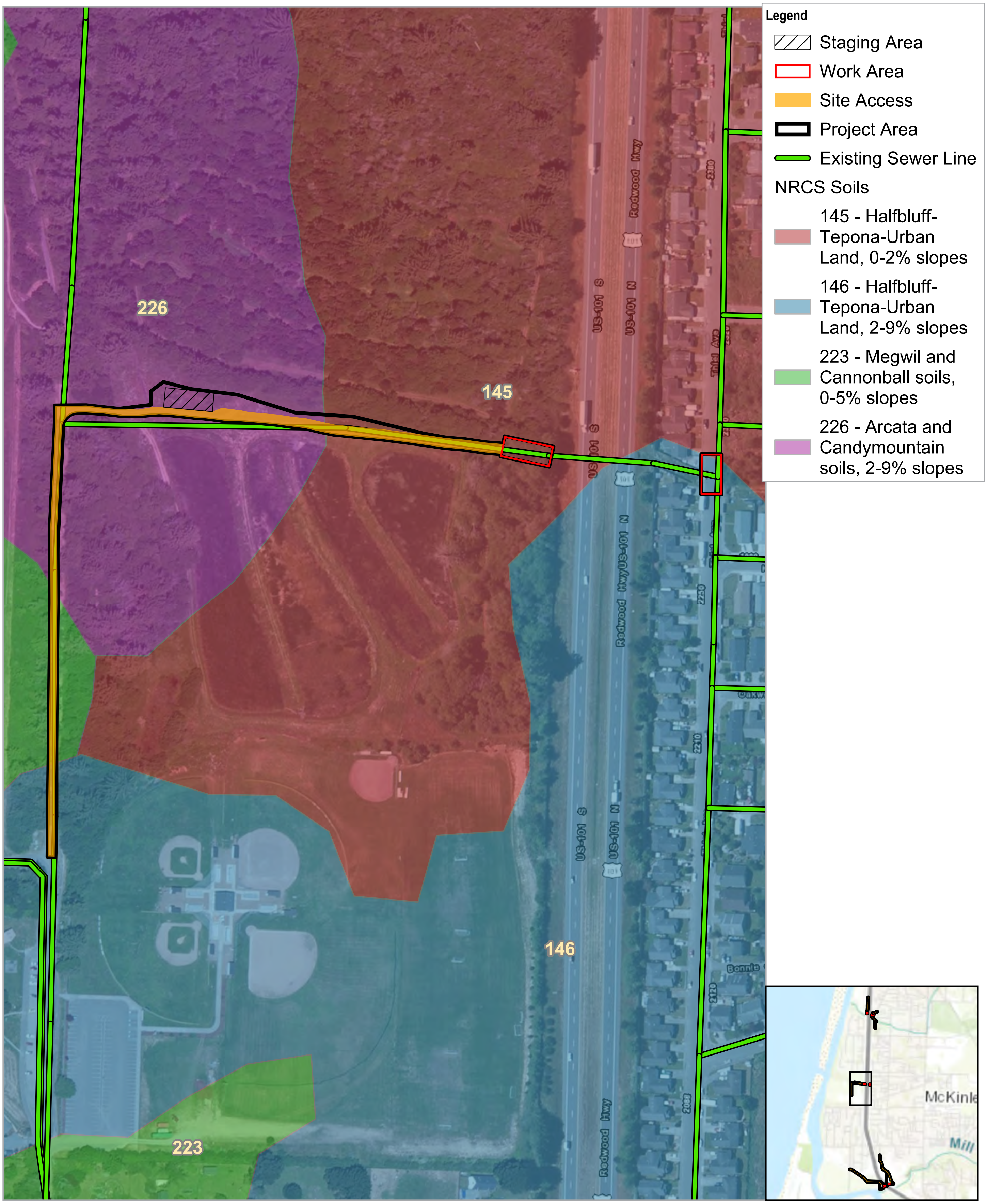

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Feet

N

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

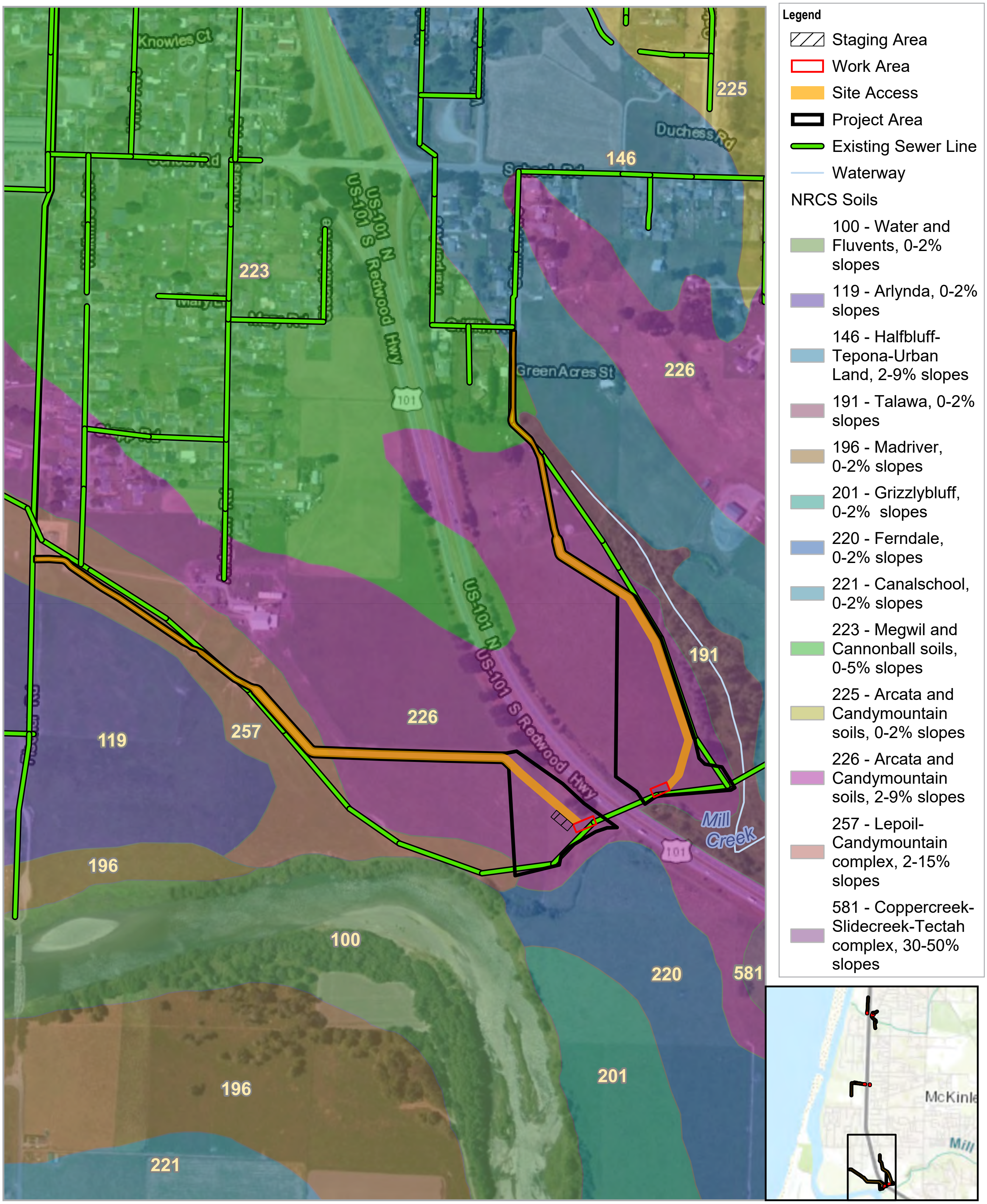
Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

NRCS Soils
Middle Crossing Site

FIGURE 5.2

N:\US\Eureka\Projects\561\11216191\GIS\Maps\Deliverables\11216191_WetDel.aprx
Print date: 11 Nov 2020 - 14:42

Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: jclark2



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Feet

N

Map Projection: Lambert Conformal Conic
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Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

NRCS Soils
Southern Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 5.3

N:\US\Eureka\Projects\561\11216191\GIS\Maps\Deliverables\11216191_WetDel.aprx
Print date: 11 Nov 2020 - 14:42

Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: jclark2

Paper Size ANSI A

0 100 200 300 400

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

N

McKinleyville Community Services District
Wastewater Recycling Expansion Project

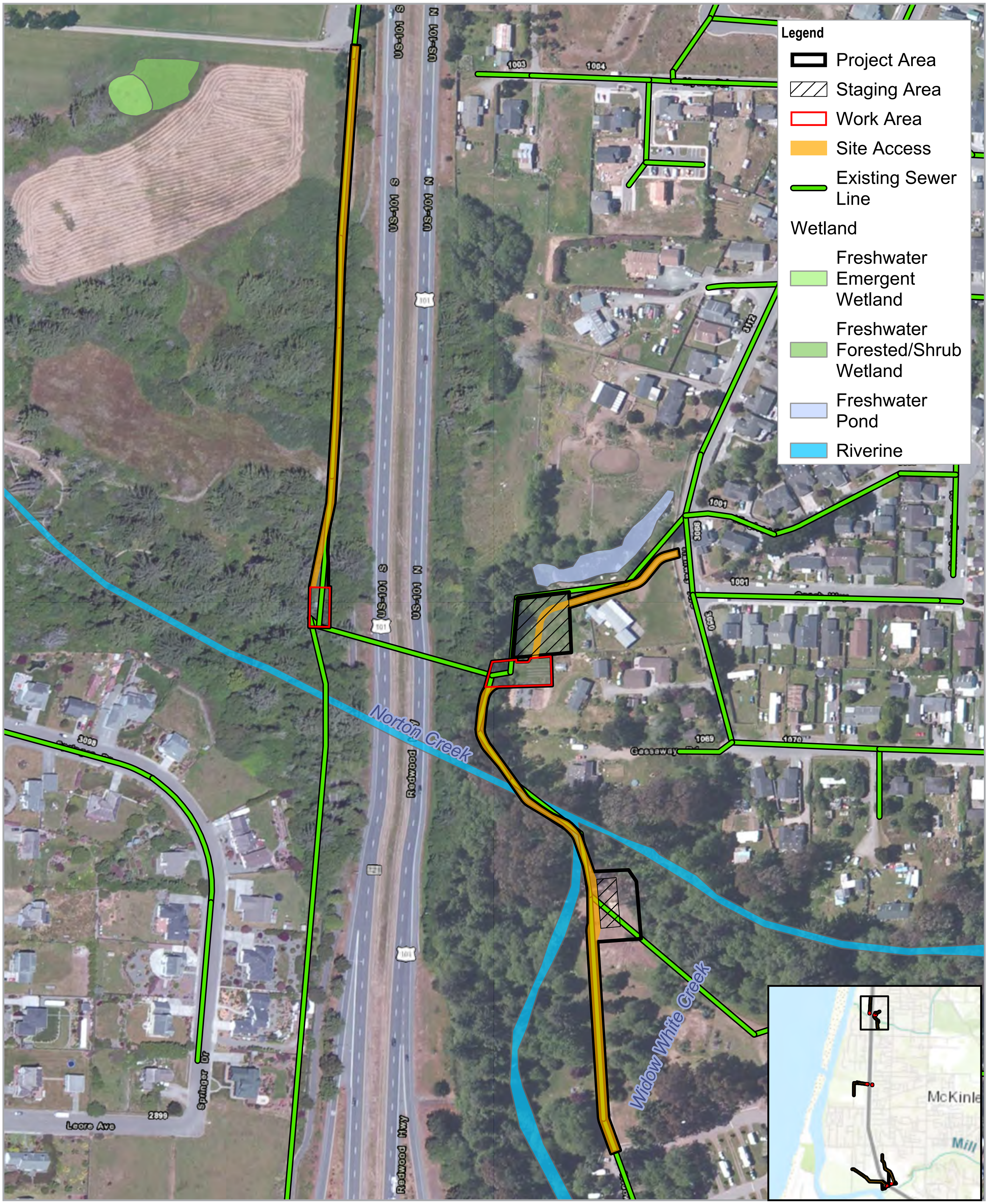
NRCS Soils

Project No. 12623402
Revision No. -
Date Jul 2024

FIGURE 5.4

\\ghdnet\ghd\US\Eureka\Projects\561\12623402\GIS\Maps\Deliverables\1262340_ProjComponents_20240401.aprx - 12623402_05_04_Soils
Print date: 08 Jul 2024 - 14:25

Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3



Paper Size ANSI A

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Feet

N

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

National Wetlands Inventory
Northern Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 6.1

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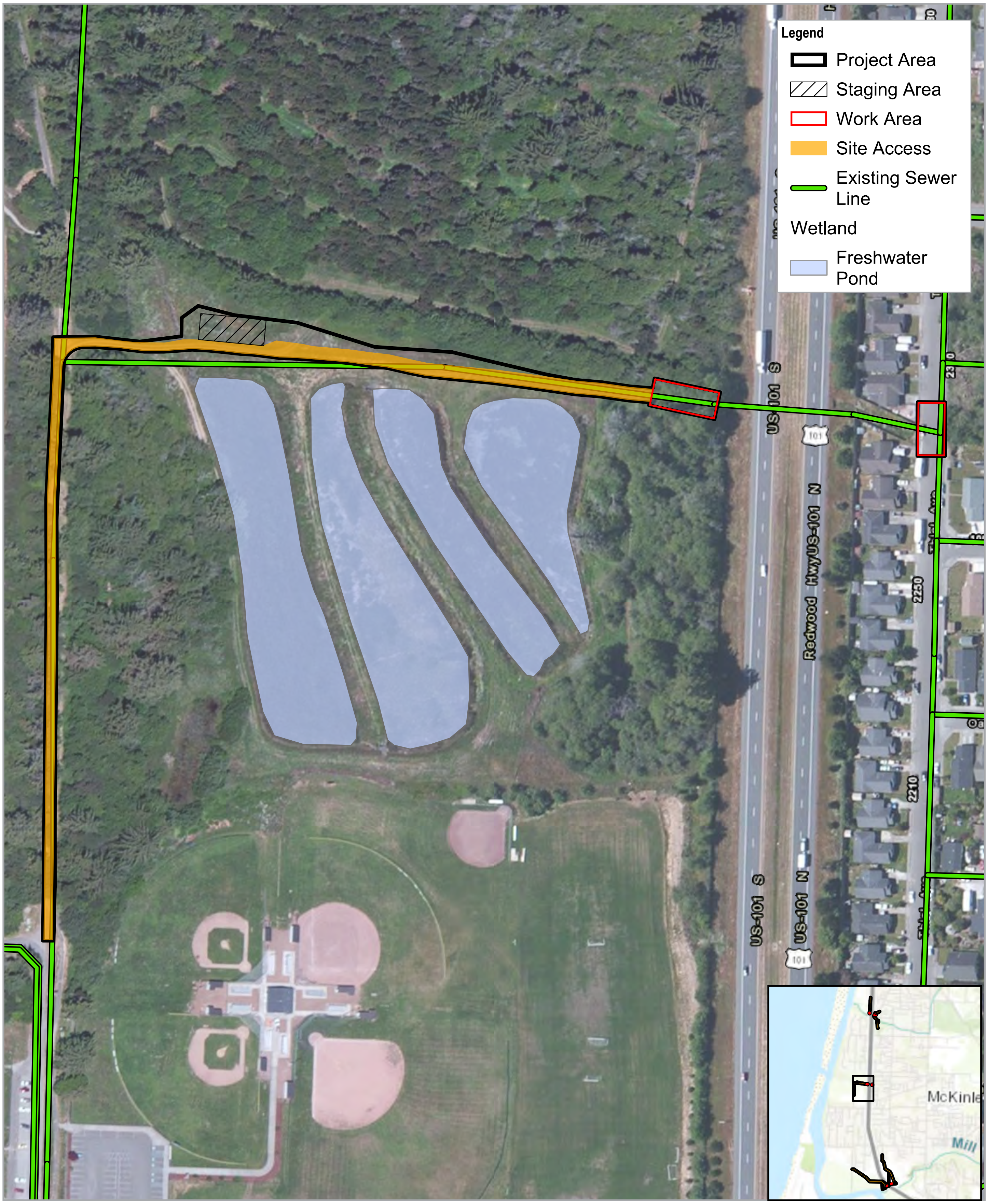
Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: jclark2



Paper Size ANSI A

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

National Wetlands Inventory Middle Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 6.2

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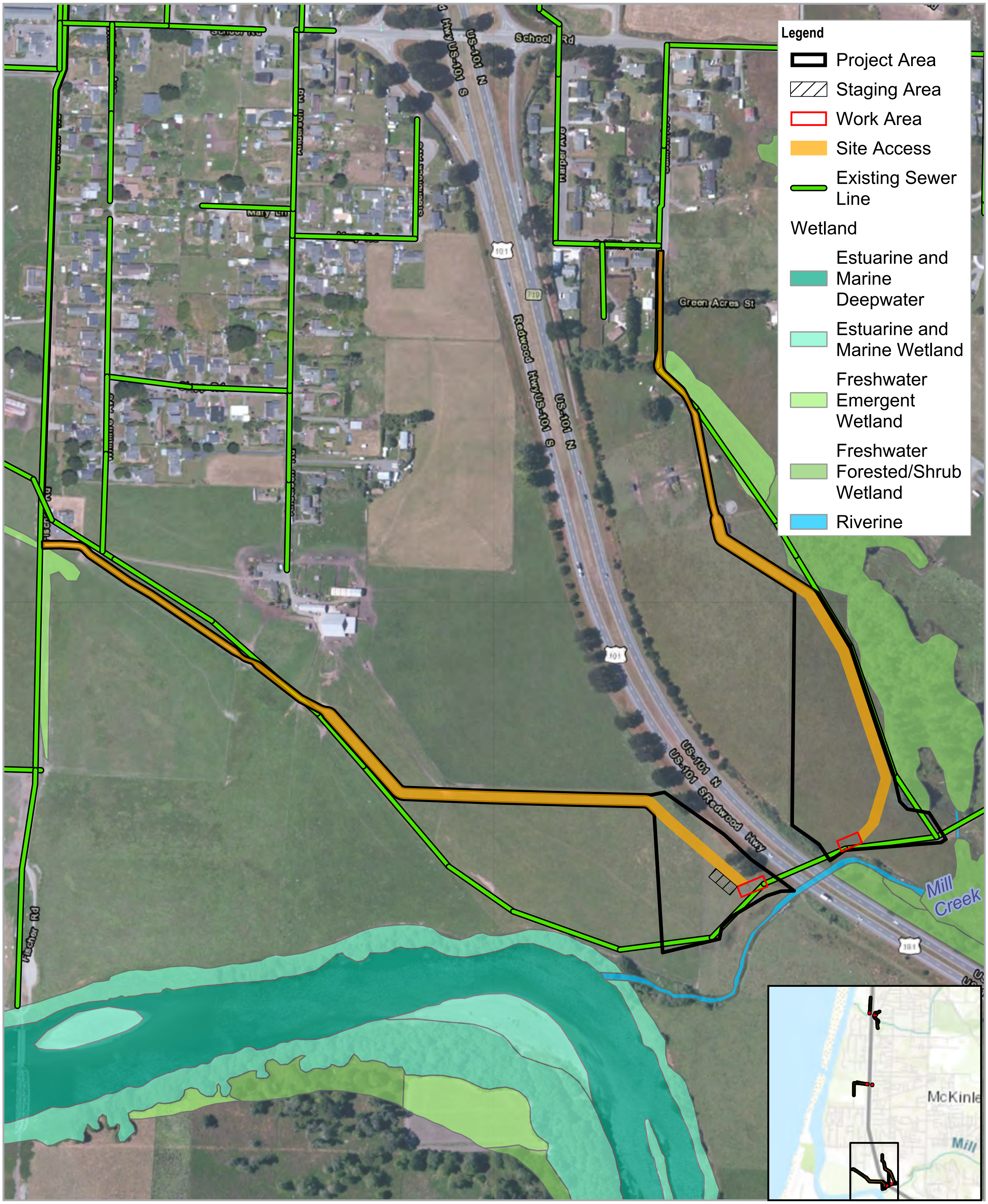


Paper Size ANSI A

0 130 260 390 520

Feet

N

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

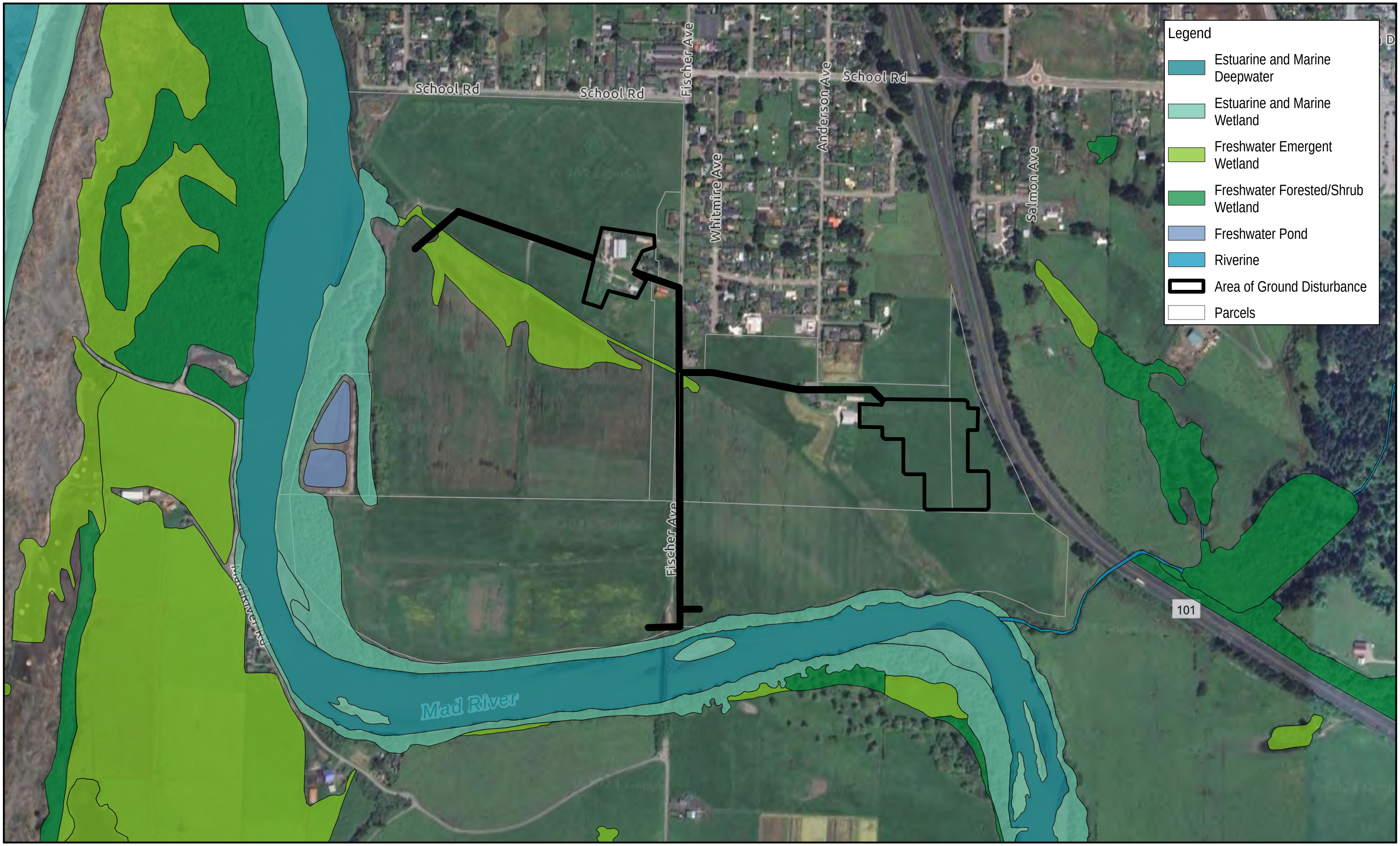
National Wetlands Inventory
Southern Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 6.3

N:\US\Eureka\Projects\561\11216191\GIS\Maps\Deliverables\11216191_WetDel.aprx
Print date: 11 Nov 2020 - 11:56

Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: jclark2



Paper Size ANSI A

0 200 400 600 800

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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McKinleyville Community Services District
Wastewater Recycling Expansion Project

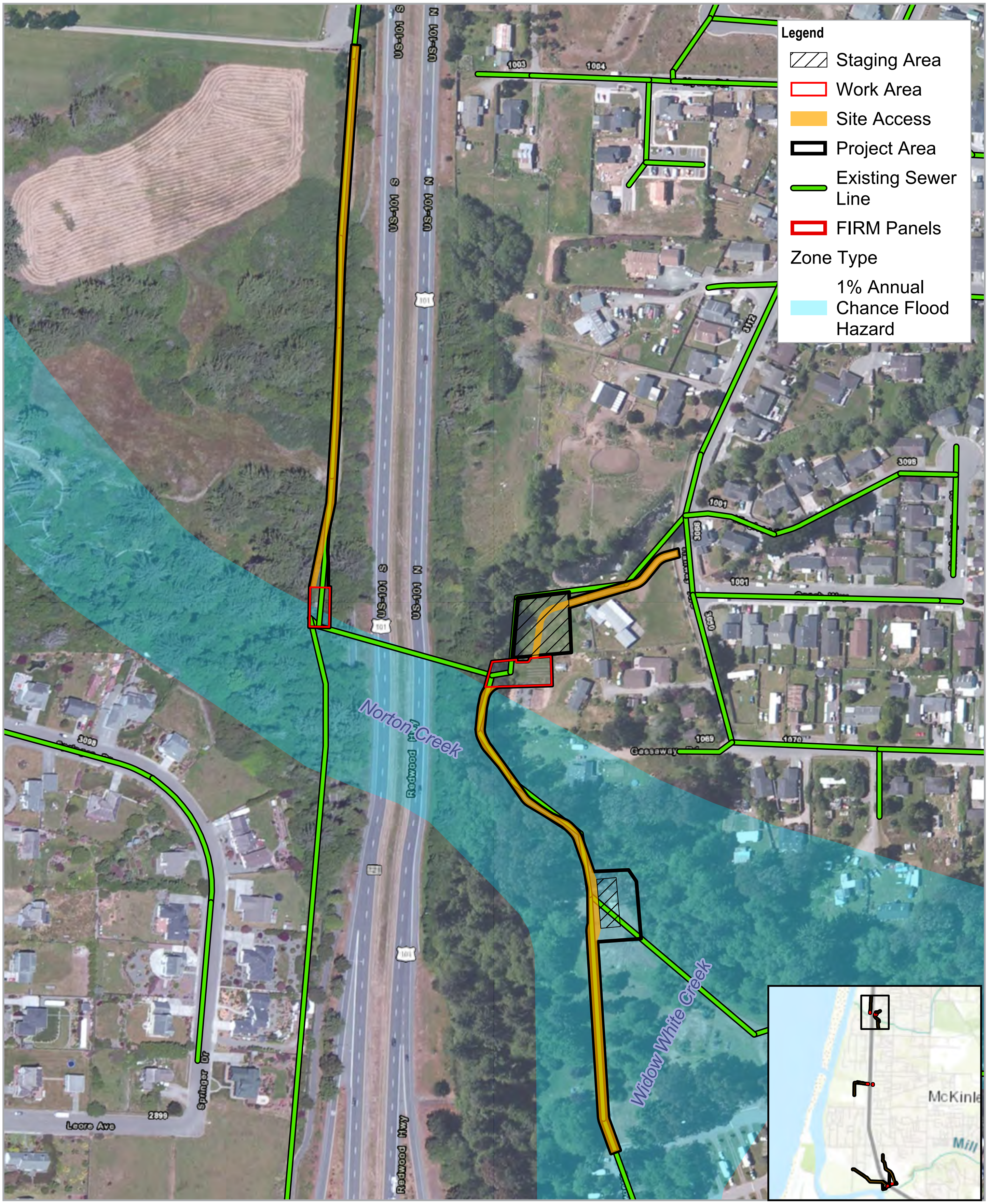
Project No. 12623402
Revision No. -
Date Jul 2024

National Wetlands Inventory

FIGURE 6.4

\\ghdnet\ghd\US\Eureka\Projects\561\12623402\GIS\Maps\Deliverables\1262340_ProjComponents_20240401.aprx - 12623402_06_04_NWI
Print date: 10 Jul 2024 - 12:02

Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3



Paper Size ANSI A

0 75 150 225 300

Feet

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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

GHD

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

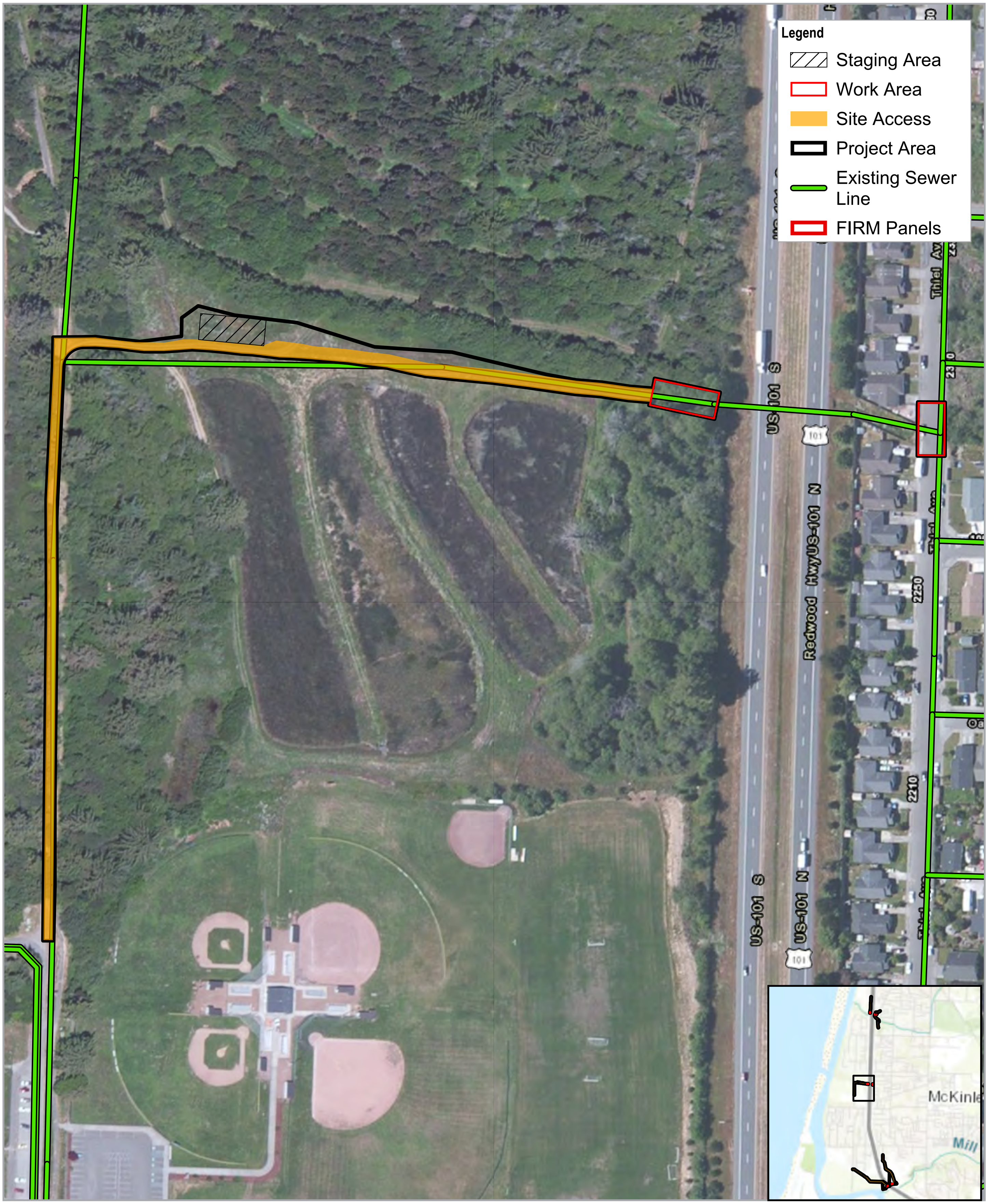
FEMA
Northern Crossing Site

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FIGURE 7.1

N:\US\Eureka\Projects\561\11216191\GIS\Maps\Deliverables\11216191_WetDel.aprx
Print date: 11 Nov 2020 - 13:46

Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: jclark2



Paper Size ANSI A

0 50 100 150 200

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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GHD

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FEMA
Middle Crossing Site

FIGURE 7.2

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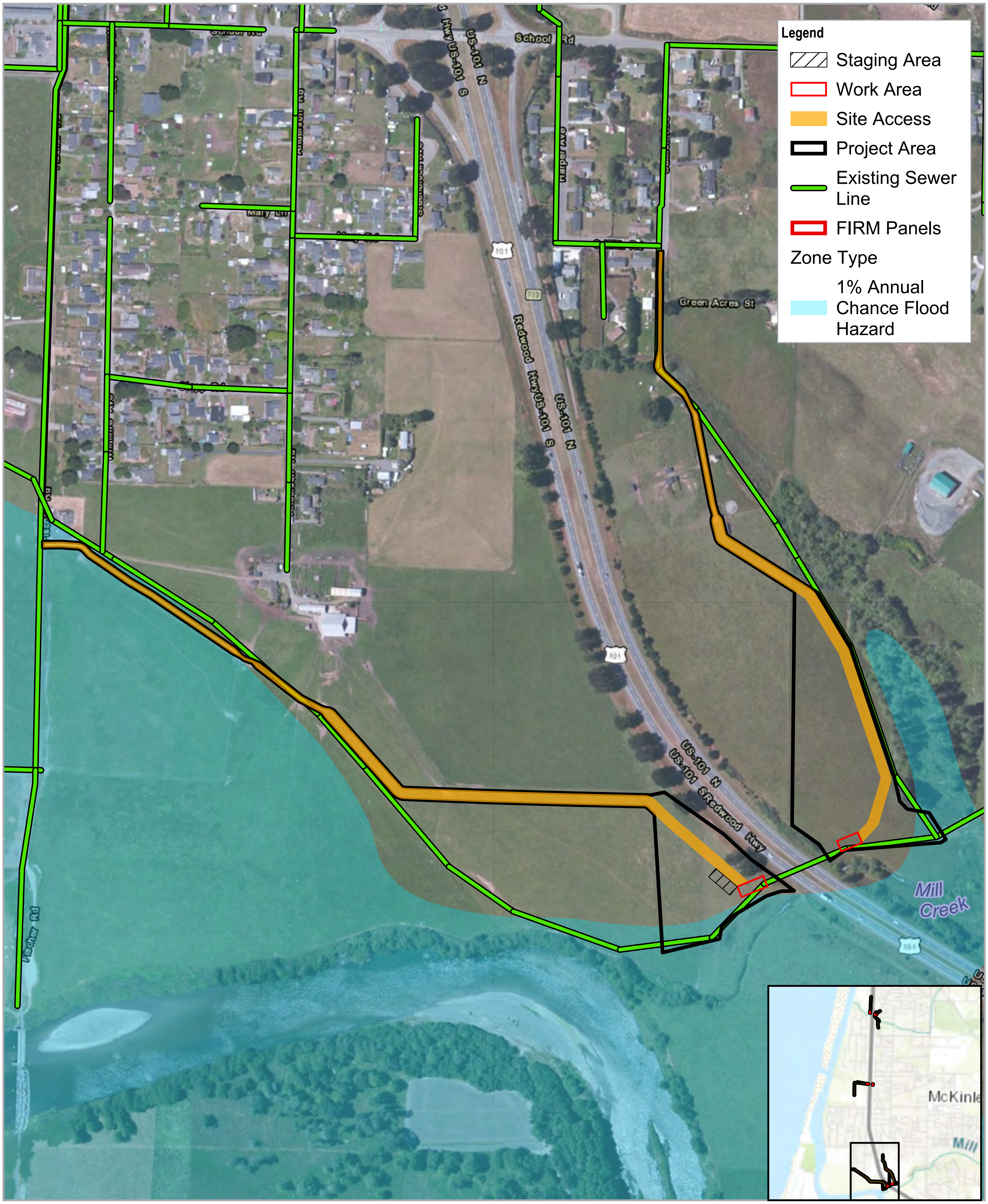
Print date: 11 Nov 2020 - 13:46

Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: jclark2



Paper Size ANSI A

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Feet

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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

McKinleyville Community Services District
Sewer Highway Crossings Retrofit
Wetland Delineation Report

Project No. **11216191**
Revision No. **-**
Date **Nov 2020**

FEMA
Southern Crossing Site

FIGURE 7.3

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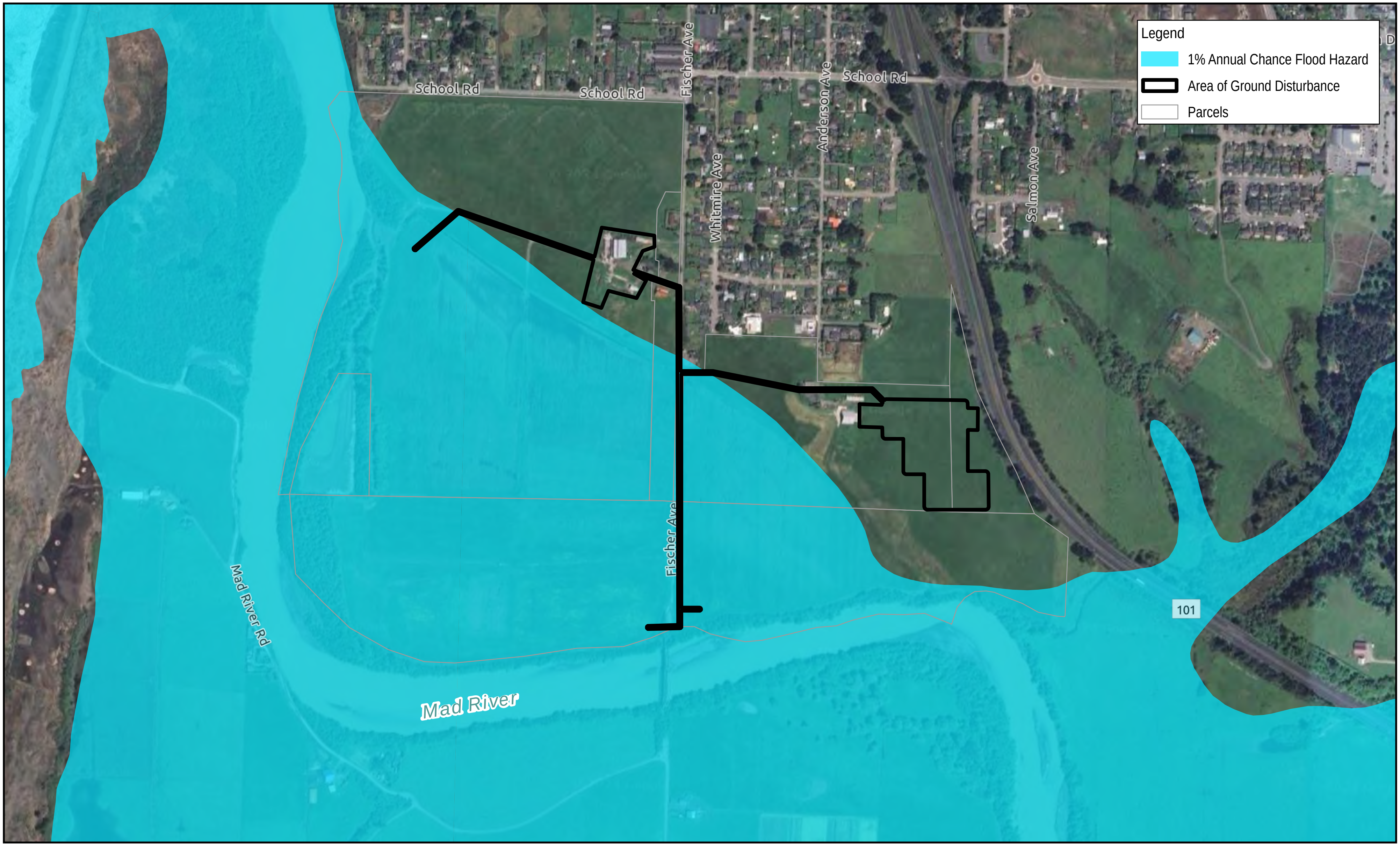
Print date: 11 Nov 2020 - 13:47

Data source: World_Transportation: Esri, HERE, Garmin, (c) OpenStreetMap contributors; World Topographic Map: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: jclark2



Paper Size ANSI A

0 200 400 600 800

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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GHD

McKinleyville Community Services District
Wastewater Recycling Expansion Project

FEMA Flood Hazard

Project No. 12623402
Revision No. -
Date Jul 2024

FIGURE 7.4

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Print date: 08 Jul 2024 - 14:34

Data source: Tiled service layer: © OpenStreetMap (and) contributors, CC-BY-SA
Road Names: Esri Community Maps Contributors, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS. Created by: ethompson3

Appendix B – Data Sheets

Highway 101 Sewer Crossing Retrofit Project

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: MCSD Sewer Line (NE) City/County: Mckinleyville Sampling Date: 10/8/20

Applicant/Owner: ______ State: CA Sampling Point: WIT1W

Investigator(s): M. Schwarz, K. McDonald Section, Township, Range: ______

Landform (hillslope, terrace, etc.): riparian slope Local relief (concave, convex, none): Concave Slope (%): ~30%

Subregion (LRR): A. Lat: ______ Long: ______ Datum: ______

Soil Map Unit Name: ______ NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No ✓	Is the Sampled Area within a Wetland? Yes ____ No ✓	
Hydric Soil Present? Yes ____ No ✓		
Wetland Hydrology Present? Yes ____ No ✓		

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 1m²)			
1. Alnus rubra	75	Y	FAC
2.			
3.			
4.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 1m²)			
1. Rubus ursinus	50	Y	FACU
2.			
3.			
4.			
5.			
	50	= Total Cover	
Herb Stratum (Plot size: 1m²)			
1. Polystichum munitum	30	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1. Hedera helix	15	Y	FACU
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum ~50 leaf litter

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	____	x 1 = ____
FACW species	____	x 2 = ____
FAC species	____	x 3 = ____
FACU species	____	x 4 = ____
UPL species	____	x 5 = ____
Column Totals:	____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- N 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: 10 ft from wetland edge

SOIL

10/4/2020 MCSD Sampling Point: WIT1-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-7	10YR3/2	100	—	—	—	—	Sandy Loam	
7-14	10YR3/3	100	—	—	—	—	Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- __ 2 cm Muck (A10)
- __ Red Parent Material (TF2)
- __ Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ______

Depth (inches): ______

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- __ Salt Crust (B11)
- __ Aquatic Invertebrates (B13)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- __ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No Y Depth (inches): ______

Water Table Present? Yes ____ No Y Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ____ No Y Depth (inches): ______

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: MCSD Sewer Line (NE) City/County: McKinleyville Sampling Date: 10/8/20

Applicant/Owner: ____ State: CA Sampling Point: WT1-W

Investigator(s): M. Schwarz, K. McDonald Section, Township, Range: ____

Landform (hillslope, terrace, etc.): riparian slope Local relief (concave, convex, none): Concave Slope (%): 3-5%

Subregion (LRR): A Lat: ____ Long: ____ Datum: ____

Soil Map Unit Name: ____ NWI classification: ____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 1m²)			
1. Rubus ursinus	10	Y	FACU
2.			
3.			
4.			
5.			
= Total Cover	10		
Herb Stratum (Plot size: 1m²)			
1. Scirpus microcarpus	30	Y	OBL
2. Athyrium filix-femina	20	Y	FAC
3. Tolmeia menziesii	5		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
= Total Cover	55		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
= Total Cover			
% Bare Ground in Herb Stratum 45			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	____	x 1 = ____
FACW species	____	x 2 = ____
FAC species	____	x 3 = ____
FACU species	____	x 4 = ____
UPL species	____	x 5 = ____
Column Totals:	____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- Y 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: 20 ft from wetland edge. Passes Dominance test, does not pass FAC-neutral

SOIL

10/8/2020 MCSD Sampling Point: WIT1-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR2/1	100	—	—	—	—	Silt Loam	
6-14	G1 3/N	90	7.5YR4/6	10	C	M	Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- X Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- X Presence of Reduced Iron (C4) posite
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 10"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 10"

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: MCSD Sewer Line (NE) City/County: McKinleyville Sampling Date: 10/8/20

Applicant/Owner: ____ State: CA Sampling Point: W2T1-U

Investigator(s): M. Schwarz, K. McDonald Section, Township, Range: ____

Landform (hillslope, terrace, etc.): riparian slope Local relief (concave, convex, none): concave Slope (%): 20

Subregion (LRR): A Lat: ____ Long: ____ Datum: ____

Soil Map Unit Name: ____ NWI classification: ____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland? Yes ____ No ✓
Hydric Soil Present?	Yes ____ No ✓	
Wetland Hydrology Present?	Yes ____ No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 1m²)			
1. Eucalyptus globulus	40	Y	UPL
2.			
3.			
4.			
	40 = Total Cover		
Sapling/Shrub Stratum (Plot size: 1m²)			
1. Rubus armeniacus	20	Y	FAC
2. Rubus ursinus	25	Y	FACU
3.			
4.			
5.			
	45 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Polystichum munitum	20	Y	FACU
2. Equisetum telmateia	1		FACW
3. Carex obnupta	1		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	22 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ~50 leaf litter

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- N 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: 3ft from wetland edge

SOIL

10/8/2020 MCSD

Sampling Point: WZ-11-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR3/3	100	—	—	—	—	Loam	
5-13	10YR3/2	100	—	—	—	-		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1) (**except MLRA 1**)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

__ 2 cm Muck (A10)
__ Red Parent Material (TF2)
__ Very Shallow Dark Surface (TF12)
__ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ________

Depth (inches): ________

Hydric Soil Present? Yes ____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1)
__ Sediment Deposits (B2)
__ Drift Deposits (B3)
__ Algal Mat or Crust (B4)
__ Iron Deposits (B5)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
__ Salt Crust (B11)
__ Aquatic Invertebrates (B13)
__ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
__ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Stunted or Stressed Plants (D1) (**LRR A**)
__ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
__ Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
__ Saturation Visible on Aerial Imagery (C9)
__ Geomorphic Position (D2)
__ Shallow Aquitard (D3)
__ FAC-Neutral Test (D5)
__ Raised Ant Mounds (D6) (**LRR A**)
__ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No Y Depth (inches): ____
Water Table Present? Yes ____ No Y Depth (inches): ____
Saturation Present? (includes capillary fringe) Yes ____ No Y Depth (inches): ____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: MCSD Sewer Line (NE) City/County: McKinleyville Sampling Date: 10/8/20

Applicant/Owner: ______ State: CA Sampling Point: W2T1-W

Investigator(s): M. Schwarz, K. McDonald Section, Township, Range: ______

Landform (hillslope, terrace, etc.): riparian slope Local relief (concave, convex, none): concave Slope (%): 5%

Subregion (LRR): A Lat: ______ Long: ______ Datum: ______

Soil Map Unit Name: ______ NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes ______ No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ______	Is the Sampled Area within a Wetland?	Yes ✓ No ______
Hydric Soil Present?	Yes ✓ No ______		
Wetland Hydrology Present?	Yes ✓ No ______		

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 1m²)			
1. Picea sitchensis	30	Y	FAC
2.			
3.			
4.			
	30 = Total Cover		
Sapling/Shrub Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Athyrium filix-femina	45	Y	FAC
2. Scirpus microcarpus	30	Y	OBL
3. Equisetum telmateia	5		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: 1m²)			
1. Hedera helix	15	Y	FACU
2.			
	15 = Total Cover		
% Bare Ground in Herb Stratum 10			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	______	x 1 = ______
FACW species	______	x 2 = ______
FAC species	______	x 3 = ______
FACU species	______	x 4 = ______
UPL species	______	x 5 = ______
Column Totals:	______ (A)	______ (B)

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

Y 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ______

Remarks: Passes Dominance Test & FAC-Neutral.
5-ft from wetland edge.

SOIL

10/2/2020 MCSD Sampling Point: W2T1-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y3/2	100	—	—	—	—	Sandy Loam	
3-9	6/ 4/N	85	7.5YR4/4	15	C	m	Loam	
9-14	6/4/N	90	7.5YR4/4	10			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ______

Depth (inches): ______

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- X Presence of Reduced Iron (C4) positive
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ______

Water Table Present? Yes ___ No ___ Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes X No 11" Depth (inches): ______

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: MCSD Sewer Line (NW) City/County: McKinleyville Sampling Date: 10/8/20

Applicant/Owner: ______ State: CA Sampling Point: W3T1-U

Investigator(s): M. Schwarz, K. McDonald Section, Township, Range: ______

Landform (hillslope, terrace, etc.): drainage to creek Local relief (concave, convex, none): concave Slope (%): 35%

Subregion (LRR): A Lat: ______ Long: ______ Datum: ______

Soil Map Unit Name: ______ NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes ______ No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ______ No ✓	Is the Sampled Area within a Wetland? Yes ______ No ✓
Hydric Soil Present?	Yes ______ No ✓	
Wetland Hydrology Present?	Yes ______ No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 1m²)			
1. Picea sitchensis	25	Y	FAC
2. Alnus rubra	60	Y	FAC
3.			
4.			
	85 = Total Cover		
Sapling/Shrub Stratum (Plot size: ______)			
1. Rubus ursinus	20	Y	FACU
2. Rubus armeniacus	5		FAC
3.			
4.			
5.			
	25 = Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Polystichum munitum	35	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	______ = Total Cover		

% Bare Ground in Herb Stratum 50% leaf litter

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	______	x 1 = ______
FACW species	______	x 2 = ______
FAC species	______	x 3 = ______
FACU species	______	x 4 = ______
UPL species	______	x 5 = ______
Column Totals:	______ (A)	______ (B)

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ______ No ✓

Remarks: 1 ft from wetland edge.

SOIL

Sampling Point: W3T1-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-14"	2.5YR3/2.5	100%	None	–	–	–	Sandy loam	May be fill-lots of gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- __ 2 cm Muck (A10)
- __ Red Parent Material (TF2)
- __ Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ______

Depth (inches): ______

Hydric Soil Present? Yes ____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- __ Salt Crust (B11)
- __ Aquatic Invertebrates (B13)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) **(LRR A)**
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- __ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) **(LRR A)**
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ____

Water Table Present? Yes ____ No ✓ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): ____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Bone dry, steep slope.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: MCSD Sewer Line (NW) City/County: McKinleyville Sampling Date: 10/8/20
Applicant/Owner: ______ State: CA Sampling Point: WST1-W
Investigator(s): M. Schwarz, K. McDonald Section, Township, Range: ______
Landform (hillslope, terrace, etc.): drainage to creek Local relief (concave, convex, none): concave Slope (%): 30%
Subregion (LRR): A Lat: ______ Long: ______ Datum: ______
Soil Map Unit Name: ______ NWI classification: ______
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 1m²)			
1. Picea sitchensis	40	Y	FAC
2. Alnus rubra	30	Y	FAC
3.			
4.			
	70 = Total Cover		
Sapling/Shrub Stratum (Plot size: 1m²)			
1. Rubus armeniacus	15	Y	FAC
2.			
3.			
4.			
5.			
	15 = Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Athyrium filix femina	20	Y	FAC
2. Polystichum munitum	25	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 40%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	____	x 1 = ____
FACW species	____	x 2 = ____
FAC species	____	x 3 = ____
FACU species	____	x 4 = ____
UPL species	____	x 5 = ____
Column Totals:	____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

✓ 1 - Rapid Test for Hydrophytic Vegetation
✓ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: 1ft from wetland boundary.
Passes dominance test, does not pass FAC-Neutral

SOIL

Sampling Point: W3T1-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3	organic decaying leaf litter							
3-9"	2.5Y3/2	100%	None				Sandy clay loam	w/gravel + organics
~9-14"	Gley1 3/10Y	95%	10YR4/6	5%	C	PL,M	clay	some organic/gravel material

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ______________

Depth (inches): ______________

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ________

Water Table Present? Yes ____ No ✓ Depth (inches): ________

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): ~12"

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

13

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: MCSD Sewer Line (SW) City/County: McKinleyville Sampling Date: 10/8/20

Applicant/Owner: ______ State: CA Sampling Point: Up7

Investigator(s): M. Schwarz, K. McDonald Section, Township, Range: ______

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR): A Lat: ______ Long: ______ Datum: ______

Soil Map Unit Name: ______ NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes ______ No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ______	No ✓	Is the Sampled Area within a Wetland?	Yes ______ No ✓
Hydric Soil Present?	Yes ______	No ✓		
Wetland Hydrology Present?	Yes ______	No ✓		

Remarks: Bioturbation-mycelia Chroma 3 – Upland soil 10YR 3/3

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
5.			
= Total Cover			
Herb Stratum (Plot size: 1m²)			
1. Daucus carota	10		FACU
2. Cirsium vulgare	4		FACU
3. Plantago lanceolata	3		FACU
4. Holcus lanatus	20	Y	FAC
5. Festuca arundinacea	5		FAC
6. Lolium perenne	1		UPL
7. Anthoxanthum odoratum	20	Y	FACU
8. Rumex acetosella	1		FACU
9. Agrostis capillaris	1		
10.			
11.			
= Total Cover	65		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 35

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	______	x 1 = ______
FACW species	______	x 2 = ______
FAC species	______	x 3 = ______
FACU species	______	x 4 = ______
UPL species	______	x 5 = ______
Column Totals:	______ (A)	______ (B)

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- N 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ______ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: MCSD Sewer Line (SE) City/County: McKinleyville Sampling Date: 10/8/20

Applicant/Owner: ______ State: CA Sampling Point: Upl 2

Investigator(s): M. Schwarz, K. McDonald Section, Township, Range: ______

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 10

Subregion (LRR): A Lat: ______ Long: ______ Datum: ______

Soil Map Unit Name: ______ NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes ______ No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ______ No ✓	Is the Sampled Area within a Wetland?	Yes ______ No ✓
Hydric Soil Present? Yes ______ No ✓		
Wetland Hydrology Present? Yes ______ No ✓		

Remarks: Soil: 10YR3/3 0-14" loam No redox

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Agrostis stolonifera	40	Y	FAC
2. Plantago erecta	30	Y	UPL
3. Hypochaeris radicata	10		FACU
4. Rumex acetosella	5		FACU
5. Anthoxanthum odoratum	2		FACU
6. Holcus lanatus	3		FAC
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	= Total Cover		
% Bare Ground in Herb Stratum 10			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	______	x 1 = ______
FACW species	______	x 2 = ______
FAC species	______	x 3 = ______
FACU species	______	x 4 = ______
UPL species	______	x 5 = ______
Column Totals:	______ (A)	______ (B)

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- N 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ______ No ✓

Remarks:

Appendix B – Data Sheets

Wastewater Recycling Expansion Project

U.S. Army Corps of Engineers **WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region** See ERDC/EL TR-10-3; the proponent agency is CECW-COR	*OMB Control #: 0710-0024, Exp:4/30/2024* *Requirement Control Symbol EXEMPT:* *(Authority: AR 335-15, paragraph 5-2a)*

Project/Site: SWSRF Grant Recycled Water City/County: McKinleyville/Humboldt Sampling Date: 04/18/2024

Applicant/Owner: MCSD State: California Sampling Point: W1-T1-3par

Investigator(S): McNamee and Cipra Section, Township, Range: –

Landform (Hillside, Terrace, Etc.): Terrace Local Relief (Concave, Convex, None): Depression Slope (%): 0

Subregion (LRR): A Lat: 40.92722865 Long: -124.1201288 Datum: WGS84

Soil Map Unit Name: – NWI Classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☑ No (If no, explain in Remarks.)

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology significantly disturbed? Are "Normal Circumstances" present? ☐ Yes ☑ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☑ Yes	☐ No	
Hydric Soil Present?	☑ Yes	☐ No	
Wetland Hydrology Present?	☑ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☑ **Yes** ☐ **No**
Remarks: Precipitation is well above normal.			

VEGETATION – Use scientific names of plants. Sampling Point: W1-T1-3par

Tree Stratum (Plot Size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Sapling/Shrub Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Herb Stratum (Plot Size: 1 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. *Festuca bromoides (Brome Six-Weeks Grass)*	40	Yes	FAC
2. *Poa pratensis (Kentucky Blue Grass)*	15	Yes	FAC
3. *Holcus lanatus (Common Velvet Grass)*	5	No	FAC
4. *Schedonorus arundinaceus (Tall False Rye Grass)*	5	No	FAC
5. *Rumex crispus (Curly Dock)*	2	No	FAC
6. *Plantago major (Giant Plantago)*	1	No	FAC
7. _	–	–	-
8. _	–	–	-
	68	=Total Cover	
Woody Vine Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	-
2. _	–	–	-
3. _	–	–	-
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	0	=Total Cover	

% Bare Ground in Herb Stratum: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ 1- Rapid Test for Hydrophytic Vegetation

☑ 2- Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 – Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ☑ **Yes** ☐ **No**

Remarks:

Problematic Hydrophytic Vegetation Explanation:

SOIL

SAMPLING POINT: W1-T1-3par

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-4	2.5Y4/1	100	_	_	_	_	Sandy clay loam	_
4-12	5Y4/1	85	10YR5/8	15	C	M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ 1 cm Muck (A9) **(LRR D, G)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Indicators of hydrophytic vegetation and Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR A, E)**
- ☐ Iron-Manganese Masses (F12) **(LRR D)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? ☑ **Yes** ☐ **No**

Remarks: Redox present in lower horizon. Meets F3(a) indicator depth requirements.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heaved Hummocks (D7)

Field Observations:

Surface Water Present?	☑ Yes	☐ No	Depth (inches): 0 inches
Water Table Present?	☐ Yes	☑ No	Depth (inches):
Saturation Present? (includes capillary fringe)	☐ Yes	☑ No	Depth (inches):

Wetland Hydrology Present? ☑ **Yes** ☐ **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Historic floodplain – standing water observed in winter and patches of standing water during delinetion .

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp:4/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: SWSRF Grant Recycled Water | City/County: McKinleyville/Humboldt | Sampling Date: 04/18/2024

Applicant/Owner: MCSD | State: California | Sampling Point: W1-T1-Up

Investigator(S): McNamee and Cipra | Section, Township, Range: –

Landform (Hillside, Terrace, Etc.): Terrace | Local Relief (Concave, Convex, None): None | Slope (%): 0

Subregion (LRR): A | Lat: 40.92669457 | Long: -124.12012139 | Datum: WGS84

Soil Map Unit Name: – | NWI Classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☑ No (If no, explain in Remarks.)

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology significantly disturbed? Are "Normal Circumstances" present? ☐ Yes ☑ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☑ Yes	☐ No
Hydric Soil Present?	☐ Yes	☑ No
Wetland Hydrology Present?	☐ Yes	☑ No

Is the Sampled Area within a Wetland? ☑ **Yes** ☐ **No**

Remarks: Precipitation is well above normal. 1 par wetland

VEGETATION – Use scientific names of plants.

Sampling Point: W1-T1-Up

Tree Stratum (Plot Size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	

Sapling/Shrub Stratum (Plot Size: 5 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	

Herb Stratum (Plot Size: 1 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Vulpia bromoides (Brome Six-Weeks Grass)*	60	Yes	FAC
2. *Trifolium repens (White Clover)*	10	No	FAC
3. *Holcus lanatus (Common Velvet Grass)*	10	No	FAC
4. *Rumex crispus (Curly Dock)*	2	No	FAC
5. *Plantago lanceolata (English Plantain)*	1	No	FACU
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	83	=Total Cover	

Woody Vine Stratum (Plot Size: 5 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	-
2. _	–	–	-
3. _	–	–	-
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	0	=Total Cover	

% Bare Ground in Herb Stratum: 15

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	0 x 1 = 0
FACW species	0 x 2 = 0
FAC species	82 x 3 = 246
FACU species	1 x 4 = 4
UPL species	0 x 5 = 0
Column Totals: (A)	83 (A) 250 (B)

Prevalence Index = B/A = 3.01

Hydrophytic Vegetation Indicators:

☐ 1- Rapid Test for Hydrophytic Vegetation

☑ 2- Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 – Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ☑ **Yes** ☐ **No**

Remarks:
Problematic Hydrophytic Vegetation Explanation:

SOIL

SAMPLING POINT: W1-T1-Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	2.5Y4/1	100	_	_	_	_	Sandy clay loam	_
7-14	5Y4/1	100					Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ 1 cm Muck (A9) **(LRR D, G)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Indicators of hydrophytic vegetation and Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR A, E)**
- ☐ Iron-Manganese Masses (F12) **(LRR D)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? ☐ **Yes** ☑ **No**

Remarks: Uniform soil - no redox

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heaved Hummocks (D7)

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth (inches):
Water Table Present?	☐ Yes ☑ No	Depth (inches):
Saturation Present? (includes capillary fringe)	☐ Yes ☑ No	Depth (inches):

Wetland Hydrology Present? ☐ **Yes** ☑ **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: In historic floodplain; however no evidence of wetlands hydrology

U.S. Army Corps of Engineers **WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region** See ERDC/EL TR-10-3; the proponent agency is CECW-COR	*OMB Control #: 0710-0024, Exp:4/30/2024* *Requirement Control Symbol EXEMPT:* *(Authority: AR 335-15, paragraph 5-2a)*

Project/Site: SWSRF Grant Recycled Water City/County: McKinleyville/Humboldt Sampling Date: 04/18/2024

Applicant/Owner: MCSD State: California Sampling Point: W2-T2-1par

Investigator(S): McNamee and Cipra Section, Township, Range: –

Landform (Hillside, Terrace, Etc.): Slope Local Relief (Concave, Convex, None): None Slope (%): 3

Subregion (LRR): A Lat: 40.92918609 Long: -124.12014368 Datum: WGS84

Soil Map Unit Name: – NWI Classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☑ No (If no, explain in Remarks.)

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology significantly disturbed? Are "Normal Circumstances" present? ☐ Yes ☑ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☑ Yes	☐ No	
Hydric Soil Present?	☐ Yes	☑ No	**1-par**
Wetland Hydrology Present?	☐ Yes	☑ No	**Is the Sampled Area within a Wetland?** ☑ **Yes** ☐ **No**

Remarks: Precipitation is well above normal. Sloped terrace above drainage ditch. Ditch is boundary of wetland to the south.

VEGETATION – Use scientific names of plants. Sampling Point: W2-T2-1par

Tree Stratum (Plot Size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Sapling/Shrub Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Herb Stratum (Plot Size: 1 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. *Agrostis stolonifera (Spreading Bent)*	40	Yes	FAC
2. *Ranunculus repens (Creeping Buttercup)*	35	Yes	FAC
3. *Phalaris arundinacea (Reed Canary Grass)*	15	No	FACW
4. *Rumex crispus (Curly Dock)*	3	No	FAC
5. *Rubus armeniacus (Himalayan Blackberry)*	1	No	FAC
6. -	–	–	-
7. _	–	–	-
8. _	–	–	-
	94	=Total Cover	
Woody Vine Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	-
2. _	–	–	-
3. _	–	–	-
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	0	=Total Cover	

% Bare Ground in Herb Stratum: 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	15	x 2 = 30
FAC species	79	x 3 = 237
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	94 (A)	267 (B)

Prevalence Index = B/A = 2.84

Hydrophytic Vegetation Indicators:

- ☐ 1- Rapid Test for Hydrophytic Vegetation
- ☑ 2- Dominance Test is >50%
- ☑ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 – Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ☑ **Yes** ☐ **No**

Remarks:

Problematic Hydrophytic Vegetation Explanation:

SOIL

SAMPLING POINT: W2-T2-1par

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR3/2	100	_	_	_	_	loam	_

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ 1 cm Muck (A9) **(LRR D, G)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Indicators of hydrophytic vegetation and Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR A, E)**
- ☐ Iron-Manganese Masses (F12) **(LRR D)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? ☐ **Yes** ☑ **No**

Remarks: No redox.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heaved Hummocks (D7)

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth (inches):
Water Table Present?	☐ Yes ☑ No	Depth (inches):
Saturation Present? (includes capillary fringe)	☐ Yes ☑ No	Depth (inches):

Wetland Hydrology Present? ☐ **Yes** ☑ **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Same soil dampness, but soil not saturated. Topographically on higher ground adjacent to drainage swale.

U.S. Army Corps of Engineers **WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region** See ERDC/EL TR-10-3; the proponent agency is CECW-COR	*OMB Control #: 0710-0024, Exp:4/30/2024* *Requirement Control Symbol EXEMPT:* *(Authority: AR 335-15, paragraph 5-2a)*

Project/Site: SWSRF Grant Recycled Water City/County: McKinleyville/Humboldt Sampling Date: 04/18/2024

Applicant/Owner: MCSD State: California Sampling Point: W3-T3-1par

Investigator(S): McNamee and Cipra Section, Township, Range: –

Landform (Hillside, Terrace, Etc.): Floodplain Local Relief (Concave, Convex, None): None Slope (%): 0

Subregion (LRR): A Lat: 40.93132902 Long: -124.12605244 Datum: WGS84

Soil Map Unit Name: – NWI Classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☑ No (If no, explain in Remarks.)

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology significantly disturbed? Are "Normal Circumstances" present? ☐ Yes ☑ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☑ Yes	☐ No	
Hydric Soil Present?	☐ Yes	☑ No	
Wetland Hydrology Present?	☐ Yes	☑ No	**Is the Sampled Area within a Wetland?** **1-par** ☑ **Yes** ☐ **No**

Remarks: Precipitation is well above normal.. Ipar pasture

VEGETATION – Use scientific names of plants. Sampling Point: W3-T3-1par

Tree Stratum (Plot Size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Sapling/Shrub Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Herb Stratum (Plot Size: 1 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. *Vulpia bromoides (Brome Six-Weeks Grass)*	35	Yes	FAC
2. *Agrostis stolonifera (Spreading Bent)*	30	Yes	FAC
3. *Ranunculus repens (Creeping Buttercup)*	25	Yes	FAC
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	90	=Total Cover	
Woody Vine Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	-
2. _	–	–	-
3. _	–	–	-
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	0	=Total Cover	

% Bare Ground in Herb Stratum: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	90	x 3 = 270
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals: (A)	90 (A)	270 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

☐ 1- Rapid Test for Hydrophytic Vegetation

☑ 2- Dominance Test is >50%

☑ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 – Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ☑ **Yes** ☐ **No**

Remarks:

Problematic Hydrophytic Vegetation Explanation:

SOIL

SAMPLING POINT: W3-T3-1par

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5Y4/1	100	_	_	_	_	Silty clay loam	_
4/12	2.5Y4/1	100					Silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ 1 cm Muck (A9) **(LRR D, G)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Indicators of hydrophytic vegetation and Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR A, E)**
- ☐ Iron-Manganese Masses (F12) **(LRR D)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type:
Depth (inches):

Hydric Soil Present? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heaved Hummocks (D7)

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth (inches):
Water Table Present?	☐ Yes ☑ No	Depth (inches):
Saturation Present? (includes capillary fringe)	☐ Yes ☑ No	Depth (inches):

Wetland Hydrology Present? ☐ **Yes** ☑ **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Location appears at higher topographic point relative to adjacent areas. Standing water visible to east approximately 200' away.

U.S. Army Corps of Engineers **WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region** See ERDC/EL TR-10-3; the proponent agency is CECW-COR	*OMB Control #: 0710-0024, Exp:4/30/2024* *Requirement Control Symbol EXEMPT:* *(Authority: AR 335-15, paragraph 5-2a)*

Project/Site: SWSRF Grant Recycled Water City/County: McKinleyville/Humboldt Sampling Date: 04/18/2024

Applicant/Owner: MCSD State: California Sampling Point: W4-T3-3par

Investigator(S): McNamee and Cipra Section, Township, Range: –

Landform (Hillside, Terrace, Etc.): Slope Local Relief (Concave, Convex, None): – Slope (%): 5

Subregion (LRR): A Lat: 40.93160306 Long: -124.12561987 Datum: WGS84

Soil Map Unit Name: – NWI Classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☑ No (If no, explain in Remarks.)

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology significantly disturbed? Are "Normal Circumstances" present? ☐ Yes ☑ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☑ Yes	☐ No	
Hydric Soil Present?	☑ Yes	☐ No	
Wetland Hydrology Present?	☑ Yes	☐ No	**Is the Sampled Area within a Wetland?** ☑ **Yes** ☐ **No**

Remarks: Precipitation is well above normal.. Bank above ditch.

VEGETATION – Use scientific names of plants. Sampling Point: W4-T3-3par

Tree Stratum (Plot Size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Sapling/Shrub Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Herb Stratum (Plot Size: 1 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. *Ranunculus repens (Creeping Buttercup)*	60	Yes	FAC
2. *Agrostis stolonifera (Spreading Bent)*	30	Yes	FAC
3. *Potentilla anserina (Silverweed)*	1	No	OBL
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	91	=Total Cover	
Woody Vine Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	-
2. _	–	–	-
3. _	–	–	-
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	0	=Total Cover	

% Bare Ground in Herb Stratum: 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ 1- Rapid Test for Hydrophytic Vegetation

☑ 2- Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 – Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ☑ **Yes** ☐ **No**

Remarks:

Problematic Hydrophytic Vegetation Explanation:

SOIL

SAMPLING POINT: W4-T3-3par

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	5Y4/1	90	10YR5/8	10	C	M	Silty clay loam	Redox throughout matrix
10-15	5Y4/1	98	10YR5/8	2	C	PL	Silty clay loam	Faint redox around O. M.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ 1 cm Muck (A9) **(LRR D, G)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Indicators of hydrophytic vegetation and Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR A, E)**
- ☐ Iron-Manganese Masses (F12) **(LRR D)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type:
Depth (inches):

Hydric Soil Present? ☑Yes ☐ No

Remarks: The upper horizon meets F3 indicator due to depleted matrix and redox in soil matrix.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☑ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heaved Hummocks (D7)

Field Observations:

Surface Water Present?	☑ Yes ☐ No	Depth (inches):
Water Table Present?	☑ Yes ☐ No	Depth (inches):
Saturation Present? (includes capillary fringe)	☐ Yes ☑ No	Depth (inches):

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Pit approximately 2 feet adjacent to drainage swale. Surface water and water table are adjacent to pit.

U.S. Army Corps of Engineers **WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region** See ERDC/EL TR-10-3; the proponent agency is CECW-COR	*OMB Control #: 0710-0024, Exp:4/30/2024* *Requirement Control Symbol EXEMPT:* *(Authority: AR 335-15, paragraph 5-2a)*

Project/Site: SWSRF Grant Recycled Water City/County: McKinleyville/Humboldt Sampling Date: 04/18/2024

Applicant/Owner: MCSD State: California Sampling Point: W4-T3-Up

Investigator(S): McNamee and Cipra Section, Township, Range: –

Landform (Hillside, Terrace, Etc.): Slope Local Relief (Concave, Convex, None): Slope Slope (%): 0

Subregion (LRR): A Lat: 40.93160118 Long: -124.12561976 Datum: WGS84

Soil Map Unit Name: – NWI Classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☑ No (If no, explain in Remarks.)

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology significantly disturbed? Are "Normal Circumstances" present? ☐ Yes ☑ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐ Yes	☑ No	
Hydric Soil Present?	☐ Yes	☑ No	
Wetland Hydrology Present?	☐ Yes	☑ No	**Is the Sampled Area within a Wetland?** ☐ **Yes** ☑ **No**

Remarks: Precipitation is well above normal. Grass in field north of point has been mowed.. Terrace above ditch with standing water.

VEGETATION – Use scientific names of plants.

Sampling Point: W4-T3-Up

Tree Stratum (Plot Size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Sapling/Shrub Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Herb Stratum (Plot Size: 1 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. *Ranunculus repens (Creeping Buttercup)*	60	Yes	FAC
2. *Other : Agropyron cristatus*	35	Yes	_
3. *Helminthotheca echioides (Akan Asante)*	1	No	FAC
4. *Plantago lanceolata (English Plantain)*	1	No	FACU
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	97	=Total Cover	
Woody Vine Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	-
2. _	–	–	-
3. _	–	–	-
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	0	=Total Cover	

% Bare Ground in Herb Stratum: 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	61	x 3 = 183
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	62 (A)	187 (B)

Prevalence Index = B/A = 3.02

Hydrophytic Vegetation Indicators:

- ☐ 1- Rapid Test for Hydrophytic Vegetation
- ☐ 2- Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 – Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ☐ **Yes** ☑ **No**

Remarks:

Problematic Hydrophytic Vegetation Explanation:

SOIL

SAMPLING POINT: W4-T3-Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR4/1	100	_	_	_	_	Silty loam	_

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ 1 cm Muck (A9) **(LRR D, G)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Indicators of hydrophytic vegetation and Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR A, E)**
- ☐ Iron-Manganese Masses (F12) **(LRR D)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type:
Depth (inches):

Hydric Soil Present? ☐ **Yes** ☑ **No**

Remarks: No redox; uniform soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heaved Hummocks (D7)

Field Observations:

Surface Water Present?	☐ Yes ☐ No	Depth (inches):
Water Table Present?	☐ Yes ☐ No	Depth (inches):
Saturation Present? (includes capillary fringe)	☐ Yes ☐ No	Depth (inches):

Wetland Hydrology Present? ☐ **Yes** ☑ **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: On flat area between drainage swale and base of hill.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp:4/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: SWSRF Grant Recycled Water | City/County: McKinleyville/Humboldt | Sampling Date: 04/18/2024

Applicant/Owner: MCSD | State: California | Sampling Point: Up-1

Investigator(S): McNamee and Cipra | Section, Township, Range: –

Landform (Hillside, Terrace, Etc.): Terrace | Local Relief (Concave, Convex, None): None | Slope (%): 0

Subregion (LRR): A | Lat: 40.92521655 | Long: -124.11976174 | Datum: WGS84

Soil Map Unit Name: – | NWI Classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☑ No (If no, explain in Remarks.)

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology significantly disturbed? Are "Normal Circumstances" present? ☐ Yes ☑ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐ Yes	☑ No
Hydric Soil Present?	☐ Yes	☐ No
Wetland Hydrology Present?	☐ Yes	☐ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☑ **No**

Remarks: Precipitation is well above normal . Sampling point is in a fallow ag field that is a former floodplain.

VEGETATION – Use scientific names of plants. Sampling Point: Up1

Tree Stratum (Plot Size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	_	_	–
	0	=Total Cover	
Sapling/Shrub Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	_	_	–
	0	=Total Cover	
Herb Stratum (Plot Size: 1 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. *Plantago lanceolata (English Plantain)*	50	Yes	FACU
2. *Schedonorus arundinaceus (Tall False Rye Grass)*	10	No	FAC
3. *Holcus lanatus (Common Velvet Grass)*	10	No	FAC
4. *Other : Gerianium dissectum*	2	No	UPL
5. *Other : Sylibum marinum*	1	No	UPL
6. _	–	–	-
7. _	–	–	-
8. _	_	_	-
	73	=Total Cover	
Woody Vine Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	-
2. _	–	–	-
3. _	–	–	-
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	_	_	-
	0	=Total Cover	

% Bare Ground in Herb Stratum: 27

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	20	x 3 = 60
FACU species	50	x 4 = 200
UPL species	3	x 5 = 15
Column Totals:	73 (A)	275 (B)

Prevalence Index = B/A = 3.77

Hydrophytic Vegetation Indicators:

- ☐ 1- Rapid Test for Hydrophytic Vegetation
- ☐ 2- Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 – Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ☐ **Yes** ☑ **No**

Remarks:

Problematic Hydrophytic Vegetation Explanation:

SOIL

SAMPLING POINT: Up-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-0-10	2.5y2/3	100	_	_	_	_	Silty clay loam	_
10-15	2.5Y2/3	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ 1 cm Muck (A9) **(LRR D, G)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Indicators of hydrophytic vegetation and Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR A, E)**
- ☐ Iron-Manganese Masses (F12) **(LRR D)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type:
Depth (inches):

Hydric Soil Present? ☐ Yes ☑ No

Remarks: Uniform soil color; texture sandier on bottom horizon, no redox observed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heaved Hummocks (D7)

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth (inches):
Water Table Present?	☐ Yes	☑ No	Depth (inches):
Saturation Present? (includes capillary fringe)	☐ Yes	☑ No	Depth (inches):

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: In a flat field, in historic floodplain

U.S. Army Corps of Engineers **WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region** See ERDC/EL TR-10-3; the proponent agency is CECW-COR	*OMB Control #: 0710-0024, Exp:4/30/2024* *Requirement Control Symbol EXEMPT:* *(Authority: AR 335-15, paragraph 5-2a)*

Project/Site: SWSRF Grant Recycled Water City/County: McKinleyville/Humboldt Sampling Date: 04/18/2024

Applicant/Owner: MCSD State: California Sampling Point: Up-2

Investigator(S): McNamee and Cipra Section, Township, Range: –

Landform (Hillside, Terrace, Etc.): Terrace Local Relief (Concave, Convex, None): None Slope (%): 0

Subregion (LRR): A Lat: 40.92490906 Long: -124.12072606 Datum: WGS84

Soil Map Unit Name: – NWI Classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☑ No (If no, explain in Remarks.)

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology significantly disturbed? Are "Normal Circumstances" present? ☐ Yes ☑ No

Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐ Yes	☑ No	
Hydric Soil Present?	☐ Yes	☑ No	
Wetland Hydrology Present?	☐ Yes	☑ No	**Is the Sampled Area within a Wetland?** ☐ **Yes** ☑ **No**

Remarks: Precipitation is well above normal. Sampling point is in mowed agricultural field that is a former floodplain. Vegetation is not considered hydrophytic because it does not pass the prevalence index, which upholds that wetlands hydrology is not present and does not meet the Coastal Commission definition of one-parameter wetland (14 CCR Section 13577).

VEGETATION – Use scientific names of plants. Sampling Point: Up-2

Tree Stratum (Plot Size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	

Sapling/Shrub Stratum (Plot Size: 5 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	

Herb Stratum (Plot Size: 1 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Agrostis stolonifera (Spreading Bent)*	40	Yes	FAC
2. *Schedonorus arundinaceus (Tall False Rye Grass)*	30	Yes	FAC
3. *Trifolium repens (White Clover)*	3	No	FAC
4. *Taraxacum officinale (Common Dandelion)*	2	No	FACU
5. *Ranunculus repens (Creeping Buttercup)*	1	No	FAC
6.	–	–	-
7. _	–	–	-
8. _	–	–	-
	76	=Total Cover	

Woody Vine Stratum (Plot Size: 5 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	-
2. _	–	–	-
3. _	–	–	-
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	0	=Total Cover	

% Bare Ground in Herb Stratum: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	74	x 3 = 222
FACU species	2	x 4 = 8
UPL species	0	x 5 = 0
Column Totals:	76 (A)	230 (B)

Prevalence Index = B/A = 3.03

Hydrophytic Vegetation Indicators:

☐ 1- Rapid Test for Hydrophytic Vegetation

☑ 2- Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ 5 – Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ☐ **Yes** ☑ **No**

Remarks:

Problematic Hydrophytic Vegetation Explanation:

SOIL

SAMPLING POINT: Up-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-15	2.5Y3/2	100	_	_	_	_	Silty clay loam	_

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ 1 cm Muck (A9) **(LRR D, G)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Indicators of hydrophytic vegetation and Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR A, E)**
- ☐ Iron-Manganese Masses (F12) **(LRR D)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heaved Hummocks (D7)

Field Observations:

Surface Water Present? ☐ Yes ☑ No Depth (inches):

Water Table Present? ☐ Yes ☑ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☑ No Depth (inches):

Wetland Hydrology Present? ☐ **Yes** ☑ **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: .

U.S. Army Corps of Engineers **WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region** See ERDC/EL TR-10-3; the proponent agency is CECW-COR	*OMB Control #: 0710-0024, Exp:4/30/2024* *Requirement Control Symbol EXEMPT:* *(Authority: AR 335-15, paragraph 5-2a)*

Project/Site: SWSRF Grant Recycled Water City/County: McKinleyville/Humboldt Sampling Date: 04/18/2024
Applicant/Owner: MCSD State: California Sampling Point: Up-3
Investigator(S): McNamee and Cipra Section, Township, Range: –
Landform (Hillside, Terrace, Etc.): Terrace Local Relief (Concave, Convex, None): None Slope (%): 0
Subregion (LRR): A Lat: 40.927549 Long: -124.114668 Datum: WGS84
Soil Map Unit Name: – NWI Classification: –
Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☑ No (If no, explain in Remarks.)
Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology significantly disturbed? Are "Normal Circumstances" present? ☐ Yes ☑ No
Are ☐ Vegetation, ☐ Soil, or ☐ Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐ Yes	☑ No	
Hydric Soil Present?	☐ Yes	☑ No	
Wetland Hydrology Present?	☐ Yes	☑ No	**Is the Sampled Area within a Wetland?** ☐ **Yes** ☑ **No**

Remarks: Precipitation is well above normal. Upland terrace, mowed grasses. Veg was surveyed in unmoved portion.

VEGETATION – Use scientific names of plants. Sampling Point: Up-3

Tree Stratum (Plot Size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Sapling/Shrub Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	–
2. _	–	–	–
3. _	–	–	–
4. _	–	–	–
5. _	–	–	–
6. _	–	–	–
7. _	–	–	–
8. _	–	–	–
	0	=Total Cover	
Herb Stratum (Plot Size: 1 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. *Anthoxanthum odoratum (Large Sweet Vernal Grass)*	70	Yes	FACU
2. *Rumex acetosella (Common Sheep Sorrel)*	10	No	FACU
3. *Plantago lanceolata (English Plantain)*	10	No	FACU
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	90	=Total Cover	
Woody Vine Stratum (Plot Size: 5 m)	**Absolute % Cover**	**Dominant Species?**	**Indicator Status**
1. _	–	–	-
2. _	–	–	-
3. _	–	–	-
4. _	–	–	-
5. _	–	–	-
6. _	–	–	-
7. _	–	–	-
8. _	–	–	-
	0	=Total Cover	

% Bare Ground in Herb Stratum: 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	90	x 4 = 360
UPL species	0	x 5 = 0
Column Totals:	90 (A)	360 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

☐ 1- Rapid Test for Hydrophytic Vegetation
☐ 2- Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 – Wetland Non-Vascular Plants[1]
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ☐ **Yes** ☑ **No**

Remarks:
Problematic Hydrophytic Vegetation Explanation:

SOIL

SAMPLING POINT: Up-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-12	10YR2/2	100	_	_	_	_	Sandy loam	_

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ 1 cm Muck (A9) **(LRR D, G)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Indicators of hydrophytic vegetation and Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR A, E)**
- ☐ Iron-Manganese Masses (F12) **(LRR D)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type:
Depth (inches):

Hydric Soil Present? ☐ **Yes** ☑ **No**

Remarks: Soil very uniform, dry and brittle

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Fauna (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heaved Hummocks (D7)

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth (inches):
Water Table Present?	☐ Yes	☑ No	Depth (inches):
Saturation Present? (includes capillary fringe)	☐ Yes	☑ No	Depth (inches):

Wetland Hydrology Present? ☐ **Yes** ☑ **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Located on top of a terrace, no wetlands hydrology.

Appendix C – On-site Plant List (Highway Crossing Project)

Scientific Name	Common Name	Status	Family	Status
Alnus rubra	Red alder	native	Betulaceae	FAC
Anthoxanthum odoratum	Sweet vernal grass	invasive non-native	Poaceae	FACU
Athyrium filix-femina	Common ladyfern	native	Woodsiaceae	FAC
Carex obnupta	Slough sedge	native	Cyperaceae	OBL
Cirsium vulgare	Bullthistle	invasive non-native	Asteraceae	FACU
Daucus carota	Queen Anne's lace	non-native	Apiaceae	FACU
Equisetum telmateia ssp. braunii	Giant horsetail	native	Equisetaceae	FACW
Eucalyptus globulus	Blue gum	invasive non-native	Myrtaceae	
Festuca arundinacea	Reed fescue	invasive non-native	Poaceae	FAC
Festuca perennis	Italian rye grass	invasive non-native	Poaceae	FAC
Frangula purshiana	Cascara sagrada	native	Rhamnaceae	FAC
Hedera helix	English ivy	invasive non-native	Araliaceae	FACU
Holcus lanatus	Common velvetgrass	invasive non-native	Poaceae	FAC
Hypochaeris radicata	Hairy cats ear	invasive non-native	Asteraceae	FACU
Leucanthemum vulgare	Oxe eye daisy	invasive non-native	Asteraceae	FACU
Linum bienne	Flax	non-native	Linaceae	
Picea sitchensis	Sitka spruce	native	Pinaceae	FAC
Plantago erecta	California plantain	native	Plantaginaceae	
Plantago lanceolata	English plantain	invasive non-native	Plantaginaceae	FACU
Plantago major	Common plantain	non-native	Plantaginaceae	FAC
Poa pratensis	Kentucky blue grass	invasive non-native	Poaceae	FAC
Polystichum munitum	Western sword fern	native	Dryopteridaceae	FACU
Pteridium aquilinum	Western brackenfern	native	Dennstaedtiaceae	FACU
Ranunculus repens	Creeping buttercup	invasive non-native	Ranunculaceae	FAC
Rubus armeniacus	Himalayan blackberry	invasive non-native	Rosaceae	FAC
Rubus spectabilis	Salmon berry	native	Rosaceae	FAC
Rubus ursinus	California blackberry	native	Rosaceae	FACU
Rumex acetosella	Sheep sorrel	invasive non-native	Polygonaceae	FACU
Rumex crispus	Curly dock	invasive non-native	Polygonaceae	FAC
Salix hookeriana	Coastal willow	native	Salicaceae	FACW
Salix lasiolepis	Arroyo willow	native	Salicaceae	FACW
Sambucus racemosa	Red elderberry	native	Adoxaceae	FACU
Scirpus microcarpus	Mountain bog bulrush	native	Cyperaceae	OBL
Stellaria media	Chickweed	non-native	Caryophyllaceae	FACU
Tolmiea diplomenziesii	Pig-a-back plant	native	Saxifragaceae	FAC
Trifolium fragiferum	Strawberry clover	non-native	Fabaceae	FACU
Trifolium repens	White clover	non-native	Fabaceae	FAC

Appendix D – Rapid Assessment Forms (Highway Crossing Project)

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

For Office Use:	Final database #:	Final vegetation type:	Alliance Picea sitchensis Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION circle: Relevé or RA

Database #: MCSD0001	Date: 10/14/20	Name of recorder: Kelsey McDonald
		Other surveyors:
	UID:	Location Name: McKinleyville Comm. Services Dist. (central-west)

GPS name: EOS Arrow For Relevé only: Bearing°, left axis at ID point____ of Long / Short side

UTME __________ UTMN __________ Zone: 11 NAD83 GPS error: ft./ m./ PDOP _____

Decimal degrees: LAT ___.________ LONG ___.________

GPS within stand? Yes / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID __________ Projected UTMs: UTME __________ UTMN __________

Camera Name: iphone Cardinal photos at ID point:

Other photos:

Stand Size (acres): <1, 1-5, >5 | Plot Area (m²): 100 / _____ | Plot Dimensions ___ x ___ m | RA Radius 10 m

Exposure, Actual °: _____ NE NW SE SW Flat Variable | Steepness, Actual °: _____ 0° 1-5° > 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: __________ Soil Texture code: __________ | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H_2O: BA Stems: 55 Litter: 35 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 10 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch _____

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Sitka spruce and alders surround the Hammond Trail. Dominated by facultatives – potential 1-par wetland, based on vegetation, but no potential 3-par wetlands in project area.

Disturbance code / Intensity (L,M,H): ___/___ ___/___ ___/___ ___/___ ___/___ "Other" ______/___

II. HABITAT DESCRIPTION

Tree DBH : **T1** (<1" dbh), **T2** (1-6" dbh), **T3** (6-11" dbh), **T4** (11-24" dbh), **T5** (>24" dbh), **T6** multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: **S1** seedling (<3 yr. old), **S2** young (<1% dead), **S3** mature (1-25% dead), **S4** decadent (>25% dead)

Herbaceous: **H1** (<12" plant ht.), **H2** (>12" ht.)

Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)

Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)

III. INTERPRETATION OF STAND

Field-assessed vegetation Alliance name: Picea sitchensis Alliance

Field-assessed Association name (optional):

Adjacent Alliances/direction: Salix hookeriana / E, ______/____

Confidence in Alliance identification: L M H Explain:

Phenology (E,P,L): Herb L Shrub L Tree L Other identification or mapping information:

Combined Vegetation Rapid Assessment and Relevé Field Form
(Revised March 27, 2018)
SPECIES SHEET

Database #: MCSDCC01

IV. VEGETATION DESCRIPTION

% NonVasc cover: ____ **Total % Vasc Veg cover:** 95

% Cover - **Conifer tree / Hardwood tree:** 35/30 **Regenerating Tree:** ____ **Shrub:** 60 **Herbaceous:** 45

Height Class - **Conifer tree / Hardwood tree:** 7/6 **Regenerating Tree:** ____ **Shrub:** 5 **Herbaceous:** 2

Height classes: 1=<1/2m, 2=1/2-1m, 3=1-2m, 4=2-5m, 5=5-10m, 6=10-15m, 7=15-20m, 8=20-35m, 9=35-50m, 10=>50m

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular

% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Stratum	Species	% cover	C	Final species determination
T	Picea sitchensis	35		
T	Alnus rubra	30		
S	Sambucus racemosa	15		
S	Salix spp.	10		
S	Rubus ursinus	20		
S	Rubus armeniacus	10		
S	Rubus spectabilis	5		
H	Pteridium aquilinum	10		
H	Polystichum munitum	2		
H	Ranunculus repens	10		
H	Poa pratensis	15		
H	Holcus lanatus	10		
H	Stellaria media	8		
H	Plantago major	1		
H	Rumex crispus	1		

Unusual species: ______

Combined Vegetation Rapid Assessment and Relevé Field Form
(Revised March 27, 2018)

For Office Use:	Final database #:	Final vegetation type:	Alliance Salix hookeriana / Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Database #: MCSDC002 **Date:** 10/14/20 **UID:**

circle: **Relevé** or **RA**

Name of recorder: Kelsey McDonald

Other surveyors:

Location Name: MCSD (Center-west)

GPS name: ECS Arrow

For Relevé only: **Bearing°**, left axis at ID point____ of **Long / Short** side

UTME ________ **UTMN** ________ **Zone: 11 NAD83** GPS error: **ft./ m./ PDOP** ____

Decimal degrees: **LAT** __.______ **LONG** ___.______

GPS within stand? Yes / No If No, cite from GPS to stand: distance (m) 1 bearing ° ____ inclination ° ____

and record: Base point ID ________ **Projected UTMs: UTME** ________ **UTMN** ________

Camera Name: iphone **Cardinal photos at ID point:**

Other photos:

Stand Size (acres): <1, 1-5, >5 | **Plot Area (m²): 100 /** ____ | **Plot Dimensions** ___ x ___ **m** | **RA Radius** 10 **m**

Exposure, Actual °: ____ **NE NW SE SW Flat Variable** | **Steepness, Actual °:** ____ **0° 1-5° > 5-25° > 25**

Topography: Macro: top upper mid lower bottom | Micro: convex ~~flat~~ concave undulating

Geology code: ______ **Soil Texture code:** ______ | **Upland** or **Wetland/Riparian** (circle one)

% Surface cover:

H₂0:	BA Stems: 80	Litter: 10	Bedrock: (Incl. outcrops)	Boulder: (>60cm diam)	Stone: (25-60cm)	Cobble: (7.5-25cm)	Gravel: (2mm-7.5cm)	Fines: (Incl sand, mud) 10	=100%

% Current year bioturbation ____ **Past bioturbation present? Yes / No** | **% Hoof punch** ____

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Hooker's Willow Patch North of access road Very dense overlapping veg. 1-par wetland.

Disturbance code / Intensity (L,M,H): ___/___ ___/___ ___/___ ___/___ ___/___ **"Other"** ______/___

II. HABITAT DESCRIPTION

Tree DBH : T1 (<1" dbh), **T2** (1-6" dbh), **T3** (6-11" dbh), **T4** (11-24" dbh), **T5** (>24" dbh), **T6** multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), **S2** young (<1% dead), **S3** mature (1-25% dead), **S4** decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), **H2** (>12" ht.)

Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), **2** (2-10ft. ht.), **3** (10-20ft. ht.), **4** (>20ft. ht.)

Desert Palm/Joshua Tree: 1 (<1.5" base diameter), **2** (1.5-6" diam.), **3** (>6" diam.)

III. INTERPRETATION OF STAND

Field-assessed vegetation Alliance name: Salix hookeriana Alliance

Field-assessed Association name (optional):

Adjacent Alliances/direction: Picea sitchensis / W, Alnus rubra / E

Confidence in Alliance identification: L M H Explain: Less than 1 acre, could be lumped

Phenology (E,P,L): Herb L **Shrub** L **Tree** ___ **Other identification or mapping information:**

Database #: MCSD0002

Combined Vegetation Rapid Assessment and Relevé Field Form
(Revised March 27, 2018)
SPECIES SHEET

IV. VEGETATION DESCRIPTION

% NonVasc cover: ____ **Total % Vasc Veg cover:** 100

% Cover - **Conifer tree / Hardwood tree:** ____/____ **Regenerating Tree:** ____ **Shrub:** 100 **Herbaceous:** 20

Height Class - **Conifer tree / Hardwood tree:** ____/____ **Regenerating Tree:** ____ **Shrub:** 4-5 **Herbaceous:** 1

Height classes: 1=<1/2m, 2=1/2-1m, 3=1-2m, 4=2-5m, 5=5-10m, 6=10-15m, 7=15-20m, 8=20-35m, 9=35-50m, 10=>50m

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular
% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Stratum	Species	% cover	C	Final species determination
S	Salix hookeriana	95		
S	Rubus armeniacus	10		
H	Ranunculus repens	5		
H	Holcus lanatus	5		
H	Agrostis stolonifera	3		
H	Festuca perennis	3		
H	Anthoxanthum odoratum	3		
H	Leucanthemum vulgare	1		

Unusual species: ____

Appendix E – Site Photographs

Photo 1. Wetland 1, located in and along the access road in the Widow White Creek/Norton Creek riparian area. (Highway Crossing Project)

Photo 2. Mixed blue gum, red alder, and sitka spruce in the canopy in the vicinity of Wetland 2. (Highway Crossing Project)

Photo 3. A perennial stream passes through a large culvert under the access road at the confluence of Norton Creek and Widow White Creek. (Highway Crossing Project)

Photo 4. Red alder forest around the central west planned retrofit drilling site and access road. (Highway Crossing Project)

Photo 5. Coastal willow thicket along the central access road from the Hammond Trail. (Highway Crossing Project)

Photo 6. Sitka spruce forest canopy over the Hammond Trail central access road. (Highway Crossing Project)

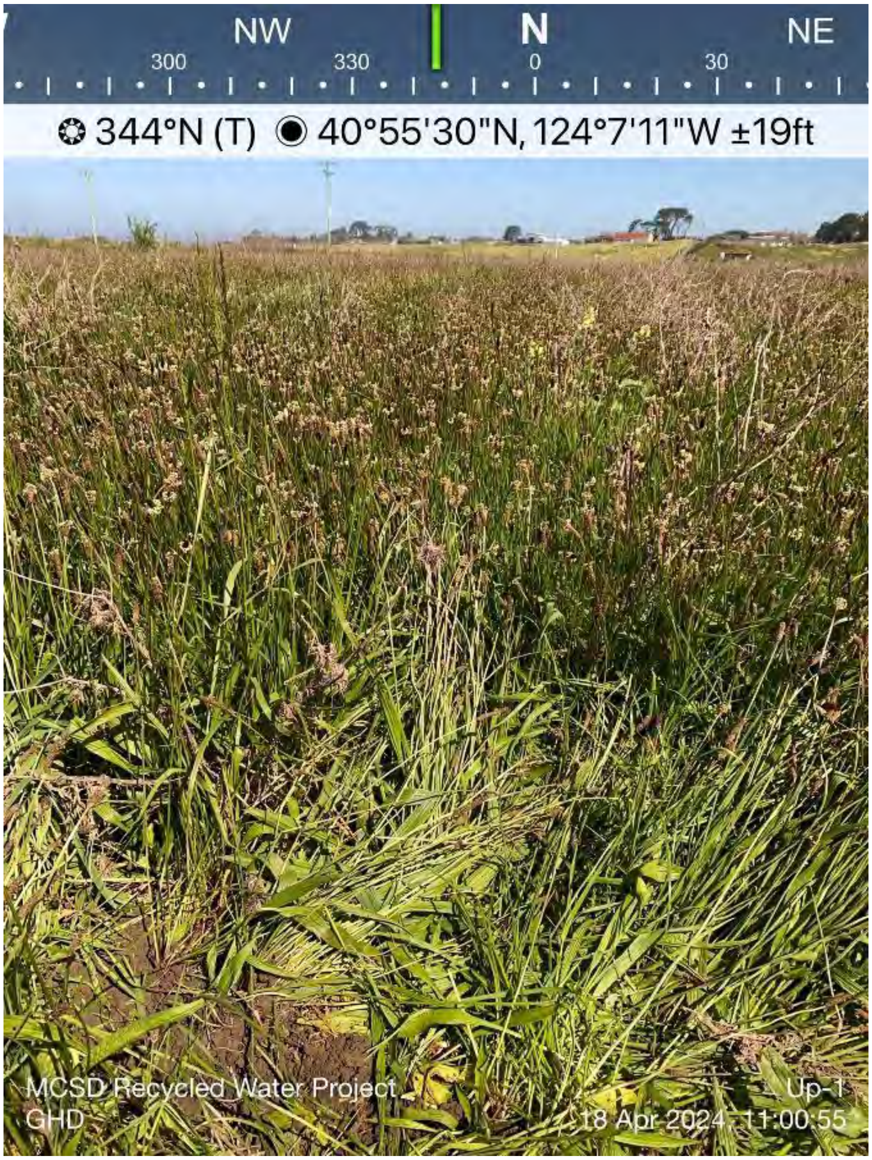


Photo 7. Conditions at Up-1 which was dominated by English plantain (FACU) (Wastewater Recycling Expansion Project).

Photo 8. Conditions at Up-2 which was dominated by creeping bentgrass (FAC) (Wastewater Recycling Expansion Project).

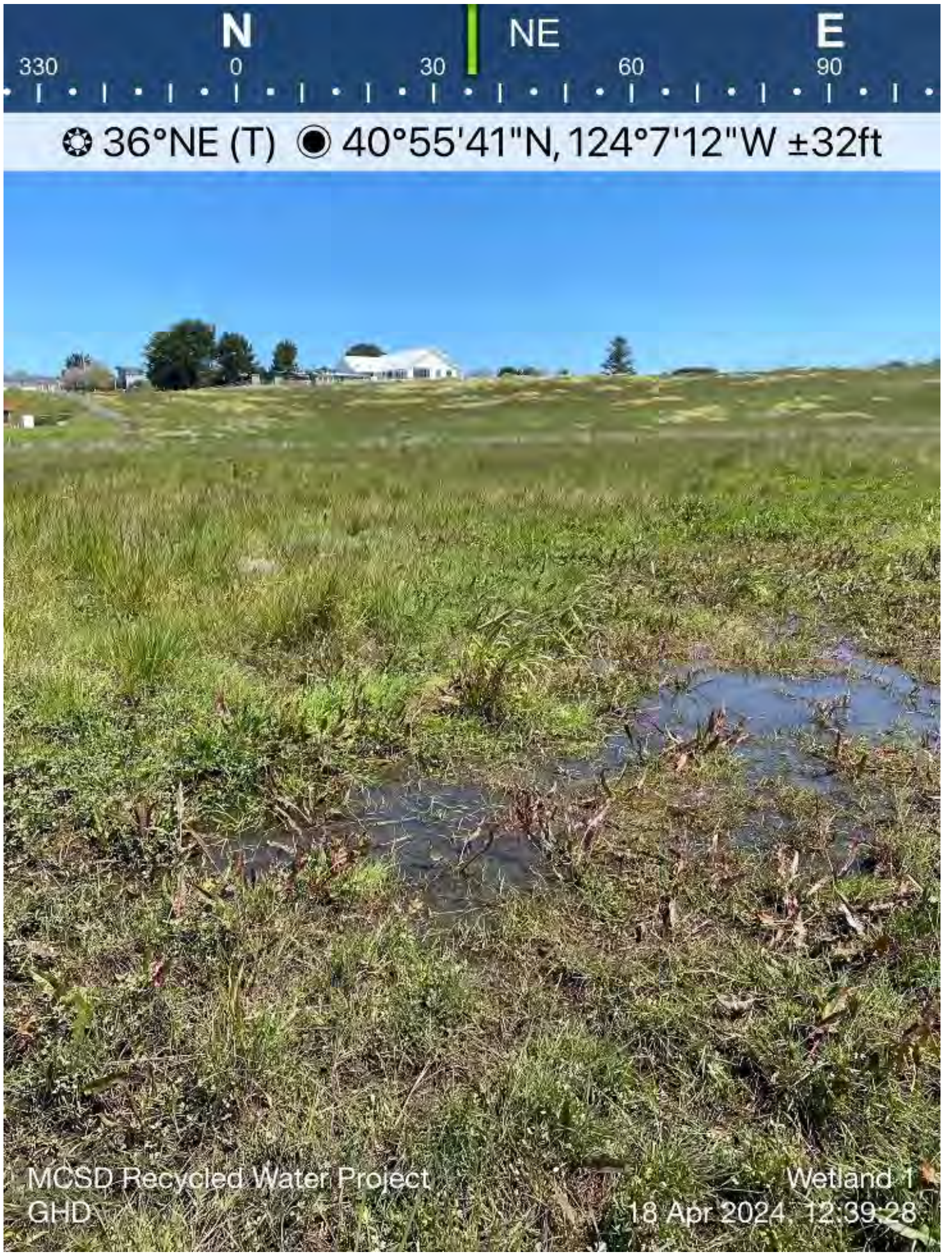


Photo 9. Standing water in Wetland 1 (Wastewater Recycling Expansion Project).

Photo 10. Standing water in Wetland 1 (Wastewater Recycling Expansion Project).

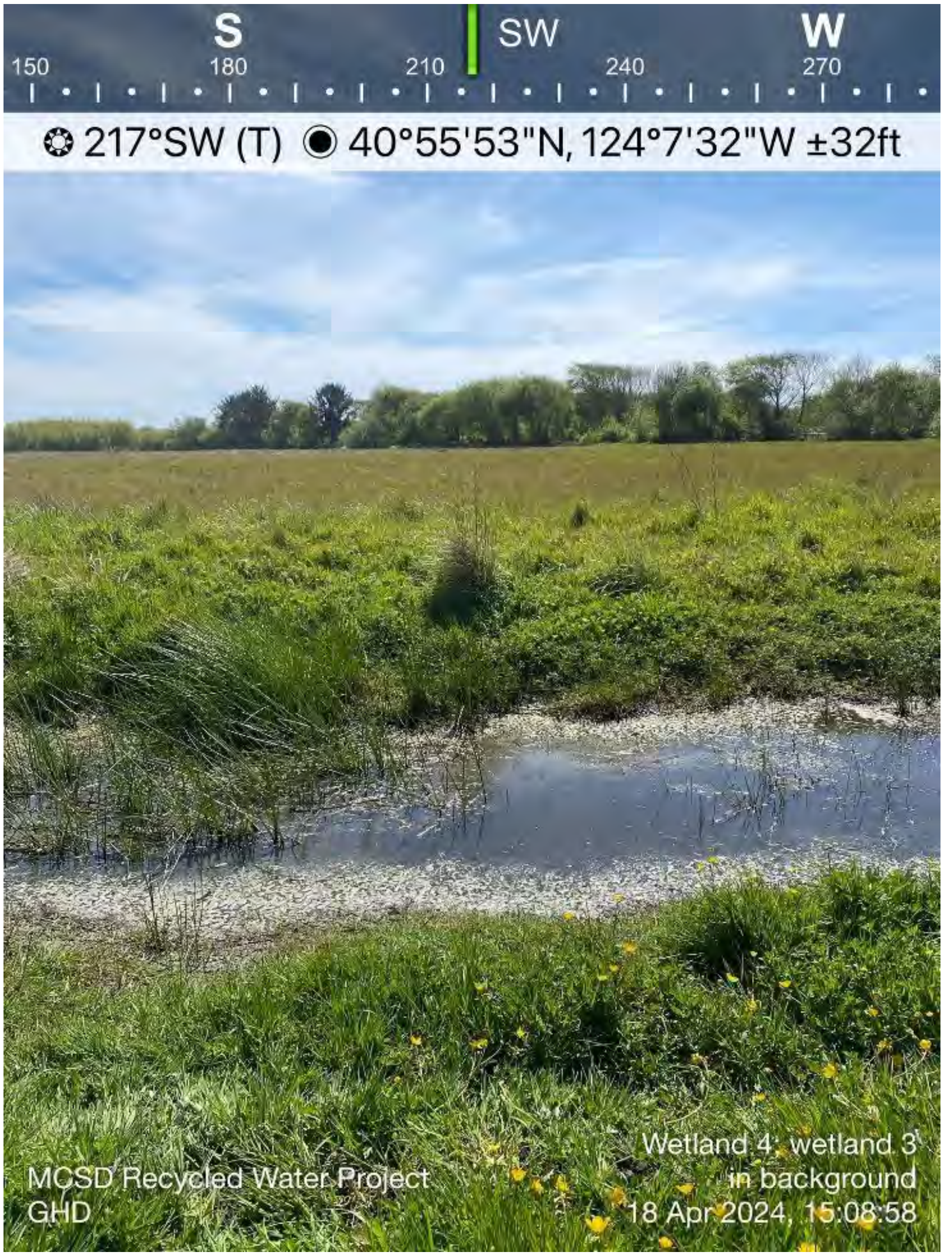


Photo 11. Wetland 4 in the foreground, and Wetland 3 (one-parameter) in the background (Wastewater Recycling Expansion Project).

Photo 12. Conditions at Up-3 located in the northeast portion of the Project on a terrace (Wastewater Recycling Expansion Project).

Photo 13. Upland conditions along the road in the northwest portion of the Project (Wastewater Recycling Expansion Project).

Appendix F – NRCS Custom Soil Resource Reports

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Humboldt County, Central Part, California

145—Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 23d0g
Elevation: 10 to 120 feet

Mean annual precipitation: 35 to 90 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 275 to 325 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Halfbluff and similar soils: 35 percent
Tepona and similar soils: 30 percent
Urban land, residential: 25 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Halfbluff

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 11 inches: fine sandy loam
BA - 11 to 18 inches: fine sandy loam
Bw - 18 to 35 inches: sandy loam
CB - 35 to 43 inches: sandy loam
2C1 - 43 to 55 inches: loamy sand
2C2 - 55 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 30 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern, marine terraces, marine deposits, fine sandy lo
Hydric soil rating: No

Description of Tepona

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits derived from sedimentary rock

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A1 - 2 to 12 inches: loam
A2 - 12 to 25 inches: very fine sandy loam
Bw1 - 25 to 35 inches: sandy loam
Bw2 - 35 to 41 inches: sandy loam
C1 - 41 to 49 inches: sandy loam
C2 - 49 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 30 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern, marine terraces, marine deposits, fine sandy lo
Hydric soil rating: No

Description of Urban Land, Residential

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Talawa

Percent of map unit: 5 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Tillas

Percent of map unit: 3 percent
Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Hookton

Percent of map unit: 2 percent
Landform: Erosion remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

146—Halfbluff-Tepona-Urban Land, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2dh7x
Elevation: 10 to 120 feet
Mean annual precipitation: 35 to 90 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 275 to 325 days
Farmland classification: Not prime farmland

Map Unit Composition

Tepona and similar soils: 40 percent
Halfbluff and similar soils: 35 percent
Urban land, residential: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tepona

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits derived from sedimentary rock

Typical profile
Oi - 0 to 0 inches: slightly decomposed plant material
A - 0 to 11 inches: sandy loam
Bw - 11 to 35 inches: fine sandy loam
Bw - 35 to 41 inches: fine sandy loam
C - 41 to 64 inches: loamy fine sand

Properties and qualities
Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 30 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.4 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern, marine terraces, marine deposits, fine sandy lo
Other vegetative classification: Forest Type IV, coastal (RNPF004CA)
Hydric soil rating: No

Description of Halfbluff

Setting
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits derived from sedimentary rock

Typical profile
A - 0 to 23 inches: loam
Bw - 23 to 37 inches: fine sandy loam
C - 37 to 71 inches: fine sand

Properties and qualities
Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 20 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D
Ecological site: F004BX118CA - Sitka spruce-redwood/salal/ western brackenfern, marine terraces, marine deposits, fine sandy lo
Other vegetative classification: Forest Type IV, coastal (RNPF004CA)
Hydric soil rating: No

Description of Urban Land, Residential

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Talawa

Percent of map unit: 5 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Tillas

Percent of map unit: 3 percent
Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Convex

Hydric soil rating: No

Hookton

Percent of map unit: 2 percent
Landform: Erosion remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

223—Megwil and Cannonball soils, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2p9z9
Elevation: 10 to 600 feet
Mean annual precipitation: 35 to 90 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 275 to 325 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Megwil, , and similar soils: 50 percent
Cannonball and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Megwil,

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed marine deposits

Typical profile

Ap - 0 to 12 inches: loam
Bt1 - 12 to 20 inches: clay loam
Bt2 - 20 to 64 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 20 to 39 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F004BX120CA - Redwood-Sitka spruce/California huckleberry-salmonberry/western swordfern-deer fern, marine terraces, loam
Hydric soil rating: No

Description of Cannonball

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed marine deposits

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 11 inches: loam
Bt1 - 11 to 18 inches: loam
Bt2 - 18 to 31 inches: sandy clay loam
Bt3 - 31 to 40 inches: sandy clay loam
Btg - 40 to 68 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 20 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam an
Hydric soil rating: No

Minor Components

Urban land, residential

Percent of map unit: 5 percent
Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Tsunami

Percent of map unit: 5 percent
Landform: Fan terraces, fan remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Talawa

Percent of map unit: 3 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Aubell

Percent of map unit: 2 percent
Landform: Fan remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

226—Arcata and Candymountain soils, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2lmt1
Elevation: 10 to 310 feet
Mean annual precipitation: 35 to 90 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 275 to 325 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Arcata and similar soils: 50 percent
Candymountain and similar soils: 35 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arcata

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 27 inches: loam
AB - 27 to 36 inches: loam
Bw - 36 to 63 inches: sandy loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam an
Hydric soil rating: No

Description of Candymountain

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 17 inches: fine sandy loam
Bw - 17 to 55 inches: fine sandy loam
C - 55 to 79 inches: loamy very fine sand

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam an
Hydric soil rating: No

Minor Components

Halfbluff

Percent of map unit: 4 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern, marine terraces, marine deposits, fine sandy lo
Other vegetative classification: Forest Type IV, coastal (RNPF004CA)
Hydric soil rating: No

Urban land, residential

Percent of map unit: 4 percent
Landform: Marine terraces
Hydric soil rating: No

Megwil,

Percent of map unit: 3 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F004BX120CA - Redwood-Sitka spruce/California huckleberry-salmonberry/western swordfern-deer fern, marine terraces, loam

Hydric soil rating: No

Timmons

Percent of map unit: 2 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam an
Hydric soil rating: No

Talawa

Percent of map unit: 2 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

257—Lepoil-Candymountain complex, 2 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2p9zc
Elevation: 10 to 800 feet
Mean annual precipitation: 35 to 90 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 275 to 325 days
Farmland classification: Not prime farmland

Map Unit Composition

Lepoil and similar soils: 45 percent
Candymountain and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lepoil

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed marine deposits derived from sedimentary rock

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material

A - 2 to 16 inches: loam
Bt - 16 to 69 inches: clay loam
2CBt - 69 to 75 inches: very fine sandy loam
2C - 75 to 83 inches: fine sand

Properties and qualities

Slope: 2 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 11.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam an
Hydric soil rating: No

Description of Candymountain

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed marine deposits derived from sedimentary rock

Typical profile

Oi - 0 to 4 inches: slightly decomposed plant material
A - 4 to 15 inches: fine sandy loam
Bw - 15 to 31 inches: fine sandy loam
BC - 31 to 45 inches: fine sandy loam
C - 45 to 60 inches: very fine sand

Properties and qualities

Slope: 2 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam an
Hydric soil rating: No

Minor Components

Cannonball

Percent of map unit: 10 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam an
Hydric soil rating: No

Hutsinpillar

Percent of map unit: 5 percent
Landform: Marine terraces, drainageways
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Humboldt County, Central Part, California
Survey Area Data: Version 6, Jun 1, 2020

United States Department of Agriculture

NRCS

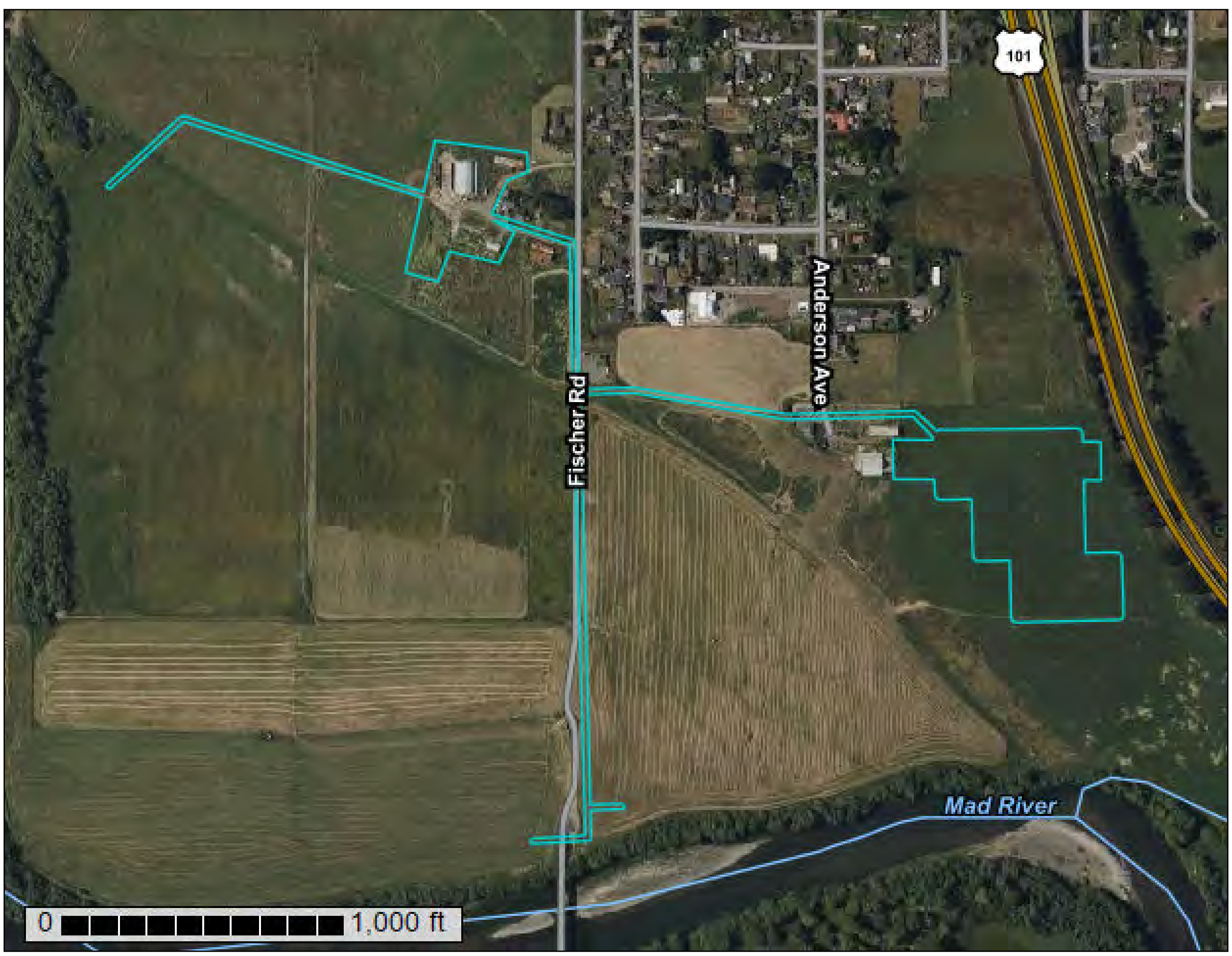
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Humboldt County, Central Part, California

12623402 - MCSD Wastewater Project Soils Report



July 8, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

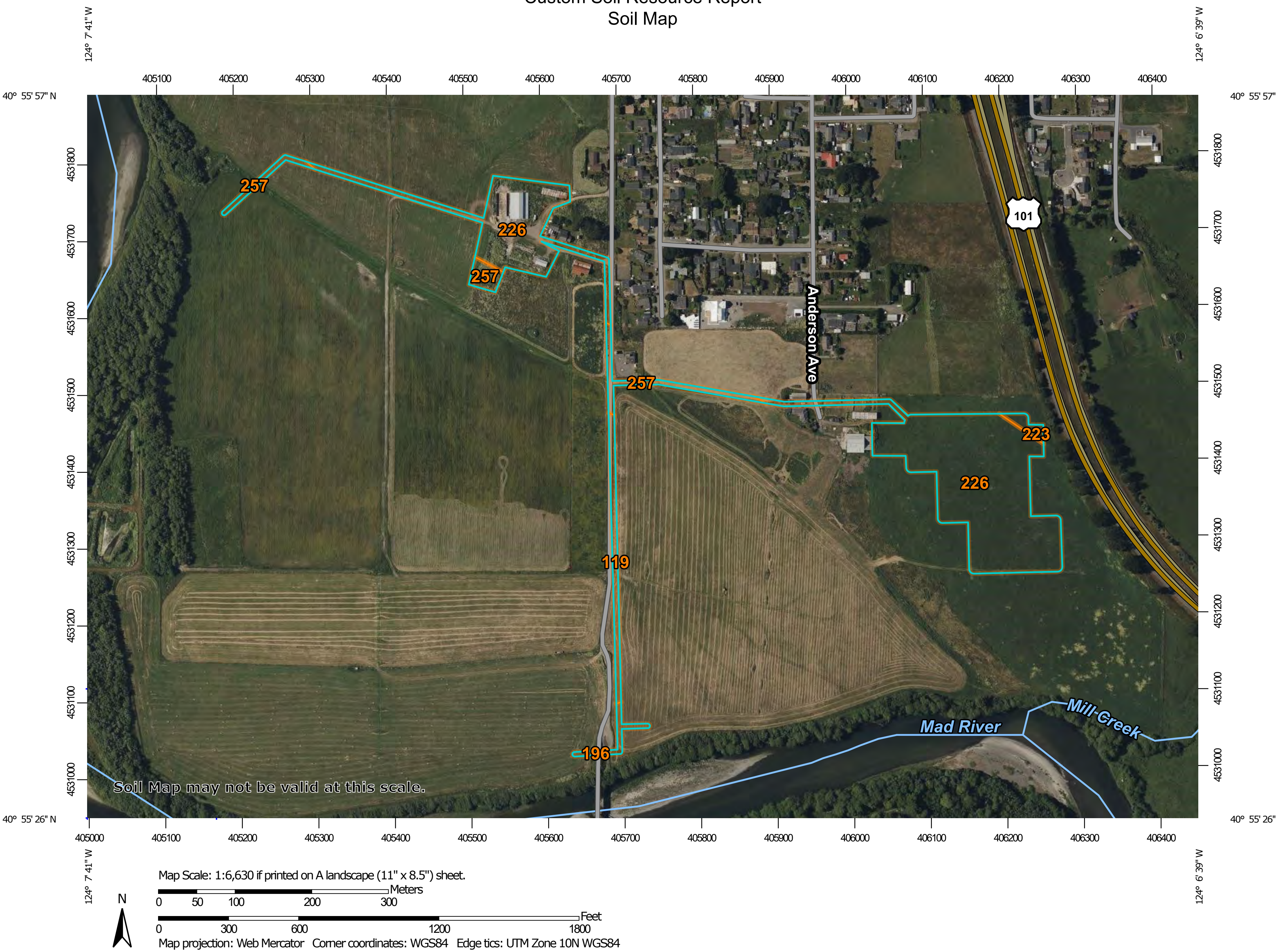
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map


124° 7' 41" W
124° 6' 39" W
40° 55' 57" N
40° 55' 26" N
405000
405100
405200
405300
405400
405500
405600
405700
405800
405900
406000
406100
406200
406300
406400
4531000
4531100
4531200
4531300
4531400
4531500
4531600
4531700
4531800
257
226
257
257
119
196
223
226
101
Anderson Ave
Mad River
Mill Creek
Soil Map may not be valid at this scale.
Map Scale: 1:6,630 if printed on A landscape (11" x 8.5") sheet.
Meters
0 50 100 200 300
Feet
0 300 600 1200 1800
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Central Part, California
Survey Area Data: Version 10, Aug 28, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 1, 2022—Jun 19, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
119	Arlynda, 0 to 2 percent slopes	0.6	4.8%
196	Madriver, 0 to 2 percent slopes	0.2	1.9%
223	Megwil and Cannonball soils, 0 to 5 percent slopes	0.2	1.6%
226	Arcata and Candymountain soils, 2 to 9 percent slopes	11.1	84.1%
257	Lepoil-Candymountain complex, 2 to 15 percent slopes	1.0	7.7%
Totals for Area of Interest		**13.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Humboldt County, Central Part, California

119—Arlynda, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hs3p
Elevation: 0 to 160 feet
Mean annual precipitation: 35 to 80 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 275 to 330 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Arlynda and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arlynda

Setting

Landform: Meander scars, backswamps, depressions, flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium derived from mixed sources

Typical profile

Oi - 0 to 3 inches: slightly decomposed plant material
A - 3 to 14 inches: silty clay loam
Bg1 - 14 to 22 inches: silty clay loam
Cg1 - 22 to 63 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 4 inches
Frequency of flooding: Occasional
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): 5w
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: R004BA205CA - Marshlands
Hydric soil rating: Yes

Minor Components

Loleta

Percent of map unit: 5 percent

Landform: Alluvial fans, fan remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: Yes

Wigi, occasionally flooded
Percent of map unit: 5 percent
Landform: Salt marshes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Worswick
Percent of map unit: 5 percent
Landform: Natural levees, flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

196—Madriver, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: n7ls
Elevation: 10 to 160 feet
Mean annual precipitation: 35 to 80 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 275 to 330 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Madriver and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Madriver

Setting
Landform: Natural levees
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sources

Typical profile

Ap1 - 0 to 7 inches: loam
Ap2 - 7 to 17 inches: loam
C1 - 17 to 28 inches: sandy loam
C2 - 28 to 42 inches: silt loam
C3 - 42 to 56 inches: silt loam
C4 - 56 to 67 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 20 to 39 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: R004BA203CA - Riparian
Hydric soil rating: No

Minor Components

Russ

Percent of map unit: 5 percent
Landform: Natural levees
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Ferndale

Percent of map unit: 3 percent
Landform: Flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Worswick

Percent of map unit: 3 percent
Landform: Natural levees, flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Canalschool

Percent of map unit: 2 percent
Landform: Flood-plain steps
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Swainslough

Percent of map unit: 2 percent
Landform: Backswamps, depressions, flood-plain steps, salt marshes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: Yes

223—Megwil and Cannonball soils, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2p9z9
Elevation: 10 to 600 feet
Mean annual precipitation: 35 to 90 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 275 to 325 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Megwil, , and similar soils: 50 percent
Cannonball and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Megwil,

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed marine deposits

Typical profile

Ap - 0 to 12 inches: loam
Bt1 - 12 to 20 inches: clay loam
Bt2 - 20 to 64 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 20 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F004BX120CA - Redwood-Sitka spruce/California huckleberry-salmonberry/western swordfern-deer fern, marine terraces, loam
Hydric soil rating: No

Description of Cannonball

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed marine deposits

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 11 inches: loam
Bt1 - 11 to 18 inches: loam
Bt2 - 18 to 31 inches: sandy clay loam
Bt3 - 31 to 40 inches: sandy clay loam
Btg - 40 to 68 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 20 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam
Hydric soil rating: No

Minor Components

Tsunami

Percent of map unit: 5 percent
Landform: Fan terraces, fan remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Urban land, residential

Percent of map unit: 5 percent
Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Talawa

Percent of map unit: 3 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Aubell

Percent of map unit: 2 percent
Landform: Fan remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

226—Arcata and Candymountain soils, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2lmt1
Elevation: 10 to 310 feet
Mean annual precipitation: 35 to 90 inches
Mean annual air temperature: 52 to 55 degrees F

Frost-free period: 275 to 325 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Arcata and similar soils: 50 percent
Candymountain and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arcata

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 27 inches: loam
AB - 27 to 36 inches: loam
Bw - 36 to 63 inches: sandy loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam
Hydric soil rating: No

Description of Candymountain

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 17 inches: fine sandy loam

Bw - 17 to 55 inches: fine sandy loam
C - 55 to 79 inches: loamy very fine sand

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam
Hydric soil rating: No

Minor Components

Urban land, residential

Percent of map unit: 4 percent
Landform: Marine terraces
Hydric soil rating: No

Halfbluff

Percent of map unit: 4 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern, marine terraces, marine deposits, fine sandy loam
Other vegetative classification: Forest Type IV, coastal (RNPF004CA)
Hydric soil rating: No

Megwil,

Percent of map unit: 3 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F004BX120CA - Redwood-Sitka spruce/California huckleberry-salmonberry/western swordfern-deer fern, marine terraces, loam
Hydric soil rating: No

Timmons

Percent of map unit: 2 percent
Landform: Marine terraces

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam
Hydric soil rating: No

Talawa

Percent of map unit: 2 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

257—Lepoil-Candymountain complex, 2 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2p9zc
Elevation: 10 to 800 feet
Mean annual precipitation: 35 to 90 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 275 to 325 days
Farmland classification: Not prime farmland

Map Unit Composition

Lepoil and similar soils: 45 percent
Candymountain and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lepoil

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed marine deposits derived from sedimentary rock

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 16 inches: loam
Bt - 16 to 69 inches: clay loam
2CBt - 69 to 75 inches: very fine sandy loam

2C - 75 to 83 inches: fine sand

Properties and qualities

Slope: 2 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam
Hydric soil rating: No

Description of Candymountain

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed marine deposits derived from sedimentary rock

Typical profile

Oi - 0 to 4 inches: slightly decomposed plant material
A - 4 to 15 inches: fine sandy loam
Bw - 15 to 31 inches: fine sandy loam
BC - 31 to 45 inches: fine sandy loam
C - 45 to 60 inches: very fine sand

Properties and qualities

Slope: 2 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam
Hydric soil rating: No

Minor Components

Cannonball

Percent of map unit: 10 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California huckleberry/western swordfern, marine terraces, marine deposits, sandy loam and loam
Hydric soil rating: No

Hutsinpillar

Percent of map unit: 5 percent
Landform: Marine terraces, drainageways
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Appendix G – Record of Climatological Observations and WETS Tables

Almanac for EUREKA WFO WOODLEY ISLAND, CA
October 14, 2020

Daily Data	Observed	----	Normal	Record Highest	Record Lowest
Max Temperature	65		62	76 in 1995	51 in 1917
Min Temperature	52		47	60 in 1932	39 in 1966
Avg Temperature	58.5		54.6	66.0 in 1924	45.5 in 1899
Precipitation	0.01		0.07	2.79 in 1908	0.00 in 2019
Snowfall	0.0		0.0	0.0 in 2020	0.0 in 2020
Snow Depth	0		-	0 in 2020	0 in 2020
HDD (base 65)	6		10	19 in 1899	0 in 1963
CDD (base 65)	0		0	1 in 1924	0 in 2020
Month-to-Date Summary	Observed	----	Normal	Record Highest	Record Lowest
Avg Max Temperature	62.9		62.4	66.9 in 2004	55.6 in 1912
Avg Min Temperature	51.7		47.9	53.5 in 1979	41.6 in 2017
Avg Temperature	57.3		55.1	59.2 in 1963	50.0 in 1912
Total Precipitation	0.39		0.64	6.47 in 1962	0.00 in 2019
Total Snowfall	0.0		0.0	0.0 in 2020	0.0 in 2020
Max Snow Depth	0		-	0 in 2020	0 in 2020
Total HDD (base 65)	104		138	207 in 1912	78 in 1963
Total CDD (base 65)	0		0	5 in 1987	0 in 2020
Year-to-Date Summary	Observed	----	Normal	Record Highest	Record Lowest
Avg Max Temperature	60.4		60.1	63.0 in 1983	55.0 in 1955
Avg Min Temperature	47.7		47.0	50.2 in 1992	44.7 in 1917
Avg Temperature	54.0		53.6	56.4 in 1992	49.9 in 1917
Total Precipitation	20.01		25.00	51.11 in 1904	10.72 in 1924
Total Snowfall (since July 1)	0.0		0.0	T in 1952	0.0 in 2020
Max Snow Depth (since July 1)	0		-	0 in 2020	0 in 2020
Total HDD (since July 1)	638		802	1163 in 1910	451 in 1983
Total CDD (since Jan 1)	14		0	15 in 1979	0 in 2018

WETS Table

WETS Station: EUREKA WFO WOODLEY ISLAND, CA

Requested years: 1980 - 2000

Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	56.2	42.4	49.3	6.47	3.80	7.86	12	0.0
Feb	57.1	43.5	50.3	5.55	3.36	6.72	10	0.2
Mar	57.2	43.8	50.5	5.55	3.82	6.61	12	0.0
Apr	58.5	45.6	52.0	3.01	1.81	3.65	7	0.0
May	60.5	48.6	54.6	1.82	0.89	2.23	5	0.0
Jun	62.5	51.1	56.8	0.73	0.36	0.89	2	0.0
Jul	63.7	52.9	58.3	0.19	0.06	0.19	0	0.0
Aug	64.6	53.7	59.1	0.35	0.04	0.25	1	0.0
Sep	64.2	51.6	57.9	0.63	0.18	0.70	2	0.0
Oct	62.2	48.5	55.4	2.19	1.29	2.67	5	0.0
Nov	58.6	44.7	51.7	5.78	3.23	7.05	10	0.0
Dec	55.7	41.4	48.5	6.95	3.94	8.46	11	0.0
Annual:					32.26	44.44		
Average	60.1	47.3	53.7	-	-	-	-	-
Total	-	-	-	39.21			76	0.3

GROWING SEASON DATES

Years with missing data:	24 deg = 0	28 deg = 0	32 deg = 0
Years with no occurrence:	24 deg = 21	28 deg = 19	32 deg = 2
Data years used:	24 deg = 21	28 deg = 21	32 deg = 21
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	No occurrence	No occurrence	1/16 to 12/24: 342 days
70 percent *	No occurrence	No occurrence	1/5 to 1/5: 365 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

STATS TABLE - total precipitation (inches)

Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1886												9.78	9.78
1887	8.86	9.00	2.28		3.51	1.92	0.06	0.07	0.21	0.55	2.66	5.43	34.55
1888	12.95	1.98	4.09		0.76	4.66	0.44	0.00	0.06	1.15	3.41	5.93	35.43
1889	4.25	1.93	5.91		7.27	0.37	0.15	0.13	0.32	8.36	3.71	12.88	45.28
1890	18.26	13.88	11.57	1.43	1.71	0.90	0.08	0.02	0.79	0.44	0.18	5.48	54.74
1891	3.33	9.81	5.83	6.37	1.55	1.53	0.28	0.31	1.45	1.64	2.72	10.97	45.79
1892	3.29	2.53	5.32		3.63	0.45	0.00	0.09	0.99	2.90	8.19	6.55	33.94
1893	3.65	6.27	10.59	2.99	2.43	0.33	0.00	0.00	2.39	4.33	9.87	6.69	49.54

1894	12.38	6.13	7.46	M1.28	1.31	1.67	0.02	0.04	1.84	3.12	2.03	12.31	49.59
1895	9.37	3.60	5.31	2.88	5.39	0.06	0.23	0.11	3.14	0.05	3.88	7.50	41.52
1896	8.14	4.61	6.93	6.88	6.22	0.51	0.00	0.70	1.60	2.37	8.00	9.41	55.37
1897	3.04	11.23	9.85	1.36	0.75	1.60	0.03	0.15	1.05	2.63	5.44	6.18	43.31
1898	3.23	8.00	1.80	1.82	2.62	1.21	0.00	0.06	1.48	2.13	4.43	3.17	29.95
1899	6.50	5.03	8.53	1.91	1.73	0.75	0.00	0.42	0.88	4.28	14.80	7.05	51.88
1900	6.63	6.04	3.42	4.43	2.08	1.70	T	0.07	0.21	7.07	8.01	5.27	44.93
1901	9.93	7.41	3.86	4.08	1.50	0.12	0.03	T	4.26	2.46	3.96	4.43	42.04
1902	1.95	19.49	7.85	4.56	2.70	0.27	0.25	T	0.14	2.34	10.88	8.33	58.76
1903	16.07	3.80	7.42	1.23	0.70	0.57	0.06	0.53	0.28	2.42	10.79	4.03	47.90
1904	5.24	16.10	19.05	5.14	1.02	0.55	0.75	T	1.36	2.67	4.41	8.18	64.47
1905	4.81	0.99	7.41	0.78	1.99	0.12	0.02	0.00	0.38	1.50	3.93	4.32	26.25
1906	7.63	6.27	7.72	2.14	3.57	1.56	0.01	0.01	0.76	0.67	3.13	7.59	41.06
1907	10.40	10.57	11.83	3.30	1.69	0.58	T	2.66	0.63	1.48	2.38	8.59	54.11
1908	7.23	6.59	2.82	0.85	2.57	0.19	T	0.16	0.02	5.09	3.97	3.91	33.40
1909	14.41	11.54	2.72	0.24	0.76	0.14	0.55	T	0.61	3.78	12.60	4.29	51.64
1910	7.26	7.33	1.97	0.83	0.64	0.49	0.00	0.00	0.01	0.82	6.86	3.43	29.64
1911	8.63	3.75	1.45	3.39	3.52	0.23	T	0.08	0.29	1.68	2.09	4.74	29.85
1912	10.17	5.73	4.73	5.92	1.98	1.29	0.05	0.04	2.40	1.55	6.86	5.83	46.55
1913	8.10	0.87	3.61	3.41	1.67	1.60	0.28	0.03	0.48	0.88	5.29	7.58	33.80
1914	9.75	4.20	3.13	3.27	0.70	1.73	0.01	T	1.82	3.79	2.42	7.09	37.91
1915	9.75	12.39	1.65	1.38	2.07	0.05	0.26	0.00	0.11	0.79	6.15	5.19	39.79
1916	13.02	5.18	4.83	1.98	1.48	1.00	1.34	0.12	0.38	0.47	3.13	5.47	38.40
1917	5.53	5.10	5.01	3.78	1.02	0.00	0.00	0.02	0.66	0.00	6.43	1.17	28.72
1918	2.55	6.29	5.84	1.15	0.29	0.02	0.22	0.21	1.42	1.00	4.74	4.29	28.02
1919	7.84	8.18	6.25	4.03	1.48	0.14	0.01	0.01	1.52	0.24	2.99	4.33	37.02
1920	1.87	2.11	5.79	3.12	0.04	1.92	0.13	0.49	2.47	4.11	6.35	10.83	39.23
1921	8.37	7.45	3.04	1.67	2.54	1.30	0.00	0.01	0.27	1.59	6.21	4.48	36.93
1922	2.54	9.75	6.43	2.39	0.95	0.14	0.00	0.03	0.37	3.38	3.32	7.62	36.92
1923	3.88	0.50	0.80	2.95	1.26	1.07	0.03	0.02	1.54	2.55	2.86	4.93	22.39
1924	1.95	3.19	2.85	0.67	0.08	0.05	0.02	1.03	0.41	6.84	6.37	4.07	27.53
1925	3.97	6.49	2.02	7.47	2.57	0.24	T	0.25	3.56	0.95	3.71	4.84	36.07
1926	4.69	6.64	0.07	0.94	1.13	T	0.01	0.54	0.43	3.49	13.65	6.47	38.06
1927	5.83	10.30	3.95	3.32	1.68	0.91	0.00	0.02	0.86	1.17	5.89	3.10	37.03

1928	3.40	2.78	7.01	5.86	0.12	0.32	0.02	0.05	M0.58	2.21	4.90	7.82	35.07
1929	4.31	2.06	2.31	2.61	0.14	2.39	T	0.01	0.00	0.21	T	7.13	21.17
1930	6.32	4.92	1.23	2.54	1.04	0.13	T	T	1.12	1.21	3.20	2.50	24.21
1931	4.09	2.39	3.35	1.61	0.49	1.33	0.01	0.01	0.54	2.28	5.75	9.06	30.91
1932	6.84	1.20	4.54	4.87	1.41	0.11	0.14	0.03	0.01	1.32	5.11	5.54	31.12
1933	7.04	M2.93	7.20	0.97	4.23	0.30	T	0.05	0.70	2.08	0.38	6.50	32.38
1934	3.83	2.31	3.61	1.68	1.23	0.29	T	0.01	0.47	3.98	8.63	5.28	31.32
1935	7.25	2.73	5.60	4.86	0.30	0.27	0.09	T	1.10	3.02	1.35	6.79	33.36
1936	8.84	5.89	1.77	2.13	2.23	1.34	0.09	T	0.04	0.49	0.01	3.97	26.80
1937	4.27	5.41	7.19	6.55	0.88	1.35	0.03	0.05	0.19	4.33	10.95	4.26	45.46
1938	6.28	13.94	13.97	2.23	0.31	0.01	T	T	1.74	3.34	3.12	5.97	50.91
1939	4.49	4.41	5.03	0.37	1.85	0.56	0.23	0.06	0.05	1.82	0.91	12.13	31.91
1940	4.37	9.62	7.47	0.81	2.54	0.32	0.00	0.00	0.91	4.03	2.29	8.87	41.23
1941	11.37	6.68	4.31	4.49	3.61	1.52	0.06	0.18	0.48	2.64	3.91	12.87	52.12
1942	4.08	6.22	1.77	4.05	5.43	0.57	0.07	0.06	0.06	1.21	8.60	8.52	40.64
1943	5.23	3.51	5.83	3.23	4.25	0.47	0.04	0.21	0.01	4.61	3.59	1.67	32.65
1944	2.92	3.62	2.25	4.25	3.49	1.19	0.10	0.19	0.19	2.79	9.11	5.92	36.02
1945	3.64	9.55	6.03	2.27	3.43	T	T	0.10	1.09	3.38	9.47	9.93	48.89
1946	4.32	5.10	4.68	0.42	1.26	0.30	0.12	0.01	0.32	2.26	4.36	1.56	24.71
1947	3.93	1.33	3.91	1.84	0.17	1.58	1.20	0.10	0.59	6.50	1.72	3.09	25.96
1948	8.23	5.20	6.16	6.53	2.16	0.77	0.25	0.13	1.71	3.33	3.19	7.35	45.01
1949	1.63	6.09	6.94	0.41	2.56	0.06	0.16	0.02	0.50	2.03	3.23	4.49	28.12
1950	13.79	4.61	7.71	1.93	1.30	1.03	0.05	0.07	0.35	13.04	3.43	5.99	53.30
1951	8.47	7.56	3.94	2.05	1.38	T	0.05	0.02	0.79	3.88	7.80	9.10	45.04
1952	10.67	6.22	3.78	1.34	1.77	1.98	T	0.01	0.73	0.62	2.13	11.87	41.12
1953	12.63	3.44	5.95	3.18	5.83	1.24	T	0.41	0.61	3.84	9.57	3.62	50.32
1954	11.78	3.29	3.76	2.78	0.16	2.57	0.04	1.24	0.87	1.47	5.09	9.65	42.70
1955	5.73	1.83	1.82	5.56	0.03	0.11	0.21	T	1.18	2.64	5.77	11.63	36.51
1956	11.51	7.47	2.36	0.31	1.58	1.71	0.06	T	0.33	5.47	0.49	7.18	38.47
1957	4.22	4.36	8.77	1.96	3.42	0.30	0.34	0.02	1.37	6.00	4.44	5.69	40.89
1958	8.57	10.80	6.09	3.67	1.26	0.71	0.05	T	0.78	1.17	3.71	4.06	40.87
1959	7.23	10.65	3.37	0.52	0.91	0.25	T	0.01	1.54	0.74	0.28	3.64	29.14
1960	3.87	7.48	8.13	2.92	6.05	T	0.02	0.04	0.01	1.31	9.87	5.08	44.78
1961	4.54	7.53	7.90	3.49	3.97	0.50	0.03	0.30	0.53	2.28	5.65	3.44	40.16

1962	3.26	6.08	4.04	2.62	0.60	0.11	T	1.92	0.71	6.49	6.77	2.58	35.18
1963	1.70	4.74	6.28	10.68	1.74	0.33	0.11	0.07	0.68	5.41	6.91	3.20	41.85
1964	11.13	1.20	5.91	0.67	1.59	0.72	0.83	0.03	0.07	1.82	12.11	10.96	47.04
1965	5.82	1.36	1.23	5.60	0.44	0.35	T	0.36	T	0.70	5.20	5.22	26.28
1966	9.44	3.12	6.57	1.34	0.06	0.30	0.25	0.50	1.33	1.02	9.86	6.52	40.31
1967	8.87	1.47	7.44	5.29	1.52	0.32	0.00	T	1.32	2.15	4.40	4.34	37.12
1968	7.59	2.93	3.85	0.40	1.04	0.20	0.04	1.98	0.60	2.81	5.88	8.32	35.64
1969	13.92	7.82	1.56	3.22	1.01	0.34	0.05	T	0.36	3.20	3.49	9.60	44.57
1970	12.46	3.15	2.70	1.54	1.38	0.29	T	T	0.32	2.11	13.20	10.24	47.39
1971	5.41	3.28	7.91	2.92	1.28	1.51	0.16	0.55	2.08	0.92	6.36	6.38	38.76
1972	7.96	5.93	5.08	2.27	1.11	0.88	0.01	0.07	1.06	1.97	5.41	7.42	39.17
1973	6.47	3.85	7.10	0.35	0.85	0.23	T	0.08	2.35	4.14	16.58	7.02	49.02
1974	6.02	5.98	6.98	3.15	0.42	0.33	0.11	0.32	T	1.76	2.75	6.40	34.22
1975	5.20	7.68	10.73	3.29	1.05	0.58	0.10	0.58	0.01	6.77	4.72	5.38	46.09
1976	1.88	7.51	3.12	2.80	0.54	0.14	0.20	1.70	0.04	0.28	2.98	0.52	21.71
1977	1.90	2.24	4.33	1.20	2.10	0.07	T	0.20	3.35	2.79	4.51	6.60	29.29
1978	4.52	6.06	2.88	4.10	0.82	0.34	0.03	0.59	2.72	0.04	2.39	1.16	25.65
1979	3.82	6.26	1.70	3.94	2.25	0.05	0.31	0.13	1.15	6.14	6.19	3.75	35.69
1980	3.19	4.67	6.14	4.18	1.70	0.42	T	0.07	0.14	1.38	2.49	6.10	30.48
1981	7.67	3.72	4.64	0.71	2.02	0.57	T	0.01	0.97	3.71	9.39	9.88	43.29
1982	4.75	5.76	7.06	5.97	0.07	0.78	0.08	0.03	0.62	4.89	7.83	10.30	48.14
1983	8.48	9.18	10.73	5.47	1.12	0.65	0.89	3.42	0.87	1.87	10.40	14.13	67.21
1984	0.76	5.18	4.70	2.76	2.51	1.07	0.03	0.05	0.55	3.67	15.15	4.27	40.70
1985	0.66	3.69	4.68	0.45	1.14	0.89	0.15	0.52	1.06	4.07	2.98	2.78	23.07
1986	7.19	10.08	6.12	1.46	2.34	0.21	0.02	T	2.70	1.75	1.85	3.83	37.55
1987	6.48	3.38	6.10	1.15	0.41	0.26	0.20	0.06	0.02	1.05	4.23	10.92	34.26
1988	7.13	0.54	1.18	2.06	2.70	2.22	0.05	T	0.12	0.41	8.93	6.26	31.60
1989	4.71	2.88	7.63	2.01	1.67	0.21	0.08	0.13	0.85	2.90	1.60	0.80	25.47
1990	7.20	4.50	3.30	1.41	3.74	0.32	0.22	0.71	0.19	1.73	3.07	2.91	29.30
1991	1.65	2.75	6.94	2.52	2.16	0.26	1.13	0.37	T	1.06	1.95	2.36	23.15
1992	3.99	3.80	3.51	2.42	0.06	1.27	0.25	0.01	0.33	2.08	2.21	9.33	29.26
1993	7.15	5.93	4.72	5.94	4.44	1.23	0.37	0.54	0.03	0.56	1.35	7.12	39.38
1994	5.09	7.12	2.06	3.30	1.10	0.71	0.08	T	0.06	0.54	8.21	7.00	35.27
1995	12.74	1.40	11.18	7.47	1.21	1.85	0.08	0.22	0.69	0.53	2.26	11.56	51.19

1996	10.74	8.11	3.51	4.64	2.40	0.05	0.03	T	1.21	3.50	5.16	21.26	60.61
1997	8.81	2.55	2.73	3.06	0.90	1.25	T	0.84	2.05	2.73	7.39	4.73	37.04
1998	13.42	13.95	7.83	2.23	3.12	0.33	0.16	0.01	0.08	3.06	14.09	5.40	63.68
1999	4.37	10.32	8.94	1.79	1.62	0.15	0.04	0.30	0.05	1.60	7.36	3.02	39.56
2000	9.71	7.00	2.81	2.15	1.86	0.54	0.04	T	0.55	2.99	3.51	1.97	33.13
2001	3.79	3.60	2.45	2.54	0.71	0.69	0.20	0.21	0.28	1.00	7.71	11.56	34.74
2002	6.37	5.76	4.32	2.42	0.55	0.28	0.03	0.01	0.06	0.06	2.66	23.31	45.83
2003	5.51	3.84	4.91	11.25	1.74	0.04	0.02	0.49	0.35	0.55	5.78	11.35	45.83
2004	6.29	8.12	2.38	1.68	1.37	0.06	0.06	0.43	0.68	5.71	1.87	9.43	38.08
2005	5.91	2.41	6.24	4.70	3.90	3.08	0.05	0.07	0.08	2.40	8.52	12.72	50.08
2006	12.09	6.34	11.11	4.08	1.03	0.35	0.04	T	0.09	0.58	7.41	7.09	50.21
2007	1.86	11.86	2.51	2.72	0.86	0.46	0.97	0.08	0.60	4.92	2.33	7.30	36.47
2008	9.70	2.73	3.16	2.12	0.04	0.24	0.02	0.47	0.05	0.93	4.05	6.66	30.17
2009	1.58	6.20	5.45	1.23	2.93	0.18	0.06	0.02	1.03	1.95	4.15	4.17	28.95
2010	9.29	4.20	6.06	7.76	3.51	2.31	0.04	0.15	1.39	4.26	4.69	10.08	53.74
2011	2.23	3.62	11.88	4.07	1.43	1.29	0.17	0.04	0.37	4.21	3.86	2.22	35.39
2012	7.76	2.63	12.02	4.76	0.77	2.00	0.67	0.07	0.04	2.72	6.36	10.97	50.77
2013	2.57	1.78	3.09	2.44	1.17	0.43	0.00	0.08	3.14	0.05	1.29	0.56	16.60
2014	1.35	6.09	6.25	1.37	0.58	0.35	0.02	0.02	3.09	4.74	3.89	9.75	37.50
2015	1.36	5.04	3.21	2.57	0.07	0.04	0.15	0.41	0.27	1.18	4.88	14.66	33.84
2016	12.06	2.98	8.11	2.84	0.76	0.02	0.54	0.04	0.01	10.92	6.98	7.87	53.13
2017	10.51	11.10	7.97	5.46	1.31	0.59	0.07	0.05	1.01	1.64	7.40	1.94	49.05
2018	7.86	2.87	8.50	5.02	0.79	0.70	0.03	0.05	0.19	0.85	4.94	4.95	36.75
2019	6.67	14.43	4.79	2.51	2.61	0.00	0.00	0.18	1.92	1.51	1.75	7.63	44.00
2020	7.50	0.60	3.69	2.05	4.73	0.20	0.03	0.08	0.74	0.41	M0.31		20.34
Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.													
Data missing for all days in a month or year is blank.													
Creation date: 2016-07-22													

WETS Table

WETS Station: EUREKA WFO WOODLEY ISLAND, CA								
Requested years: 2004 - 2024								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	55.3	40.8	48.1	6.44	3.69	7.84	11	0.0
Feb	54.9	40.7	47.8	5.35	2.87	6.53	10	0.1
Mar	55.8	42.2	49.0	6.12	4.10	7.33	12	0.0
Apr	57.2	44.2	50.7	3.17	2.09	3.80	7	0.0
May	59.6	48.0	53.8	1.59	0.66	1.94	4	0.0
Jun	62.3	50.7	56.5	0.76	0.24	0.86	2	0.0
Jul	63.4	52.9	58.1	0.20	0.05	0.20	0	0.0
Aug	64.4	53.4	58.9	0.12	0.05	0.15	0	0.0
Sep	64.4	51.0	57.7	0.91	0.25	1.07	2	0.0
Oct	61.9	47.3	54.6	2.76	1.02	3.33	5	0.0
Nov	58.2	43.1	50.7	4.45	3.14	5.27	9	0.0
Dec	54.6	40.3	47.4	7.28	4.52	8.80	12	0.0
Annual:					32.46	43.47		
Average	59.3	46.2	52.8	-	-	-	-	-
Total	-	-	-	39.15			74	0.1

GROWING SEASON DATES			
Years with missing data:	24 deg = 1	28 deg = 2	32 deg = 1
Years with no occurrence:	24 deg = 20	28 deg = 16	32 deg = 0
Data years used:	24 deg = 20	28 deg = 19	32 deg = 20
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	No occurrence	Insufficient data	2/16 to 12/5: 292 days
70 percent *	No occurrence	Insufficient data	2/8 to 12/14: 309 days
* Percent chance of the growing season occurring between the Beginning and Ending dates.			

STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1886												9.78	9.78
1887	8.86	9.00	2.28		3.51	1.92	0.06	0.07	0.21	0.55	2.66	5.43	34.55
1888	12.95	1.98	4.09		0.76	4.66	0.44	0.00	0.06	1.15	3.41	5.93	35.43
1889	4.25	1.93	5.91		7.27	0.37	0.15	0.13	0.32	8.36	3.71	12.88	45.28
1890	18.26	13.88	11.57	1.43	1.71	0.90	0.08	0.02	0.79	0.44	0.18	5.48	54.74
1891	3.33	9.81	5.83	6.37	1.55	1.53	0.28	0.31	1.45	1.64	2.72	10.97	45.79
1892	3.29	2.53	5.32		3.63	0.45	0.00	0.09	0.99	2.90	8.19	6.55	33.94
1893	3.65	6.27	10.59	2.99	2.43	0.33	0.00	0.00	2.39	4.33	9.87	6.69	49.54

1894	12.38	6.13	7.46	M1.28	1.31	1.67	0.02	0.04	1.84	3.12	2.03	12.31	49.59
1895	9.37	3.60	5.31	2.88	5.39	0.06	0.23	0.11	3.14	0.05	3.88	7.50	41.52
1896	8.14	4.61	6.93	6.88	6.22	0.51	0.00	0.70	1.60	2.37	8.00	9.41	55.37
1897	3.04	11.23	9.85	1.36	0.75	1.60	0.03	0.15	1.05	2.63	5.44	6.18	43.31
1898	3.23	8.00	1.80	1.82	2.62	1.21	0.00	0.06	1.48	2.13	4.43	3.17	29.95
1899	6.50	5.03	8.53	1.91	1.73	0.75	0.00	0.42	0.88	4.28	14.80	7.05	51.88
1900	6.63	6.04	3.42	4.43	2.08	1.70	T	0.07	0.21	7.07	8.01	5.27	44.93
1901	9.93	7.41	3.86	4.08	1.50	0.12	0.03	T	4.26	2.46	3.96	4.43	42.04
1902	1.95	19.49	7.85	4.56	2.70	0.27	0.25	T	0.14	2.34	10.88	8.33	58.76
1903	16.07	3.80	7.42	1.23	0.70	0.57	0.06	0.53	0.28	2.42	10.79	4.03	47.90
1904	5.24	16.10	19.05	5.14	1.02	0.55	0.75	T	1.36	2.67	4.41	8.18	64.47
1905	4.81	0.99	7.41	0.78	1.99	0.12	0.02	0.00	0.38	1.50	3.93	4.32	26.25
1906	7.63	6.27	7.72	2.14	3.57	1.56	0.01	0.01	0.76	0.67	3.13	7.59	41.06
1907	10.40	10.57	11.83	3.30	1.69	0.58	T	2.66	0.63	1.48	2.38	8.59	54.11
1908	7.23	6.59	2.82	0.85	2.57	0.19	T	0.16	0.02	5.09	3.97	3.91	33.40
1909	14.41	11.54	2.72	0.24	0.76	0.14	0.55	T	0.61	3.78	12.60	4.29	51.64
1910	7.26	7.33	1.97	0.83	0.64	0.49	0.00	0.00	0.01	0.82	6.86	3.43	29.64
1911	8.63	3.75	1.45	3.39	3.52	0.23	T	0.08	0.29	1.68	2.09	4.74	29.85
1912	10.17	5.73	4.73	5.92	1.98	1.29	0.05	0.04	2.40	1.55	6.86	5.83	46.55
1913	8.10	0.87	3.61	3.41	1.67	1.60	0.28	0.03	0.48	0.88	5.29	7.58	33.80
1914	9.75	4.20	3.13	3.27	0.70	1.73	0.01	T	1.82	3.79	2.42	7.09	37.91
1915	9.75	12.39	1.65	1.38	2.07	0.05	0.26	0.00	0.11	0.79	6.15	5.19	39.79
1916	13.02	5.18	4.83	1.98	1.48	1.00	1.34	0.12	0.38	0.47	3.13	5.47	38.40
1917	5.53	5.10	5.01	3.78	1.02	0.00	0.00	0.02	0.66	0.00	6.43	1.17	28.72
1918	2.55	6.29	5.84	1.15	0.29	0.02	0.22	0.21	1.42	1.00	4.74	4.29	28.02
1919	7.84	8.18	6.25	4.03	1.48	0.14	0.01	0.01	1.52	0.24	2.99	4.33	37.02
1920	1.87	2.11	5.79	3.12	0.04	1.92	0.13	0.49	2.47	4.11	6.35	10.83	39.23
1921	8.37	7.45	3.04	1.67	2.54	1.30	0.00	0.01	0.27	1.59	6.21	4.48	36.93
1922	2.54	9.75	6.43	2.39	0.95	0.14	0.00	0.03	0.37	3.38	3.32	7.62	36.92
1923	3.88	0.50	0.80	2.95	1.26	1.07	0.03	0.02	1.54	2.55	2.86	4.93	22.39
1924	1.95	3.19	2.85	0.67	0.08	0.05	0.02	1.03	0.41	6.84	6.37	4.07	27.53
1925	3.97	6.49	2.02	7.47	2.57	0.24	T	0.25	3.56	0.95	3.71	4.84	36.07
1926	4.69	6.64	0.07	0.94	1.13	T	0.01	0.54	0.43	3.49	13.65	6.47	38.06
1927	5.83	10.30	3.95	3.32	1.68	0.91	0.00	0.02	0.86	1.17	5.89	3.10	37.03

1928	3.40	2.78	7.01	5.86	0.12	0.32	0.02	0.05	M0.58	2.21	4.90	7.82	35.07
1929	4.31	2.06	2.31	2.61	0.14	2.39	T	0.01	0.00	0.21	T	7.13	21.17
1930	6.32	4.92	1.23	2.54	1.04	0.13	T	T	1.12	1.21	3.20	2.50	24.21
1931	4.09	2.39	3.35	1.61	0.49	1.33	0.01	0.01	0.54	2.28	5.75	9.06	30.91
1932	6.84	1.20	4.54	4.87	1.41	0.11	0.14	0.03	0.01	1.32	5.11	5.54	31.12
1933	7.04	M2.93	7.20	0.97	4.23	0.30	T	0.05	0.70	2.08	0.38	6.50	32.38
1934	3.83	2.31	3.61	1.68	1.23	0.29	T	0.01	0.47	3.98	8.63	5.28	31.32
1935	7.25	2.73	5.60	4.86	0.30	0.27	0.09	T	1.10	3.02	1.35	6.79	33.36
1936	8.84	5.89	1.77	2.13	2.23	1.34	0.09	T	0.04	0.49	0.01	3.97	26.80
1937	4.27	5.41	7.19	6.55	0.88	1.35	0.03	0.05	0.19	4.33	10.95	4.26	45.46
1938	6.28	13.94	13.97	2.23	0.31	0.01	T	T	1.74	3.34	3.12	5.97	50.91
1939	4.49	4.41	5.03	0.37	1.85	0.56	0.23	0.06	0.05	1.82	0.91	12.13	31.91
1940	4.37	9.62	7.47	0.81	2.54	0.32	0.00	0.00	0.91	4.03	2.29	8.87	41.23
1941	11.37	6.68	4.31	4.49	3.61	1.52	0.06	0.18	0.48	2.64	3.91	12.87	52.12
1942	4.08	6.22	1.77	4.05	5.43	0.57	0.07	0.06	0.06	1.21	8.60	8.52	40.64
1943	5.23	3.51	5.83	3.23	4.25	0.47	0.04	0.21	0.01	4.61	3.59	1.67	32.65
1944	2.92	3.62	2.25	4.25	3.49	1.19	0.10	0.19	0.19	2.79	9.11	5.92	36.02
1945	3.64	9.55	6.03	2.27	3.43	T	T	0.10	1.09	3.38	9.47	9.93	48.89
1946	4.32	5.10	4.68	0.42	1.26	0.30	0.12	0.01	0.32	2.26	4.36	1.56	24.71
1947	3.93	1.33	3.91	1.84	0.17	1.58	1.20	0.10	0.59	6.50	1.72	3.09	25.96
1948	8.23	5.20	6.16	6.53	2.16	0.77	0.25	0.13	1.71	3.33	3.19	7.35	45.01
1949	1.63	6.09	6.94	0.41	2.56	0.06	0.16	0.02	0.50	2.03	3.23	4.49	28.12
1950	13.79	4.61	7.71	1.93	1.30	1.03	0.05	0.07	0.35	13.04	3.43	5.99	53.30
1951	8.47	7.56	3.94	2.05	1.38	T	0.05	0.02	0.79	3.88	7.80	9.10	45.04
1952	10.67	6.22	3.78	1.34	1.77	1.98	T	0.01	0.73	0.62	2.13	11.87	41.12
1953	12.63	3.44	5.95	3.18	5.83	1.24	T	0.41	0.61	3.84	9.57	3.62	50.32
1954	11.78	3.29	3.76	2.78	0.16	2.57	0.04	1.24	0.87	1.47	5.09	9.65	42.70
1955	5.73	1.83	1.82	5.56	0.03	0.11	0.21	T	1.18	2.64	5.77	11.63	36.51
1956	11.51	7.47	2.36	0.31	1.58	1.71	0.06	T	0.33	5.47	0.49	7.18	38.47
1957	4.22	4.36	8.77	1.96	3.42	0.30	0.34	0.02	1.37	6.00	4.44	5.69	40.89
1958	8.57	10.80	6.09	3.67	1.26	0.71	0.05	T	0.78	1.17	3.71	4.06	40.87
1959	7.23	10.65	3.37	0.52	0.91	0.25	T	0.01	1.54	0.74	0.28	3.64	29.14
1960	3.87	7.48	8.13	2.92	6.05	T	0.02	0.04	0.01	1.31	9.87	5.08	44.78
1961	4.54	7.53	7.90	3.49	3.97	0.50	0.03	0.30	0.53	2.28	5.65	3.44	40.16

1962	3.26	6.08	4.04	2.62	0.60	0.11	T	1.92	0.71	6.49	6.77	2.58	35.18
1963	1.70	4.74	6.28	10.68	1.74	0.33	0.11	0.07	0.68	5.41	6.91	3.20	41.85
1964	11.13	1.20	5.91	0.67	1.59	0.72	0.83	0.03	0.07	1.82	12.11	10.96	47.04
1965	5.82	1.36	1.23	5.60	0.44	0.35	T	0.36	T	0.70	5.20	5.22	26.28
1966	9.44	3.12	6.57	1.34	0.06	0.30	0.25	0.50	1.33	1.02	9.86	6.52	40.31
1967	8.87	1.47	7.44	5.29	1.52	0.32	0.00	T	1.32	2.15	4.40	4.34	37.12
1968	7.59	2.93	3.85	0.40	1.04	0.20	0.04	1.98	0.60	2.81	5.88	8.32	35.64
1969	13.92	7.82	1.56	3.22	1.01	0.34	0.05	T	0.36	3.20	3.49	9.60	44.57
1970	12.46	3.15	2.70	1.54	1.38	0.29	T	T	0.32	2.11	13.20	10.24	47.39
1971	5.41	3.28	7.91	2.92	1.28	1.51	0.16	0.55	2.08	0.92	6.36	6.38	38.76
1972	7.96	5.93	5.08	2.27	1.11	0.88	0.01	0.07	1.06	1.97	5.41	7.42	39.17
1973	6.47	3.85	7.10	0.35	0.85	0.23	T	0.08	2.35	4.14	16.58	7.02	49.02
1974	6.02	5.98	6.98	3.15	0.42	0.33	0.11	0.32	T	1.76	2.75	6.40	34.22
1975	5.20	7.68	10.73	3.29	1.05	0.58	0.10	0.58	0.01	6.77	4.72	5.38	46.09
1976	1.88	7.51	3.12	2.80	0.54	0.14	0.20	1.70	0.04	0.28	2.98	0.52	21.71
1977	1.90	2.24	4.33	1.20	2.10	0.07	T	0.20	3.35	2.79	4.51	6.60	29.29
1978	4.52	6.06	2.88	4.10	0.82	0.34	0.03	0.59	2.72	0.04	2.39	1.16	25.65
1979	3.82	6.26	1.70	3.94	2.25	0.05	0.31	0.13	1.15	6.14	6.19	3.75	35.69
1980	3.19	4.67	6.14	4.18	1.70	0.42	T	0.07	0.14	1.38	2.49	6.10	30.48
1981	7.67	3.72	4.64	0.71	2.02	0.57	T	0.01	0.97	3.71	9.39	9.88	43.29
1982	4.75	5.76	7.06	5.97	0.07	0.78	0.08	0.03	0.62	4.89	7.83	10.30	48.14
1983	8.48	9.18	10.73	5.47	1.12	0.65	0.89	3.42	0.87	1.87	10.40	14.13	67.21
1984	0.76	5.18	4.70	2.76	2.51	1.07	0.03	0.05	0.55	3.67	15.15	4.27	40.70
1985	0.66	3.69	4.68	0.45	1.14	0.89	0.15	0.52	1.06	4.07	2.98	2.78	23.07
1986	7.19	10.08	6.12	1.46	2.34	0.21	0.02	T	2.70	1.75	1.85	3.83	37.55
1987	6.48	3.38	6.10	1.15	0.41	0.26	0.20	0.06	0.02	1.05	4.23	10.92	34.26
1988	7.13	0.54	1.18	2.06	2.70	2.22	0.05	T	0.12	0.41	8.93	6.26	31.60
1989	4.71	2.88	7.63	2.01	1.67	0.21	0.08	0.13	0.85	2.90	1.60	0.80	25.47
1990	7.20	4.50	3.30	1.41	3.74	0.32	0.22	0.71	0.19	1.73	3.07	2.91	29.30
1991	1.65	2.75	6.94	2.52	2.16	0.26	1.13	0.37	T	1.06	1.95	2.36	23.15
1992	3.99	3.80	3.51	2.42	0.06	1.27	0.25	0.01	0.33	2.08	2.21	9.33	29.26
1993	7.15	5.93	4.72	5.94	4.44	1.23	0.37	0.54	0.03	0.56	1.35	7.12	39.38
1994	5.09	7.12	2.06	3.30	1.10	0.71	0.08	T	0.06	0.54	8.21	7.00	35.27
1995	12.74	1.40	11.18	7.47	1.21	1.85	0.08	0.22	0.69	0.53	2.26	11.56	51.19

1996	10.74	8.11	3.51	4.64	2.40	0.05	0.03	T	1.21	3.50	5.16	21.26	60.61
1997	8.81	2.55	2.73	3.06	0.90	1.25	T	0.84	2.05	2.73	7.39	4.73	37.04
1998	13.42	13.95	7.83	2.23	3.12	0.33	0.16	0.01	0.08	3.06	14.09	5.40	63.68
1999	4.37	10.32	8.94	1.79	1.62	0.15	0.04	0.30	0.05	1.60	7.36	3.02	39.56
2000	9.71	7.00	2.81	2.15	1.86	0.54	0.04	T	0.55	2.99	3.51	1.97	33.13
2001	3.79	3.60	2.45	2.54	0.71	0.69	0.20	0.21	0.28	1.00	7.71	11.56	34.74
2002	6.37	5.76	4.32	2.42	0.55	0.28	0.03	0.01	0.06	0.06	2.66	23.31	45.83
2003	5.51	3.84	4.91	11.25	1.74	0.04	0.02	0.49	0.35	0.55	5.78	11.35	45.83
2004	6.29	8.12	2.38	1.68	1.37	0.06	0.06	0.43	0.68	5.71	1.87	9.43	38.08
2005	5.91	2.41	6.24	4.70	3.90	3.08	0.05	0.07	0.08	2.40	8.52	12.72	50.08
2006	12.09	6.34	11.11	4.08	1.03	0.35	0.04	T	0.09	0.58	7.41	7.09	50.21
2007	1.86	11.86	2.51	2.72	0.86	0.46	0.97	0.08	0.60	4.92	2.33	7.30	36.47
2008	9.70	2.73	3.16	2.12	0.04	0.24	0.02	0.47	0.05	0.93	4.05	6.66	30.17
2009	1.58	6.20	5.45	1.23	2.93	0.18	0.06	0.02	1.03	1.95	4.15	4.17	28.95
2010	9.29	4.20	6.06	7.76	3.51	2.31	0.04	0.15	1.39	4.26	4.69	10.08	53.74
2011	2.23	3.62	11.88	4.07	1.43	1.29	0.17	0.04	0.37	4.21	3.86	2.22	35.39
2012	7.76	2.63	12.02	4.76	0.77	2.00	0.67	0.07	0.04	2.72	6.36	10.97	50.77
2013	2.57	1.78	3.09	2.44	1.17	0.43	0.00	0.08	3.14	0.05	1.29	0.56	16.60
2014	1.35	6.09	6.25	1.37	0.58	0.35	0.02	0.02	3.09	4.74	3.89	9.75	37.50
2015	1.36	5.04	3.21	2.57	0.07	0.04	0.15	0.41	0.27	1.18	4.88	14.66	33.84
2016	12.06	2.98	8.11	2.84	0.76	0.02	0.54	0.04	0.01	10.92	6.98	7.87	53.13
2017	10.51	11.10	7.97	5.46	1.31	0.59	0.07	0.05	1.01	1.64	7.40	1.94	49.05
2018	7.86	2.87	8.50	5.02	0.79	0.70	0.03	0.05	0.19	0.85	4.94	4.95	36.75
2019	6.67	14.43	4.79	2.51	2.61	0.00	0.00	0.18	1.92	1.51	1.75	7.63	44.00
2020	7.50	0.60	3.69	2.05	4.73	0.20	0.03	0.08	0.74	0.41	2.55	3.96	26.54
2021	7.10	4.32	3.93	0.71	0.25	1.06	0.21	0.03	1.24	4.02	2.85	7.25	32.97
2022	1.90	0.51	1.49	4.57	1.36	1.53	0.76	0.11	0.43	0.14	5.36	8.54	26.70
2023	7.89	5.74	9.25	2.66	0.97	0.23	0.02	0.11	1.83	2.09	3.85	7.78	42.42
2024	11.85	8.85	7.42	1.18	3.00	0.79	M0.00						33.09

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2024-07-03

Climatological Data for EUREKA WFO WOODLEY ISLAND, CA - April 2024

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2024-04-01	61	40	50.5	11	1	0.00	0.0	0
2024-04-02	57	44	50.5	11	1	0.01	0.0	0
2024-04-03	51	41	46.0	6	0	0.02	0.0	0
2024-04-04	51	39	45.0	5	0	0.00	0.0	0
2024-04-05	53	37	45.0	5	0	T	0.0	0
2024-04-06	55	40	47.5	8	0	0.08	0.0	0
2024-04-07	56	42	49.0	9	0	0.04	0.0	0
2024-04-08	57	44	50.5	11	1	0.00	0.0	0
2024-04-09	58	46	52.0	12	2	0.00	0.0	0
2024-04-10	56	44	50.0	10	0	0.00	0.0	0
2024-04-11	55	45	50.0	10	0	0.00	0.0	0
2024-04-12	57	42	49.5	10	0	T	0.0	0
2024-04-13	55	46	50.5	11	1	0.36	0.0	0
2024-04-14	55	47	51.0	11	1	0.30	0.0	0
2024-04-15	57	46	51.5	12	2	0.00	0.0	0
2024-04-16	56	43	49.5	10	0	0.00	0.0	0
2024-04-17	56	40	48.0	8	0	0.00	0.0	0
2024-04-18	62	40	51.0	11	1	0.00	0.0	0
2024-04-19	63	43	53.0	13	3	0.00	0.0	0
2024-04-20	60	41	50.5	11	1	0.00	0.0	0
2024-04-21	58	46	52.0	12	2	0.00	0.0	0
2024-04-22	62	41	51.5	12	2	0.00	0.0	0
2024-04-23	56	50	53.0	13	3	0.03	0.0	0
2024-04-24	57	49	53.0	13	3	0.01	0.0	0
2024-04-25	57	49	53.0	13	3	0.20	0.0	0
2024-04-26	56	50	53.0	13	3	0.09	0.0	0
2024-04-27	57	47	52.0	12	2	T	0.0	0
2024-04-28	61	47	54.0	14	4	0.04	0.0	0
2024-04-29	58	46	52.0	12	2	T	0.0	0
2024-04-30	57	41	49.0	9	0	0.00	0.0	0
Average|Sum	57.0	43.9	50.4	318	38	1.18	0.0	0.0

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