

INITIAL STUDY AND DRAFT MITIGATED NEGATIVE DECLARATION

ORGANIC LIBERTY CA, LLC COMMERCIAL CANNABIS OUTDOOR CULTIVATION PROJECT APPLICATION NO. 12376

Applicant:

Organic Liberty CA, LLC
C/O Matthew Primm
Bremer Whyte Brown & O'Meara, LLP
501 West Broadway, Suite 1750
San Diego, CA 92101

Lead Agency:

Humboldt County Planning & Building Department
3015 H Street
Eureka, CA 95501

May 2020

TABLE OF CONTENTS

| | | |
|------------|--|-----------|
| 1.0 | INTRODUCTION..... | 1 |
| 1.1 | Project Title | 1 |
| 1.2 | Lead Agency Name and Address..... | 1 |
| 1.3 | Project Location | 1 |
| 1.4 | Project Sponsor’s Name and Address..... | 1 |
| 1.5 | Assessor Parcels, Ownership, Zoning, and General Plan Designations | 1 |
| 1.6 | Description of Project | 2 |
| 1.6.1 | Hours/Days of Operation and Number of Employees..... | 2 |
| 1.6.2 | Operations Plan..... | 2 |
| 1.6.3 | Water Source, Storage, and Irrigation Plan | 2 |
| 1.6.4 | Projected Water Usage | 3 |
| 1.6.5 | Grading and Drainage | 4 |
| 1.6.6 | Storage and Use of Fertilizers, Pesticides, and Other Products | 4 |
| 1.6.7 | Access and Parking..... | 4 |
| 1.6.8 | Portable Toilets..... | 5 |
| 1.6.9 | Security Plan..... | 5 |
| 1.6.10 | Site-Specific Technical Reports | 5 |
| 1.7 | Surrounding Land Uses and Setting..... | 6 |
| 1.7.1 | Existing Land Uses..... | 6 |
| 1.7.2 | Surrounding Land Uses | 6 |
| 1.7.3 | Geology | 7 |
| 1.7.4 | Soils | 7 |
| 1.7.5 | Seismicity | 7 |
| 1.7.6 | Biological Resources | 8 |
| 1.7.7 | Surface Waters and Drainage | 8 |
| 1.8 | Requested Entitlements..... | 9 |
| 1.8.1 | County Entitlements | 9 |
| 1.8.2 | Other Permits, Licenses, and Approvals | 9 |
| 2.0 | CEQA EVALUATION | 10 |
| 2.1 | Environmental Factors Potentially Affected | 10 |
| 2.2 | Determination..... | 10 |
| 2.3 | Evaluation of Environmental Impacts..... | 11 |
| I. | AESTHETICS. | 12 |

| | | |
|--------|---|----|
| II. | AGRICULTURE AND FORESTRY RESOURCES..... | 15 |
| III. | AIR QUALITY..... | 17 |
| IV. | BIOLOGICAL RESOURCES..... | 21 |
| V. | CULTURAL RESOURCES. | 34 |
| VI. | ENERGY. | 36 |
| VII. | GEOLOGY AND SOILS. | 37 |
| VIII. | GREENHOUSE GAS EMISSIONS. | 41 |
| IX. | HAZARDS AND HAZARDOUS MATERIALS..... | 43 |
| X. | HYDROLOGY AND WATER QUALITY..... | 47 |
| XI. | LAND USE AND PLANNING..... | 51 |
| XII. | MINERAL RESOURCES. | 53 |
| XIII. | NOISE. | 54 |
| XIV. | POPULATION AND HOUSING. | 57 |
| XV. | PUBLIC SERVICES..... | 58 |
| XVI. | RECREATION..... | 60 |
| XVII. | TRANSPORTATION | 61 |
| XVIII. | TRIBAL CULTURAL RESOURCES. | 63 |
| XIX. | UTILITIES AND SERVICE SYSTEMS. | 65 |
| XX. | WILDFIRE..... | 68 |
| XXI. | MANDATORY FINDINGS OF SIGNIFICANCE..... | 69 |
| 2.4 | Discussion of Mitigation Measures, Monitoring, and Reporting Program..... | 71 |
| 2.5 | Earlier Analyses..... | 74 |
| 2.6 | Source / Reference List | 75 |
| 2.7 | Mitigation and Monitoring Report..... | 79 |

FIGURES

| | |
|----------|------------------------------|
| Figure 1 | Site and Vicinity Map |
| Figure 2 | Adjusted Legal Parcels Map |
| Figure 3 | Zoning Map |
| Figure 4 | Existing Conditions Site Map |
| Figure 5 | Site Geology Map |
| Figure 6 | NRCS Soils Map |
| Figure 7 | Prime Agricultural Soils Map |

SHEETS

| | |
|---------|-------------------------------------|
| Sheet 1 | Site Plan – Overall Parcel Boundary |
|---------|-------------------------------------|

APPENDICES

| | |
|------------|--|
| Appendix A | Operations Plan |
| Appendix B | County Well Permits |
| Appendix C | Fisch Letter |
| Appendix D | Sight Distance Analysis |
| Appendix E | Prime Agricultural Soil Assessment |
| Appendix F | Biological Resources Assessment |
| Appendix G | Wetland and Other Waters Delineation Reports |

1.0 INTRODUCTION

1.1 Project Title

Organic Liberty CA, LLC, Commercial Cannabis Outdoor Cultivation Project

1.2 Lead Agency Name and Address

Lead Agency Name: Humboldt County Planning & Building Department
Lead Agency Address: 3015 H Street, Eureka, CA 95501
Contact Person: Rodney Yandell
Phone Number: 707-445-7541

1.3 Project Location

The Project is located approximately four (4) miles south/southeast of the community of Willow Creek near the junction of State Highway 299 and Friday Ridge Road in an unincorporated area of Humboldt County, California. See Figure 1, Site and Vicinity Map.

1.4 Project Sponsor's Name and Address

Owner / Applicant:

Attn: Matthew Primm
Organic Liberty CA, LLC
501 West Broadway, Suite 1750
San Diego, CA 92101

Agent:

Attn: Jeff Smith
Lenders Construction Services, LLC
P.O. Box 6218
Eureka, CA 95502

1.5 Assessor Parcels, Ownership, Zoning, and General Plan Designations

The Project site's current assessor parcel numbers, ownership, County zoning and County General Plan land use designations are shown in Table 1, below. Also, See Figure 2, Adjusted Legal Parcels Map and Figure 3, Zoning Map.

TABLE 1
ASSESSOR PARCELS, OWNERSHIP, ZONING AND GENERAL PLAN DESIGNATIONS

| Current APN¹ | Ownership | Zoning² | General Plan³ |
|--------------------------------|----------------------|---------------------------|---------------------------------|
| 524-073-003 | Organic Liberty, LLC | AE | RA40 |
| 524-074-001 | Organic Liberty, LLC | AE | RA40 |
| 524-091-002 | Organic Liberty, LLC | AG-B-5 | RA5-20 |
| 524-091-005 | Organic Liberty, LLC | AG-B-5 | CS/IG; RA5-20 |
| 524-091-006 | Organic Liberty, LLC | AG-B-5; MH | CF,CS/IG; RA5-20 |
| 524-101-008 | Organic Liberty, LLC | U | AG |
| 524-101-015 | Organic Liberty, LLC | AE | AG |

Notes:

1. Source: Humboldt County Web GIS, accessed May 27, 2019.
2. Source: Humboldt County Zoning Code, with verification thru Humboldt County Web GIS. AE = Agriculture Exclusive. AG = Agriculture General. MH = Heavy Industrial. U = Unclassified. B = Special Building Site Combining Zone.
3. Source: Humboldt County General Plan, with verification thru Humboldt County Web GIS. RA = Residential Agriculture. CF = Conservation Floodway. CS = Commercial Services. IG = Industrial, General. AG = Agricultural Grazing. AE = Agricultural Exclusive.

1.6 Description of Project

Organic Liberty CA, LLC. (“Organic Liberty”) proposes to develop an outdoor commercial cannabis cultivation project on property located near the junction of Friday Ridge Road and California State Route 299, south/southeast of the community of Willow Creek, in Humboldt County, California (“Project”). The Project involves approximately 3.3 acres (143,748 square feet) of commercial cannabis outdoor cultivation on current APNs 524-073-003, 524-074-001, 524-091-002, 524-091-005, 524-091-006, 524-101-008, and 524-101-015. The parcels are proposed for a lot line adjustment and merger that will result in a single parcel totaling 400 acres. The Project involves only outdoor cultivation, with processing to occur at an offsite location. Plantings are proposed as “open air,” with no greenhouses or hoop structures. Plants will be planted in the existing natural soil and/or in “smart-pot” type above ground potting containers, which can be set on the existing terrain and moved around easily within the Project area.

1.6.1 Hours/Days of Operation and Number of Employees

Hours of operation will typically be from 7:00 AM to 7:00 PM; however, during periods of seasonally high workload, the hours of operation may increase to 16 hours per day (5:00 AM to 9:00 PM). The Project is anticipated to require up to 16 full-time equivalent employees during the growing and harvesting season (generally April to October). The facility is not open to the public and will not accept visitors without a specific business purpose.

1.6.2 Operations Plan

Organic Liberty has developed a detailed Operations Plan outlining security measures, inventory and quality control procedures, material storage, handling and disposal procedures, health and safety considerations, and waste management for the Project. See Appendix A, Operations Plan.

1.6.3 Water Source, Storage, and Irrigation Plan

Water for irrigation will be supplied by three existing permitted on-site groundwater wells:

- Well #1 (County Permit Number 17/18-1216) is located east of Friday Ridge Road within the Project area. Well #1 is completed to a depth of 220 feet and has an estimated yield of 5 gallons per minute according to the Well Completion Report.

- Well #2 (County Permit Number 17/18-1401) is located on the western edge of current APN 524-073-003. Well #2 is completed to a depth of 220 feet and has an estimated yield of 15 gallons per minute according to the Well Completion Report.
- Well #3 (County Permit Number 17/18-1636) is located on the western edge of current APN 524-073-003, south of Well #2. Well #3 is completed to a depth of 200 feet and has an estimated yield of 20 gallons per minute according to the Well Completion Report.

For well locations, see Sheet 1, Site Plan, and Figure 4, Existing Conditions Site Map. For copies of the well permits, see Appendix B, County Well Permits.

As documented by the well driller (Fisch Drilling), the wells are drilled into “perched bedrock with no hydraulic connection to any surface water or any part of a larger shallow homogeneous aquifer.” See Appendix C, Hydrologic Connectivity Letter.

Long term water storage (in ponds) is not proposed in connection with the Project. Short term water storage may occur in three 5,000-gallon aboveground water storage tanks, as shown on Sheet 1, Site Plan. Water will be pumped from the wells to the temporary holding tanks for regulating water pressure, and then piped from the tanks to the area of cultivation. At all times, water will be applied using no more than agronomic rates using an automated irrigation system.

1.6.4 Projected Water Usage

The Project’s annual irrigation demand has been estimated at 9.2 acre-feet (3 million gallons) (20.87 gallons/square foot/year), with a monthly maximum of approximately 1.6 acre-feet (509,000 gallons) during the month of July. Irrigation water will be needed from April through October of each year, with no irrigation water anticipated during the months of November through March. The combined output of the three existing on-site groundwater wells is approximately 0.18 acre-feet (58,000 gallons) per day, indicating sufficient water supply to service the irrigation demands of the Project.

The Project’s estimated irrigation water usage, by month, is shown in Table 2, below.

TABLE 2
PROJECTED IRRIGATION WATER USAGE

| | Month ¹ | | | | | | |
|-----------|--------------------|---------|---------|---------|---------|-----------|---------|
| | April | May | June | July | August | September | October |
| Gallons | 419,000 | 494,000 | 501,000 | 509,000 | 456,000 | 359,000 | 277,000 |
| Acre-Feet | 1.3 | 1.5 | 1.5 | 1.6 | 1.4 | 1.1 | 0.8 |

Notes:

1. No irrigation water expected during the months of November through March.

1.6.5 Grading and Drainage

The existing site drainage and runoff patterns will be maintained, as no grading is proposed. Plants will be planted in the existing natural soil and/or in “smart-pot” (or similar) above ground potting containers, which can be set on the existing terrain and moved around easily within the Project area. The average slopes in the Project area range from 4 to 15 percent.

1.6.6 Storage and Use of Fertilizers, Pesticides, and Other Products

Storage and use of fertilizers and pesticides will be conducted in accordance with the Best Practicable Treatment or Control (BPTC) measures of State Water Resources Control Board (SWRCB) Order WQ 2017-0023-DWQ, which include requirements to apply fertilizers and soil amendments at only the proper agronomic rates, and to store materials in a manner that is protected from rainfall and erosion.

Fertilizers, potting soils, compost, and other soils and soil amendments will be stored in fully enclosed, watertight, conex-type boxes. The materials will be stored in a manner so that they cannot enter or be transported into surface waters and such that nutrients or other pollutants cannot be leached into groundwater. See Sheet 2, Site Plan – Project Area for storage location.

1.6.7 Access and Parking

The Project area will be accessed from an existing driveway entrance off of State Highway 299 and Friday Ridge Road (a Category 4 roadway). At the County’s request, the Applicant retained a traffic consultant (PHA Transportation Consultants) to conduct a sight distance analysis for a section of Hwy 299 (Trinity Hwy) near Friday Ridge Road in Humboldt County. The purpose of the analysis was to identify the available sight distance from Hwy 299 to Friday Ridge Road in both east and west directions. The analysis reveals that sight distances along Hwy 299 in both directions would satisfy Caltrans’s recommended guidelines (see Appendix D, Sight Distance Analysis).

The Project will utilize an existing unpaved access road with an approximate 30’+ wide entrance off of Friday Ridge Road (western portion of parcel) that extends through the cultivation area to the parcel boundary. The access road is an existing driveway that services only the parcel. A designated parking area with space for at least six vehicles is located on the eastern portion of the parcel; however, only approximately 2-3 ranch vehicles will park onsite on a daily basis. Significant parking space and a large turnaround is located southeast of Friday Ridge Road on APN 524-091-006 owned by the applicant. During harvest, parking will occur on the parcel located southeast of Friday Ridge Road, with shuttle service to the Project area. See Sheet 2, Site Plan – Project Area.

1.6.8 Portable Toilets

Given that the Project involves only seasonal agricultural activities (cultivation) and a maximum of 16 employees, the site will utilize portable toilets to be located on the eastern portion of the Project area (near the designated parking area). See Sheet 2, Site Plan – Project Area.

1.6.9 Security Plan

The security measures located on the premises will include the following:

- **Lighting:** Outdoor lighting will be controlled by photocell switching, timers, infrared motion sensors and/or other state-of-the-art control systems to provide an appropriate light level at the exterior of the facilities to ensure that personnel and the video surveillance system can effectively monitor the space in and around the Project site. Exterior lighting will be directed so as to not pose a nuisance to neighboring properties.
- **Alarm:** A security/burglar alarm system will be installed and operated at all appropriate times within the Project site. When technologically feasible, this system will be monitored by a third-party remote central control station which will have the responsibility for automatically providing notification to law enforcement of any breach in the facility's security system.
- **Access Control:** All entrances to the Project site will be restricted by an access control system. 24-hour access to the Project site by emergency responders (e.g., Fire Department) will be provided via a Knox Box.
- **Fencing:** The Project site will be fenced with chain-link fencing.
- **Transport:** All cannabis, other than lab samples, will be transported to State licensed and/or locally permitted and licensed cannabis wholesale, distribution, processing or manufacturing companies by a State licensed and/or locally permitted licensed transport company.

The security measures will protect against theft and diversion not only from intruders, but also from staff members and visitors. This will be accomplished by limiting access to the Project site and by surveillance monitoring of personnel and visitors at all times when in close proximity to the product. Strict inventory control measures will also be employed to prevent and detect diversion.

1.6.10 Site-Specific Technical Reports

The following technical reports have been prepared in support of this application:

| | |
|------------|---|
| Appendix C | Hydrologic Connectivity Letter (Fisch Drilling, July 2018). |
| Appendix D | Sight Distance Analysis (PHA Transportation Consultants, December 2020) |

| | |
|------------|--|
| Appendix E | Prime Agricultural Soil Assessment (Dirty Business Soil Consulting & Analysis, October 2017) |
| Appendix F | Biological Resources Assessment (SHN, April 2020) |
| Appendix G | Wetland and Other Waters Delineation Report and Wetland and Other Waters Delineation Report: Alternate Site 2 (SHN, August 2017 and December 2017, respectively, addendum July 2019) |
| Appendix H | Cultural Resources Investigation Report (Archaeological Research and Supply Company, April 2020) |

1.7 Surrounding Land Uses and Setting

The Project site is situated between approximately 700 and 750 feet elevation above mean sea level on predominantly east-facing slopes approximately 275 feet above the main stem of the Trinity River. The parcel is located on a moderately sloped hillside (less than 15%) that is mostly grassy with some wooded areas. Dominant vegetation species in the Project area include California oatgrass (*Danthonia californica*), rattlesnake grass (*Briza maxima*), yellow star thistle (*Centaurea solstitialis*), Pacific madrone (*Arbutus menziesii*), coyote brush (*Baccharis pilularis*), Himalayan blackberry (*Rubus armeniacus*), common madia (*Madia elegans*), Oregon oak (*Quercus garryana* var. *garryana*), California black oak (*Quercus kelloggii*), and California bay (*Umbellularia californica*).

The region experiences a Mediterranean climate with warm, dry summers and cool, wet winters. The bulk of annual precipitation occurs in the fall, winter, and spring (December averages 11.8 inches of rain). Summers are typically dry (July averages 0.24 inches of rain). The total annual precipitation average is 55.56 inches of rain. Snow rarely occurs at this elevation.

1.7.1 Existing Land Uses

Existing and historic land uses on the Project site include: animal grazing and agricultural operations, water storage and transmission features, and a small caretaker's residence.

1.7.2 Surrounding Land Uses

The predominant land uses in the vicinity of the Project include additional land holdings of the Project applicant, State Highway 299 (east), scattered rural residential (further east of Highway 299), and open space/recreation associated with the Six Rivers National Forest and Trinity River (south and west).

The surrounding vicinity is sparsely populated with the closest offsite residence located approximately 1,000 feet east, separated by Hwy. 299, significant vegetation, and greater than 200 feet in elevation change. No schools, school bus stops, churches, or other places of religious

worship are known to exist within any applicable regulatory setback from the Project site. See Figure 4, Existing Conditions Site Map.

1.7.3 Geology

The Project site is located on an older fluvial terrace above the main stem of the Trinity River. The terrace is composed of Galice formation sediments and quaternary terrace gravels, which are Jurassic-aged marine sediments. The closest area of mapped ultramafic rock is located approximately five miles northwest of the Project in the Brannan Mountain vicinity (USGS, 2007). No ultramafic rocks and/or soils were encountered within the Project areas during site reconnaissance activities performed by SHN Engineers and Geologists' ("SHN"). See Figure 5, Site Geology Map.

1.7.4 Soils

General Soil Units

The Natural Resources Conservation Service ("NRCS") has mapped one primary soil unit on the Project site, as shown in Table 3, below (see also Figure 6, NRCS Soils Map).

TABLE 3
NRCS SOIL SUMMARY

| Map Unit Symbol | Map Unit Name | Typical Profile |
|------------------------|--|---|
| 261 | Holland-Goldridge families association, deep 5 to 35 percent slopes | H1 - 0 to 4 inches: very gravelly loam H2 - 4 to 30 inches: gravelly clay loam H3 - 30 to 43 inches: gravelly clay H4 - 43 to 47 inches: unweathered bedrock |

Prime Agricultural Soils

According to the Humboldt County Web GIS, 18.7 acres of prime agricultural soils are mapped on the Project site. In addition, a site-specific Prime Agricultural Soil Assessment conducted by Dirty Business Soil Consulting and Analysis identified an additional 5 acres of prime agricultural soils bringing the total quantity of prime agricultural soils on the parcel to 23.7. The approximately 3.3 acre cultivation area will not exceed 20% of the total prime agricultural soils on the parcel, satisfying the requirement outlined within CMMLUO 55.4.8.2.1.1. See Appendix E, Prime Agricultural Soil Assessment and Figure 7, Prime Agricultural Soils Map.

1.7.5 Seismicity

The Project is not located within an Alquist-Priolo Earthquake Fault Zone. There are no active faults mapped within the Project and it is not within an Earthquake Fault Zone as mapped by the California Geological Survey.

1.7.6 Biological Resources

SHN conducted a Biological Resources Assessment consisting of literature reviews, coordination with the California Department of Fish & Wildlife (“CDFW”), and field observations and studies in order to identify potential sensitive natural resources that may occur within the Project areas. Key findings from SHN’s assessment are summarized below:

- **Special Status Species:** A review of available literature indicates that 23 special status plant species and 15 special status animal species have a moderate or higher potential to occur within the Project area; however, site investigations were conducted by SHN during appropriate seasons for detection, and no special status species were observed.
- **Designated Critical Habitat:** The Project area does not contain designated critical habitat for any listed species. The nearest designated critical habitat is for the northern spotted owl (*Strix occidentalis caurina*); approximately 1 mile to the south, 1.1 miles to the northwest, and 1.2 miles to the northeast. Additionally, critical habitat for the marbled murrelet (*Brachyramphus marmoratus*) is mapped 2.3 miles southwest.
- **Vegetation Alliances:** The following special status vegetation alliances were observed within the Project area: *Quercus garryana* (Oregon white oak woodland) Alliance (G4/S3), and *Danthonia californica* (California oat grass prairie) Provisional Alliance (G4/S3). These special status vegetation alliances will be avoided and not impacted by Project activities.
- **Wetland and Riparian Habitats:** The wetland delineation did not identify any three-parameter wetlands within the Project area. Two drainages containing Ordinary High Water Mark (OHWM) indicators were mapped on the Project site. The OHWM areas are tributaries to the main stem of the Trinity River. These tributaries are seasonally flowing watercourses and do not contain water during the summer months. The OHWM features will be avoided with a 50-foot setback per SWRCB and County requirements.
- **Nesting Bird Habitat:** Locations with a shrub or tree canopy layer within the Project area may provide suitable nesting habitat for a diverse assemblage of migratory birds. Additionally, some species, such as a western meadowlark (*Sturnella neglecta*), may nest in tall grasses or wetland areas.
- **Wildlife Movement Corridors:** Watercourses and their associated riparian zones are likely the primary wildlife movement corridors due to their complex structure, providing cover and hiding places from predators.

See Appendix F, Biological Resources Assessment, and Appendix G, Wetland and Other Waters Delineation Reports.

1.7.7 Surface Waters and Drainage

The Project site’s hydrology has been historically altered by the stormwater drainage from Friday Ridge Road (to the west) being diverted onto the hillslope. A portion of the Friday Ridge Road

stormwater is conveyed through an in-board roadside ditch diverting water east under the road through a culvert into the Project area. Other than the cut associated with Friday Ridge Road and the abandoned road below it, the Project site's geomorphology is relatively undisturbed.

A Project-specific wetland delineation conducted by SHN did not identify any wetlands within the Project area, but did identify two drainages containing ordinary high-water mark ("OHWM") indicators. The first is a natural intermittent drainageway that drains through the northeast corner of the Project area. The second originates at the southeast corner of the Project area, originating from a drainage ditch paralleling the residential access road. The OHWM features are tributaries to the main stem of the Trinity River. These tributaries are seasonally flowing watercourses and do not contain water during the summer months. The Project will observe a 50-foot setback from the top of bank or edge of riparian dripline (whichever is greater) of these ephemeral watercourses, consistent with the requirements of WQ 2017-0023-DWQ and the County's Streamside Management Areas and Wetland Ordinance. See Appendix G, Wetland and Other Waters Delineation Reports.

1.8 Requested Entitlements

1.8.1 County Entitlements

Organic Liberty anticipates needing to obtain the following Humboldt County permits/authorizations for the Project:

- Approval of a **Use Permit** to allow approximately 3.3 acres of outdoor cultivation. The portion of the parcel on which the Project area is located is zoned Agriculture General (AG) (consistent with CMMLUO 55.4.8.2.1.1).
- Approval of a **Parcel Merger/Lot Line Adjustment** involving all or portions of current APNs 524-074-001, 524-073-003, 524-091-002, 524-091-005, 524-091-006, 524-101-008, and 524-101-015. The resulting parcel will total 400 acres in size.

1.8.2 Other Permits, Licenses, and Approvals

Organic Liberty anticipates needing to obtain the following additional permits, licenses and approvals for the Project:

- Approval of **Licenses** for outdoor cultivation issued by the State of California in accordance with the Medicinal and Adult-Use Cannabis Regulation and Safety Act ("MAUCRSA").
- Enrollment and coverage under the State Water Resources Control Board (SWRCB) General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (**Order WQ 2017-0023-DWQ**).

2.0 CEQA EVALUATION

2.1 Environmental Factors Potentially Affected

The proposed Project will not have a significant effect on the environment, as indicated by the checklist on the following pages.

| | | |
|---|--|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology and Soils | <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards and Hazardous Materials |
| <input checked="" type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Utilities and Service Systems | <input checked="" type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

2.2 Determination

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



June 16, 2020

Signature

Date

Rodney Yandell

Humboldt County Planning and Building Department

Printed Name

For

2.3 Evaluation of Environmental Impacts

The following checklist is taken from the Environmental Checklist Form presented in Appendix G of the CEQA Guidelines. The checklist is used to describe the impacts of the proposed Project and identify project-specific mitigation measures, as appropriate: For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant with Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The Project would not have any impact.

I. AESTHETICS.

Except as provided in Public Resources Code Section 21099, would the project:

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|-------------------------------------|-------------------------------------|
| a. Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a. 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. In addition, some scenic vistas are officially designated by public agencies, or informally designated by tourist guides. A substantial adverse effect to such a scenic vista is one that degrades the view from a designated view spot. No governmentally designated scenic vista or specific scenic view spot has been identified within the vicinity of the Project.

While there are no designated scenic vistas in the vicinity of the Project, the Project site is located approximately 3,000 feet from the confluence of the Trinity River's main stem and the South Fork of the Trinity River. The sections of these rivers located adjacent to the Project parcels have been designated "recreational" (main stem) and "scenic" (south fork) under the 1968 Wild and Scenic Rivers Act. In addition, there are recreational areas of the Six Rivers National Forest (e.g., Sandy Bar) located on the South Fork.

Although recreational areas of the Six Rivers National Forest and Trinity River are located within approximately ½ mile, the Project site will not be visible as it is located at a significant elevation above these areas and is separated by dense, mature vegetation.

Therefore, the Project will have ***no impact*** on a scenic vista.

- b. According to the California Scenic Highway Mapping System, there are no designated state scenic highways in Humboldt County. The nearest eligible scenic highways (as listed in Sections 263.1 through 263.8 of the California Streets and Highways Code) are Route 96 from Route 299 at Willow Creek north to Siskiyou County, and Route 299 from Arcata to Willow Creek. Both eligible scenic highways are located greater than 4 miles from the Project site. Therefore, the Project would result in ***no impact*** to scenic resources within a state scenic highway.
- c. The Project parcels are a component of a large private land holding (500 acres+) of the Project applicant. The surrounding vicinity is sparsely populated with the closest offsite residence located approximately 1,000 feet east, separated by Hwy. 299, significant vegetation, and greater than 200 feet in elevation change. The predominant land uses in the vicinity of the Project include additional land holdings of the Project applicant, State Highway 299 (east), scattered rural residential (further east of Highway 299), and open space/recreation associated with the Six Rivers National Forest and Trinity River (south and west).

The Project proposes no buildings, but only plantings (cultivation) that will be consistent with the existing visual character of the site. In addition to plantings, security fencing consisting of chain link (or equivalent) 6-feet or less in height will surround the Project area. Portions of the Project site are visible from Friday Ridge Road along the western boundary near the entrance to the Site; however, the fencing in this area will only be visible for a very limited stretch of Friday Ridge Road adjacent to the site (estimated at less than a 500-foot segment). In addition, Friday Ridge Road has limited traffic and thus a limited number of motorists viewing the Project site from the roadway. The Project site will not be visible from recreational areas of the Six Rivers National Forest or Trinity River, as the Project is located at a significant elevation above these areas and is separated by dense, mature vegetation.

Therefore, the Project would not substantially degrade the existing visual character or quality of the site and its surroundings, and would result in a ***less than significant impact***.

- d. Lighting at the site will be limited to perimeter lighting installed for security purposes. There will also be outdoor lighting in the parking area and at the entrance gate. All new outdoor lighting will be the minimum lumens required for security purposes, directed downward, and shielded to prevent lighting spillover onto adjacent properties. This is particularly important due to the fact that cannabis plants will be growing open air on the site. If lighting spillover occurs from the outdoor lighting it could alter the growing cycle of the plants and affect production levels. As such, the applicant will ensure that outdoor lighting is contained within the specific areas it is intended to illuminate. No new sources of glare that would impact surrounding land uses, drivers on Friday Ridge Road, or Route 299 are proposed.

Therefore, the Project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area and would result in a ***less than significant impact***.

II. AGRICULTURE AND FORESTRY RESOURCES.

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepare the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non- agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d. Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a. Humboldt County is not included in the Farmland Mapping and Monitoring Program (California Department of Conservation, 2019). According to the Humboldt County Web GIS, 18.7 acres of prime agricultural soils are mapped on Project site. In addition, a site-specific Prime Agricultural Soil Assessment identified an additional 5 acres of prime agricultural soils bringing the total quantity of prime agricultural soils on the site to 23.7.

All of the proposed uses (outdoor cultivation, accessory access roads, parking, and storage) that will occur on the prime agricultural soils are agricultural uses or agricultural related uses. Therefore, the Project would not convert any existing Farmland to non-agricultural uses, and ***no impact*** would occur.

- b. The Project area is zoned Agriculture General (AG). Under the County Zoning Regulations, Title III, Division 1, Chapter 4, principal permitted uses in the AG zone include general agriculture with accessory agricultural uses and structures. Outdoor cultivation is allowed on AG zoned parcels with a Use Permit under the CMMLUO. The approximately 3.3-acre cultivation area will not exceed 20% of the total prime agricultural soils on the parcel, satisfying the requirement outlined within CMMLUO 55.4.8.2.1.1.

According to the County Web GIS mapping, there is no Williamson Act contract applicable to the Project site.

The Project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and therefore, ***no impact*** would occur relative to existing zoning for agricultural use.

- c,d. The Project site is not identified as forest land (as defined in PRC section 12220[g]) or timberland (as defined by PRC section 4526), and is not zoned Timberland Production (as defined by Government Code section 51104[g]). Further, no trees will be removed as a result of Project activities. Therefore, the Project would not result in the conversion of forest land and would not conflict with forest land, timberland, or Timberland Production zoning, and ***no impact*** would occur.
- e. The Project would not produce significant growth in the area that would result in the conversion of farmland or forest land. Growth inducing impacts are generally caused by projects that have an effect on economic growth, population growth, or land development. The Project is anticipated to require a maximum of 16 employees during the peak harvest and drying season. It is anticipated that these employees (or the majority of them) would be from within Humboldt County. Therefore, the Project is not anticipated to result in the need for new residential dwelling units, and thus, would not indirectly convert farmland to non-agricultural land or forest land to non-forest land. ***No impact*** would occur.

III. AIR QUALITY.

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:

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|-------------------------------------|--------------------------|
| a. Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a,b. The North Coast Unified Air Quality Management District (NCUAQMD) has jurisdiction over air quality issues in the County and administers air quality regulations developed at the federal, state, and local levels. It is also responsible for implementing strategies for air quality improvement and recommending mitigation measures for new development.

The U.S. Environmental Protection Agency has established National Ambient Air Quality Standards (AAQS) for carbon monoxide, ozone, particulate matter of less than 10 microns in diameter (PM10), particulate matter less than 2.5 microns in diameter, nitrogen dioxide, sulfur dioxide, and lead. These pollutants are referred to as criteria pollutants because numerical criteria have been established for each pollutant, which define acceptable levels of exposure. The NCUAQMD is listed as in attainment or unclassified for all the federal and State AAQS with the exception of the State 24-hour standard for PM10.

As described on the NCUAQMD website, fugitive emissions as a result of vehicular traffic on unpaved roadways is the largest source of particulate matter emissions within the NCUAQMD. Its control and mitigation plays a key role in the NCUAQMD's attainment strategy.

The Project has no potential to produce significant criteria pollutants other than PM10 emissions (via fugitive dust) from vehicle/truck traffic on the approximately 500' section of unpaved road at the site. Using the NCUAQMD's published emissions calculator, an estimate of the Project's hourly PM10 emissions generated from road dust during the harvest period is provided below:

| Table II-B: PM10 Road Emissions [AP-42, Fifth Edition, Volume I, CHAPTER 13, Miscellaneous Sources, 13.2.2 Unpaved Roads (Supplement E)] | | | | | | | | |
|--|--|-----------------------------|---|--|------------------------------|---|--|---|
| Variable → | T | L | VMT | W | E* | UC | EF | PTE |
| Road Segment | Average Number of Round Trips per Hour | One way road length (miles) | Vehicle Mile Traveled per Hour (miles/hr) | Average Vehicle Weight (Loaded truck + Empty truck) / 2 (tons) | PM10 Emission Rate (lb/VMT) | PM10 Emission Rate Uncontrolled (lb/hr) | RoadControl Efficiency Factor (Table II-C) | Hourly PM10 PTE Controlled (lb/hr) |
| PM10 | 3 | 0.1 | 0.6 | 5 | 1.53 | 0.92 | 0.40 | 0.37 |
| | | | $2 \times T \times L = \text{VMT}$ | | $0.805 \times W^{0.4} = E^*$ | $\text{VMT} \times E = \text{UC}$ | | $\text{UC} \times \text{EF} = \text{PTE}$ |
| PM10 | | | | | | | | |
| | | | $2 \times T \times L = \text{VMT}$ | | $0.805 \times W^{0.4} = E^*$ | $\text{VMT} \times E = \text{UC}$ | | $\text{UC} \times \text{EF} = \text{PTE}$ |
| PM10 | | | | | | | | |
| | | | $2 \times T \times L = \text{VMT}$ | | $0.805 \times W^{0.4} = E^*$ | $\text{VMT} \times E = \text{UC}$ | | $\text{UC} \times \text{EF} = \text{PTE}$ |
| | | | | | | 6.79 | ← Sum → | 1.36 |

*E = $k \times (s/12)^a \times (W/3)^b / (M_{dry}/0.2)^c$ = lbs/VMT, where k, a, b, and c are empirical constants, E = size-specific emission factor (lb/VMT), s = surface material silt content (%), W = mean vehicle weight (tons), M = surface material moisture content (%), M_{dry} = 0.2%, AP-42, Section 13.2.2 (9/98) Equations 1 & 2

| Table II-C: Unpaved Roads Control Methods and Control Factors | | | | | | |
|---|--|-------------------|------------------------|------------------------------------|--|-------------------|
| Control Method | | Efficiency (Eff.) | Efficiency Factor (EF) | Control Method | | Efficiency (Eff.) |
| Base Course <u>or</u> Watering | | 60% | 0.40 | Base Course <u>and</u> Surfactants | | 90% |
| Base Course <u>and</u> Watering x | | 80% | 0.20 | Paved <u>and</u> Swept | | 95% |
| | | | | | | 0.05 |

Assumptions:

1. 16 employee round trips per day; 4 transport trips per day during harvest; 4 additional misc. service trips per day; 24 trips per day total
2. ~500' unpaved access road
3. 10,000 pound transport vehicle

The NCUAQMD has not adopted formal thresholds of significance for fugitive dust related particulate matter emissions¹; however, the NCUAQMD has adopted dust control regulations in Rule 104, Section D.2. Pursuant to Rule 104, the handling, transporting, or open storage of materials in a manner which allows or may allow unnecessary amounts of particulate matter to become airborne is not permitted. Rule 104 also requires that reasonable precautions be taken to prevent particulate matter from becoming airborne, including conducting agricultural practices in such a manner as to minimize the creation of airborne dust.

Although the Project's overall scale and intensity with respect to activities that may result in air quality impacts is low, the following mitigation measure (consistent with NCUAQMD Rule 104) is recommended to reduce PM10 emissions:

Mitigation Measure AQ-1: Speed Limits

All vehicle speeds on unpaved areas shall be limited to 15 miles per hour.

Level of Significance After Mitigation:

Implementation of Mitigation Measure AQ-1 would reduce potential impacts associated with implementation of an air quality plan, air quality standard, or non-attainment pollutant to ***less than significant***.

- c. A sensitive receptor is a person who is particularly susceptible to health effects due to exposure to an air contaminant. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. With the exception of scattered rural residential, there are no sensitive land uses within the vicinity. The surrounding vicinity is sparsely populated with the closest offsite residence located approximately 1,000 feet east, separated by Hwy. 299, significant vegetation, and greater than 200 feet in elevation change. As discussed in the air quality impact analysis section above, the Project would not produce significant quantities of criteria pollutants during operation. As part of the proposed cultivation, State of California approved agricultural chemicals (pesticides/fungicides) would be applied to the cannabis plants to control pests and mold. The Project would apply the pesticides/fungicides at agronomic rates according to manufacturer's specifications. In addition, according to the California Department of Pesticide Regulation, pesticide application is generally advised a minimum of 300 feet from sensitive receptors (e.g. residences). The surrounding vicinity is sparsely populated with the closest offsite residence located approximately 1,000 feet east, separated by Hwy. 299, significant vegetation, and greater than 200 feet in elevation change.

¹ The NCUAQMD does identify emissions of 80 pounds per day of PM10 as a significance threshold for application of Best Available Control Technology to a stationary source; the Project's estimated emissions are <5% of this threshold.

Given the limited quantities of chemicals proposed for use, and distance that pesticide/chemical use will occur from the nearest offsite residence, the Project would not expose sensitive receptors to substantial pollutant concentrations and a ***less than significant impact*** would occur.

- d. Cannabis plants and products emit volatile compounds and many are known to emit a distinctive odor that may be detectable beyond the boundaries of licensed cannabis premises. The determination of odors as offensive or a “nuisance,” particularly cannabis, is subjective and based on a number of factors. For example, the Oregon judicial system found that cannabis odors can be offensive to some people and enjoyable to others (Los Angeles Times 2015). The Oregon judicial system also found that the perception of whether a cannabis odor was offensive was linked to the intensity, duration, and frequency of the odor and the location at which the odor occurred (i.e., outdoors versus at a residence) (Los Angeles Times 2015). Impacts from cannabis odors identified by have been reported to include headaches, eye and throat irritation, nausea, discomfort being outside (e.g., exercising, gardening, socializing), mental stress, and lack of desire to entertain due to strong odors (Santa Barbara County 2017).

In general, odor regulations fall into two categories: (1) they are covered through a general nuisance regulation or (2) they are covered under a separate air district rule. California Health and Safety Code section 41700 prohibits discharge of air contaminants, including odors, that cause nuisance or annoyance to the public; however, odors related to agricultural operations are exempt under Health and Safety Code section 41704. Similarly, the growing and harvesting of cannabis crops is considered an agricultural operation, and therefore exempt from NCUAQMD Rule 104(1.1).

The Project has the potential to emit odors during cultivation activities; however, the number of nearby receptors is limited. The Project parcels are a component of a large private land holding (500 acres+) of the Project applicant. The surrounding vicinity is sparsely populated with the closest offsite residence located approximately 1,000 feet east, separated by Hwy. 299, significant vegetation, and greater than 200 feet in elevation change. The predominant land uses in the vicinity of the Project include additional land holdings of the Project applicant, State Highway 299 (east), scattered rural residential (further east of Highway 299), and open space/recreation associated with the Six Rivers National Forest and Trinity River (south and west).

Fewer than 5 residential homes are located within ½ mile of the Project site, with the majority of them separated by Hwy. 299 and the Trinity River. Some recreational areas of the Six Rivers National Forest and Trinity River are also located within ½ mile of the Project site, but are separated by mature vegetation and a significant elevation change.

Given the limited number of potential receptors, separation distance, and natural terrain, the Project is not anticipated to create objectionable odors affecting a substantial number of people. As a result, a ***less than significant*** is anticipated to occur.

| IV. BIOLOGICAL RESOURCES. | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|----------------------------------|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| <i>Would the project:</i> | | | | | |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. | Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f. | Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a. SHN conducted a Biological Resources Assessment to assess the potential presence of any candidate, sensitive, or special status species within the Project area.

Plant Species

Based on a review for special status plant species, 70 special status plant species have been reported from the region consisting of the study area's quadrangle and surrounding quadrangles. Of the special status plant species reported in the region, 47 plant species are considered to have a low potential to occur within the study area and 23 species have a moderate or higher potential to occur within the study area. Species that have a moderate or higher potential to occur within the study area are described below:

- Slender silver moss (*Anomobryum julaceum*) is a moss in the Bryaceae family. It is neither State nor federally listed, but has a CRPR of 4.2 and heritage ranks of G5/S2. Reported habitats include broadleaved upland forest, lower montane coniferous forest, and north coast coniferous forest. Grows on damp rocks and soil; acidic substrates; usually seen on roadcuts. Elevation range is 100 to 1,000 meters above sea level. Within the 9-quad search, there are no Rarefind Occurrences.
- Bald Mountain milk-vetch (*Astragalus umbraticus*) is a perennial herb in the Fabaceae family. It is neither State nor federally listed, but has a CRPR of 2B.3 and heritage ranks of G4/S2. Reported habitats include cismontane woodland and lower montane coniferous forest. Occurs in dry openings in oak and pine woodlands; sometimes on roadsides. Elevation range is 210 to 1,220 meters above sea level. Blooms May through August. Within the 9-quad search, there are two Rarefind Occurrences; with the closest being miles from the study area; and the most recent observation date within the 9 quads for this taxon was 1983.
- Northern meadow sedge (*Carex praticola*) is a perennial herb in the Cyperaceae family. It is neither State nor federally listed, but has a CRPR of 2B.2 and heritage ranks of G5/S2. Reported habitats include meadows and seeps ranging in elevation from 15 to 3,200 meters above sea level. Blooms May through July. Within the 9-quad search, there is one Rarefind Occurrence; with the closest being 6.6 miles from the study area; and the most recent observation date within the 9 quads for this taxon was 1982.
- Serpentine collomia (*Collomia diversifolia*) is an annual herb in the Polemoniaceae family. It is neither State nor federally listed, but has a CRPR of 4.3 and heritage ranks of G4/S4. Reported habitats include chaparral and cismontane woodlands; often on ultramafic soils or, rock/gravelly sites. It ranges in elevation from 300 to 600 meters above sea level. Blooms May through June. Within the 9-quad search, there are no Rarefind Occurrences.

- Mountain lady's-slipper (*Cypripedium montanum*) is a perennial rhizomatous herb in the Orchidaceae family. It is neither State nor federally listed, but has a CRPR of 4.2 and heritage ranks of G4/S4. Reported habitats include lower montane coniferous forest, broadleaved upland forest, cismontane woodland, and north coast coniferous forest. It is associated with dry, undisturbed slopes ranging in elevation from 185 to 2,225 meters above sea level. Blooms March through August. Within the 9-quad search, there are no Rarefind Occurrences.
- Pacific gilia (*Gilia capitata* ssp. *pacifica*) is an annual herb in the Polemoniaceae family. It is neither State nor federally listed, but has a CRPR of 1B.2 and heritage ranks of G5T3/S2. Reported habitats include coastal bluff scrub, chaparral, coastal prairie, and valley and foothill grassland. Elevation range is 5 to 1,345 meters above sea level. Blooms April through August. Within the 9-quad search, there are no Rarefind Occurrences.
- Tracy's tarplant (*Hemizonia congesta* ssp. *tracyi*) is an annual herb in the Asteraceae family. It is neither State nor federally listed, but has a CRPR of 4.3 and heritage ranks of G5T4/S4. Reported habitats include coastal prairie, north coast coniferous forest, and lower montane coniferous forest. It is associated with openings and sometimes occurs on serpentine. It ranges in elevation from 120 to 1,200 meters above sea level. Blooms May through October. Within the 9-quad search, there are no Rarefind Occurrences.
- California globe mallow (*Iliamna latibracteata*) is a perennial herb in the Malvaceae family. It is neither State nor federally listed, but has a CRPR of 1B.2 and heritage ranks of G2G3/S2. Reported habitats include north coast coniferous forest, chaparral, lower montane coniferous forest, and riparian scrub (streambanks). It is associated with Seepage areas in silty/clay/loam soils. It ranges in elevation from 60 to 1,655 meters above sea level. Blooms June through August. Within the 9-quad search, there are 13 Rarefind Occurrences, with the closest being 4.1 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2013.
- Orleans iris (*Iris tenax* ssp. *klamathensis*) is a perennial rhizomatous herb in the Iridaceae family. It is neither State nor federally listed, but has a CRPR of 4.3 and heritage ranks of G4G5T4/S4. Reported habitats include lower montane coniferous forests in grassy areas along roadsides and on steep rocky hillsides. It is often associated with disturbed areas. It ranges in elevation from 100 to 1,400 meters above sea level. Blooms April through May. Within the 9-quad search, there are no Rarefind Occurrences.
- Small groundcone (*Kopsiopsis hookeri*) is a parasitic perennial rhizomatous herb in the Orobanchaceae family. It is neither State nor federally listed, but has a CRPR of 2B.3 and heritage ranks of G4/S1S2. Reported habitats include north coast coniferous forests in open woods and shrubby places. It is generally parasitic on salal (*Gaultheria shallon*). It ranges in elevation from 120 to 1,435 meters above

sea level. Blooms April through August. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 6.1 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1978.

- Bristly leptosiphon (*Leptosiphon acicularis*) is an annual herb in the Polemoniaceae family. It is neither State nor federally listed, but has a CRPR of 4.2 and heritage ranks of G3/S3. Reported habitats include chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland. It is associated with grassy areas and woodlands. It ranges in elevation from 55 to 1,500 meters above sea level. Blooms April through July. Within the 9-quad search, there are no Rarefind Occurrences.
- Vollmer's lily (*Lilium pardalinum* ssp. *vollmeri*) is a perennial bulbiferous herb in the Liliaceae family. It is neither State nor federally listed, but has a CRPR of 4.3 and heritage ranks of G5T4/S3. Reported habitats include meadows, seeps, bogs, and fens. It ranges in elevation from 30 to 1,680 meters above sea level. Blooms June through August. Within the 9-quad search, there are no Rarefind Occurrences.
- Purple-flowered Washington lily (*Lilium washingtonianum* ssp. *purpurascens*) is a perennial bulbiferous herb in the Liliaceae family. It is neither State nor federally listed, but has a CRPR of 4.3 and heritage ranks of G4T4/S4. Reported habitats include chaparral, lower montane coniferous forest, and upper montane coniferous forest. Often found on serpentine dry hillsides. It ranges in elevation from 70 to 2,750 meters above sea level. Blooms June through August. Within the 9-quad search, there are no Rarefind Occurrences.
- Heart-leaved twayblade (*Listera cordata*) is a perennial herb in the Orchidaceae family. It is neither State nor federally listed, but has a CRPR of 4.2 and heritage ranks of G5/S4. Reported habitats include wetland, bogs, and fens in lower montane coniferous forest and north coast coniferous forest. It ranges in elevation from 5 to 1,370 meters above sea level. Blooms February through July. Within the 9-quad search, there are no Rarefind Occurrences.
- Elongate copper moss (*Mielichhoferia elongata*) is a moss in the Mielichhoferiaceae family. It is neither State nor federally listed, but has a CRPR of 4.3 and heritage ranks of G5/S4. Reported habitats include cismontane woodlands, often growing on acidic, metamorphic rock or substrates. It ranges in elevation from 500 to 1,300 meters above sea level. Within the 9-quad search, there are no Rarefind Occurrences.
- Howell's montia (*Montia howellii*) is an annual herb in the Montiaceae family. It is neither State nor federally listed, but has a CRPR of 2B.2 and heritage ranks of G3G4/S2. Reported habitats include meadows and seeps in north coast coniferous forests. It ranges in elevation from 10 to 1,185 meters above sea level. Blooms February through May. Within the 9-quad search, there are five Rarefind

Occurrences, with the closest being within 1.0 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2017.

- White-flowered rein orchid (*Piperia candida*) is a perennial herb in the Orchidaceae family. It is neither State nor federally listed, but has a CRPR of 1B.2 and heritage ranks of G3/S3. Reported habitats include north coast coniferous forest, lower montane coniferous forest, and broadleafed upland forest. It ranges in elevation from 45 to 1,615 meters above sea level. Blooms March through September. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 0.3 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2005.
- California pinefoot (*Pityopus californicus*) is an achlorophyllous perennial herb in the Ericaceae family. It is neither State nor federally listed, but has a CRPR of 4.2 and heritage ranks of G4G5/S4. Reported habitats include broadleafed upland forest, upper montane coniferous forest, north coast coniferous forest, and lower montane coniferous forest. It ranges in elevation from 15 to 2,225 meters above sea level. Blooms March through August. Within the 9-quad search, there are no Rarefind Occurrences.
- Nodding semaphore grass (*Pleuropogon refractus*) is a perennial rhizomatous herb in the Poaceae family. It is neither State nor federally listed, but has a CRPR of 4.2 and heritage ranks of G4/S4. Reported habitats include meadows and seeps, lower montane coniferous forest, north coast coniferous forest, and riparian forest. It ranges in elevation from 0 to 1,600 meters above sea level. Blooms March through August. Within the 9-quad search, there are no Rarefind Occurrences.
- Siskiyou checkerbloom (*Sidalcea malviflora* ssp. *patula*) is a perennial rhizomatous herb in the Malvaceae family. It is neither State nor federally listed, but has a CRPR of 1B.2 and heritage ranks of G5T2/S2. Reported habitats include coastal bluff scrub, coastal prairie, and north coast coniferous forest. It ranges in elevation from 5 to 1,255 meters above sea level. Blooms May through August. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 6.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1979.
- Coast checkerbloom (*Sidalcea oregana* ssp. *eximia*) is a perennial herb in the Malvaceae family. It is neither State nor federally listed, but has a CRPR of 1B.2 and heritage ranks of G5T1/S1. Reported habitats include meadows and seeps, north coast coniferous forest, and lower montane coniferous forest. It ranges in elevation from 5 to 1,805 meters above sea level. Blooms June through August. Within the 9-quad search, there are 4 Rarefind Occurrences; with the closest being 7.6 miles from the study area; and the most recent observation date within the 9 quads for this taxon was 2010.
- Obtuse starwort (*Stellaria obtusa*) is a perennial rhizomatous herb in the Caryophyllaceae family. It is neither State nor federally listed, but has a CRPR of

4.3 and heritage ranks of G5/S4. Reported habitats include upper montane coniferous forest, lower montane coniferous forest, and riparian woodland. It is also associated with streams or seeps in conifer forests. It ranges in elevation from 150 to 2,135 meters above sea level. Blooms May through October. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 13.8 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1935.

- Trinity River jewelflower (*Streptanthus ob lanceolatus*) is a perennial herb in the Brassicaceae family. It is neither State nor federally listed, but has a CRPR of 1B.2 and heritage ranks of G1/S1. Reported habitats include cismontane woodlands. It ranges in elevation from 20 to 420 meters above sea level. Blooms April through June. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 6.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2009.

Animal Species

Based on a review of special status animal species, 57 special status animal species have been reported with the potential to occur in the Project region. Of the special status animal species potentially occurring in the region, 42 animal species are considered to have a no or low potential to occur at the Project site and 15 species have a moderate or higher potential. Species with a moderate or high potential for occurrence within the study area are described below:

- The Cooper's hawk (*Accipiter cooperii*) is a bird in the Accipitridae family. It is not listed under either FESA or CESA but is on a CDFW “watch list” and has heritage ranks of G5/S4. Reported habitats include cismontane woodland, riparian forest, riparian woodland, and upper montane coniferous forest. Nest sites are mainly in riparian growths of deciduous trees in canyon bottoms on river flood-plains. Foraging habitat does exist for this species within the study area, though it was not detected during the 2020 site visit.
- The northern goshawk (*Accipiter gentilis*) is a bird in the Accipitridae family. It is not listed under either FESA or CESA but is considered a species of special concern and has heritage ranks of G5/S3. Reported habitats include north coast coniferous forest, subalpine coniferous forest, and upper montane coniferous forest. It usually nests on north slopes, near water. Foraging habitat does exist for this species within the study area, though it was not detected during the 2020 site visit.
- The golden eagle (*Aquila chrysaetos*) is a bird in the Accipitridae family. It is not listed under either FESA or CESA but is fully protected federally. It has heritage ranks of G1/S1. Reported habitats include lower and upper montane coniferous forest, rolling foothills, grasslands, and mountain areas. Some marginal foraging

habitat exists within the study area for this species, though it was not detected during the 2020 site visit.

- The American peregrine falcon (*Falco peregrinus anatum*) is a bird in the Falconidae family. It is Delisted under both FESA and CESA, though it remains fully protected federally. It has heritage ranks of G4T4/S3S4. Reported habitats include wetlands, lakes, rivers, and dunes. Nests are most often on cliffs or other rock faces, and sometimes on buildings. Foraging habitat exists for this species within the study area for this species, though it was not detected during the 2020 site visit.
- The bald eagle (*Haliaeetus leucocephalus*) is a bird in the Accipitridae family. It is state endangered and a fully protected species, but it is not listed under FESA. It has heritage ranks of G5/S3. Reported habitats include lower montane coniferous forest, old growth, ocean shore, lake margins, and rivers (for both nesting and wintering). Most nests are within 1 mile of water. The study area may provide temporary roosting habitat for this species, though it was not detected during the 2020 site visit.
- The osprey (*Pandion haliaetus*) is a bird in the Pandionidae family. It is not listed under either FESA or CESA but is on the Watch List. It has heritage ranks of G5/S4. Reported habitats include riparian forest, ocean shores, bays, lakes, and rivers. Large stick nests are built on top of broken trees and snags within 15 miles of fish-bearing waters. Potential nesting habitat exists within or adjacent to the study area for this species, though it was not detected during the 2020 site visit.
- The white-headed woodpecker (*Picoides albolarvatus*) is a bird in the Picidae family. It is not listed under either FESA or CESA, although it is listed on the California Special Animals list. It has heritage ranks of G1/S1. Reported habitats include upper and lower montane coniferous forest and prefers semi-open areas. This species nests in cavities of large trees or snags. Habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.
- The flammulated owl (*Psilosops flammeolus*) is a bird in the Strigidae family. It is not listed under either FESA or CESA, although it is listed on the California Special Animals list. It has heritage ranks of G3/S3. Reported habitats include lower montane and subalpine coniferous forest, with the breeding range closely related to ponderosa and Jeffery pines. Habitat does exist within the study are for this species, though it was not detected during the 2020 site visit.
- The red-breasted sapsucker (*Sphyrapicus ruber*) is a bird in the Picidae family. It is not listed under either FESA or CESA and has heritage ranks of G5/S4. It breeds in mixed coniferous and mixed deciduousconiferous forests and woodlands. It requires standing snags or hollow trees for a nesting cavity. Foraging habitat and potential nesting habitat exists within the study area for this species, though it was not detected during the 2020 site visit.

- The northern spotted owl (*Strix occidentalis caurina*) is a bird in the Strigidae family. It is listed as threatened under both FESA and CESA, is considered a species of special concern by CDFW, and has heritage ranks of G3T3/S2S3. Reported habitats include north coast coniferous forests and old-growth forests or mixed stands of old-growth and mature trees. It is occasionally found in younger forests with patches of big trees. It prefers high, multistory canopy dominated by big trees and/or many trees with cavities or broken tops, woody debris, and space under the canopy. Within the 9-quad search, there are many reported occurrences, with the closest being approximately 0.67 miles from the study area (known Activity Center HUM0542). The study area contains marginal foraging habitat within woodland and forested areas or may provide a movement corridor between suitable habitats. Although suitable habitat may exist within the project area for this species, it was not detected by incidental observations.
- The western bumble bee (*Bombus occidentalis*) is an insect in the Apidae family. It is not listed under either FESA or CESA and has heritage ranks of G2G3/S1. This species was once common and widespread but has declined precipitously from central California to southern British Columbia, perhaps from disease. Rangewide, example food plants of *Bombus occidentalis* include *Ceanothus*, *Centaurea*, *Chrysothamnus*, *Cirsium*, *Geranium*, *Grindellia*, *Lupinus*, *Melilotus*, *Monardella*, *Rubus*, *Solidago*, and *Trifolium*. Suitable habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.
- The long-eared myotis (*Myotis evotis*) is a mammal in the Vespertilionidae family. It is not listed under either FESA or CESA and has heritage ranks of G5/S3. Reported habitats include brush, woodlands, and forest habitats from sea level to about 9,000 feet. It prefers coniferous woodlands and forests. Nursery colonies occur in buildings, crevices, spaces under bark, and snags. Caves are used primarily as night roosts. Suitable habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.
- Yuma myotis (*Myotis yumanensis*) is a mammal in the Vespertilionidae family. It is not listed under either FESA or CESA and has heritage ranks of G5/S4. Reported habitats include lower montane coniferous forest, riparian forest, riparian woodland, and upper montane coniferous forests. Optimal habitats are open forests and woodlands with sources of water over which to feed. Its distribution is closely tied to bodies of water. Maternity colonies occur in caves, mines, buildings, or crevices. Suitable habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.
- The fisher (*Pekania pennanti*) is a mammal in the Mustelidae family. It is proposed as threatened under the FESA, candidate threatened under CESA, and is considered a species of special concern by CDFW. It has heritage ranks of G5T2T3Q/S2S3. Reported habitats include north coast coniferous forest, old growth, and riparian forest. It occurs in intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure.

It uses cavities, snags, logs, and rocky areas for cover and denning and needs large areas of mature, dense forest. Suitable movement corridor habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.

- The North American porcupine (*Erethizon dorsatum*) is a mammal in the Erethizontidae family. It is not listed under either FESA or CESA and has heritage ranks of G5/S3. Reported habitats include broadleaved upland forest, cismontane woodland, closed-cone coniferous forest, lower montane coniferous forest, north coast coniferous forest, and upper montane coniferous forest. Suitable habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.

During the field surveys conducted as part of the SHN Biological Resources Assessment, no special status plant or animal species were documented within the Project area. However, due to the potential presence of special status plant and animal species at the site, the following mitigations are recommended:

Mitigation Measure BR-1: Preoperation Special-Status Plant Surveys

Preoperation special-status plant surveys shall be conducted by a qualified botanist prior to the start of operation activities and within the typical blooming season or spring and early summer (generally March/April to August) for easy identification. If special-status plant species are identified, the area shall be flagged for avoidance. If a special-status species is identified and cannot be fully avoided, a mitigation plan shall be prepared by a qualified botanist and approved by the County of Humboldt.

Mitigation Measure BR-2: Preoperation Special Status Animal Surveys

Preoperation special-status wildlife surveys shall be conducted by a qualified biologist. The preoperation surveys shall be conducted no more than 30 days prior to the start of operation activities. If special-status wildlife species are identified, the area shall be flagged for avoidance. If a special-status species is identified and cannot be fully avoided, a mitigation plan shall be prepared by a qualified biologist and approved by the County of Humboldt.

Mitigation Measure BR-3: Preoperation Bird Surveys

Project-related vegetation management should occur outside the bird nesting season, (February 15 through September 1). If project-related brush clearing or infrastructure work must occur during the breeding season, a preoperation nesting-bird survey for migratory birds, raptors, and northern spotted owls shall be conducted by a qualified biologist no more than two weeks prior to Project initiation within the Project area and a 500-foot buffer. The timing of surveys shall be determined in consultation with the California Department of Fish and Wildlife. If active nests are found, a no-disturbance buffer zone shall be established, the size of which will the biologist shall determine. Within

this buffer zone, no operations shall take place until August 31 or until the biologist determines that the nest is no longer active.

Level of Significance After Mitigation:

Implementation of Mitigation Measures BR-1 – BR-3 would reduce potential impacts to candidate, sensitive, or special status species to ***less than significant***.

- b. Sensitive natural communities are habitats that are generally defined by vegetation type and geographical location and are increasingly restricted in abundance and distribution. Recognition of natural communities is an ecosystem-based approach to maintaining biodiversity in California. High quality occurrences of natural communities with heritage ranks of three (3) or lower are considered by CDFW to be significant resources and fall under the CEQA guidelines for addressing impacts. The following vegetation alliances were observed within the Project areas:

- *Quercus garryana* (Oregon white oak woodland) Alliance (G4/S3) occurs within the Project area in locations containing *Quercus garryana* at greater than 25 percent absolute cover and/or 30 percent relative cover in the tree canopy. Oregon white oak woodlands within the Project area are co-dominant with an understory of young Douglas fir (*Pseudotsuga menziesii*) trees.
- *Danthonia californica* (California oat grass prairie) Provisional Alliance (G4/S3) occurs within the Project area in grasslands that contain *Danthonia californica* at greater than 25 percent absolute cover and/or 50 percent relative cover in the herbaceous canopy.

The Project has been designed to avoid impacts to white oak woodland areas, as no white oak trees will be removed. Plants will be planted in the existing natural soil and/or in “smart-pot” (or similar) above ground potting containers, which can be set on the existing terrain and moved around easily within the Project area. The plantings and/or smart pots will be located outside the dripline of white oak trees within the Project area.

With respect to California oat grass prairie, while considered vulnerable in the State, it is locally abundant, described as a “mainstay grass for range grazing in...Humboldt County” (USDA NRCS, 2008), and only approximately 0.15 acres of isolated oat grass is located in the Project area. Although the oat grass prairie is not considered a “high quality occurrence” and will not result in a significant impact on a regional scale, the following mitigation measure is recommended to avoid or minimize impacts:

Mitigation Measure BR-4: California Oat Grass Prairie Avoidance

The California oat grass prairie should be flagged and delineated prior to any project-related activity by a qualified botanist. Project activities should occur outside of the

perimeter of the delineated California oat grass prairie. If project-related impacts are expected to occur within the California oat grass prairie, a mitigation and monitoring plan should be prepared by a qualified biologist for County approval prior to impacts.

Riparian habitat in the Project area is limited to that adjacent to two drainages containing ordinary high-water mark (“OHWM”) indicators. The first is a natural intermittent drainageway that drains through the northeast corner of the Project area. The second originates at the southeast corner of the Project area, originating from a drainage ditch paralleling the residential access road. The OHWM features are tributaries to the main stem of the Trinity River. These tributaries are seasonally flowing watercourses and do not contain water during the summer months. The Project will observe a 50-foot setback from the top of bank or edge of riparian dripline (whichever is greater) of these ephemeral watercourses, consistent with the requirements of WQ 2017-0023-DWQ and the County’s Streamside Management Areas and Wetland Ordinance.

The following mitigation measure is recommended to avoid or minimize impacts to riparian habitat:

Mitigation Measure BR-5: Riparian Habitat Avoidance

All project-related activities should remain at least 50 feet away from the top of bank or edge of riparian dripline (whichever is greater) of the mapped seasonal drainages, and no vegetation removal should occur within these setback areas.

Level of Significance After Mitigation:

Implementation of Mitigation Measures BR-4 and BR-5 would reduce potential impacts to riparian habitats and sensitive natural communities to ***less than significant***.

- c. A Project-specific wetland delineation conducted by SHN did not identify any wetlands within the Project area, but did identify two drainages containing OHWM indicators. The first is a natural intermittent drainageway that drains through the northeast corner of the Project area. The second originates at the southeast corner of the Project area, originating from a drainage ditch paralleling the residential access road. The OHWM features are tributaries to the main stem of the Trinity River. These tributaries are seasonally flowing watercourses and do not contain water during the summer months. The Project will observe a 50-foot setback from the top of bank or edge of riparian dripline (whichever is greater) of these ephemeral watercourses, consistent with the requirements of WQ 2017-0023-DWQ and the County’s Streamside Management Areas and Wetland Ordinance.

The Project will also be subject to the water quality requirements of WQ 2017-0023-DWQ and the County’s CMMLUO performance standards. This includes requiring that fertilizers

and pesticides/herbicides be applied consistent with product labeling and managed to ensure that they will not enter or be released into surface or groundwater.

Mitigation Measure BR-6: Waters of the U.S. Setback

A minimum of a 50-foot setback (from top of bank or riparian dripline, whichever is greater) shall be maintained from the mapped OHWM features on the Project site. The setback shall be delineated with temporary ESA fencing (or similar) during ground disturbance activities.

Level of Significance After Mitigation:

Implementation of Mitigation Measures BR-6 would reduce potential impacts to federally protected wetlands and other waters to ***less than significant***.

- d. The primary wildlife movement corridors within the Project area are the OHWM drainage features in the northeast and southeast corners of the Project site, as they are tributaries to the main stem of the Trinity River. These tributaries are seasonally flowing watercourses and do not contain water during the summer months. The Project will observe a 50-foot setback from the top of bank or edge of riparian dripline (whichever is greater) of these ephemeral watercourses, consistent with the requirements of WQ 2017-0023-DWQ and the County's Streamside Management Areas and Wetland Ordinance.

The shrubs and trees located in the Project area (and surrounding the Project site) could be used for nesting migratory birds. Nesting migratory birds are protected under the Federal Migratory Bird Treaty Act and CDFW code. As required by Mitigation Measures BR-2 and BR-3, preoperation surveys will occur prior to operation activities during the nesting season. This will prevent potentially significant impacts to nesting migratory bird species.

The Project proposes to construct a perimeter fence around the Project areas. These fences will occur outside of the riparian corridor and would not interfere with general movement corridors on the vast majority of the Project parcels are located outside the Project area (e.g., the Project area occurs on ~1% of the larger 400-acre parcel).

Implementation of Mitigation Measures BR-2 and BR-3 will reduce potential impacts relating to movement of native resident or migratory wildlife species or with established native resident or migratory wild-life corridors to ***less than significant impact***.

- e. The Project does not conflict with local policies or ordinances protecting biological resources. The Project will not involve the removal of trees. In addition to the general biological resources policies in the County General Plan, the County's Streamside Management Areas and Wetlands Ordinance protects sensitive fish and wildlife habitats. The Project footprint has been designed to maintain a 50-foot setback from the top of bank or edge of riparian dripline (whichever is greater) of ephemeral watercourses onsite,

consistent with the Streamside Management Areas and Wetland Ordinance. As a result, the Project will not conflict with any local policies or ordinances protecting biological resources, and ***no impact*** would occur.

- f. According to the U.S. Fish & Wildlife Service Environmental Conservation Online System, the Project site is not located within the boundaries of a Habitat Conservation Plan. Habitat Conservation Plans in Humboldt County primarily apply to forest lands and include: 1) Green Diamond Resource Company California Timberlands & Northern Spotted Owl (formerly Simpson Timber Company); 2) Humboldt Redwood Company (formerly Pacific Lumber, Headwaters); and 3) Regli Estates.

According to the California Department of Fish & Wildlife website, the Project site is not located in the boundaries of a Natural Community Conservation Plan. Existing Conservation plans for Humboldt County include the Green Diamond and Humboldt Redwoods Company (previously Pacific Lumber Company) Habitat Conservation Plans.

In addition, to being located outside of the boundaries of a habitat conservation plan or natural community conservation plan, the Project is located on private property, does not involve the removal of trees, and includes mitigation measures to further reduce potential impacts to special-status species and habitats.

Therefore, the Project will not conflict with any local policies or ordinances protecting biological resources or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved plan applicable to the Project area, and ***no impact*** would occur.

| V. CULTURAL RESOURCES. | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|--------------------------|
| <i>Would the project:</i> | | | | |
| a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Disturb any human remains, including those interred outside of dedicated cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a-c. Consultation with Native American tribes traditionally and culturally associated with the project area has been an ongoing part of the process. Specifically, an invitation for Tribal Consultation pursuant to AB 52 was sent to all tribes identified as potentially being affected by the NAHC on August 12, 2019. None of the tribes that were solicited accepted the request. The Tsnungwe Council did however submit a letter on May 11, 2020 stating that the Tribe did not believe that the proposed project would negatively impact any sensitive or important cultural resources and that they consent to the proposed project.

A Cultural Resources Investigation was prepared for the Project by Archaeological Research and Supply Company in 2018 (updated April 2020). The investigation included a records search through the California Historical Resources Information System's regional Northwest Center (NWIC), Native American Heritage Commission (NAHC) inquiry, coordination with local tribes, and pedestrian survey of the site. In addition, Bob Benson of the Tsnungwe tribe conducted a field visit with Archaeological Research and Supply Company in May 2018.

No historic or prehistoric resources were identified during the investigation. There is one ethnographic village site (Tsunungwe village site) that is eligible for the California Registry of Historic Places on the adjacent parcel to the south of the current Project area, however; zero artifacts or associated cultural resources were identified as a result of the investigation. It is unquestionable that Tsunungwe people utilized the landscape adjacent to their main village, and the Hleldin area is of cultural and spiritual significance to the Tsunungwe people. The current Project area has been subjected to past activities that may have disturbed evidence of prehistoric use.

The cultural resources study concludes that the Project will not impact significant historic or prehistoric archaeological resources if the proposed mitigation measures (consisting of a heightened inadvertent discovery protocol) are implemented.

To address the unlikely event that buried cultural resource deposits are discovered during Project activities, the following mitigation measure is proposed relating to inadvertent discovery procedures:

Mitigation Measure CR-1: Inadvertent Discovery Protocol

If cultural resources, such as lithic materials or ground stone, historic debris, building foundations, or bone are discovered during Project activities, work shall be stopped within 100 feet of the discovery. Contact will be made to the County, a professional archaeologist and representatives from the Tsunungwe Tribe. The professional historic resource consultant, Tribes and County officials will coordinate provide an assessment of the find and determine the significance and recommend next steps.

If human remains are discovered during Project activities, work will stop at the discovery location, within 100 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.

Level of Significance After Mitigation:

Potential impacts associated with the disturbance of cultural resources that may be encountered during Project activities would be **less than significant** with implementation of Mitigation Measure CR-1.

| VI. ENERGY. | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| <i>Would the project:</i> | | | | |
| a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

a.b. The Project involves only cultivation, with processing to occur at an offsite location. The Project will have minimal energy resource demands, relating primarily to fuel use in Project vehicles, and security lighting on the perimeter of the property, in the parking area, and at the entrance gate. All new outdoor lighting will be the minimum lumens required for security purposes. The property is serviced by an existing Pacific Gas and Electric (PG&E) service line, and no new or expanded energy facilities are needed in connection with the Project. Therefore, a ***less than significant impact*** would occur with respect to energy.

VII. GEOLOGY AND SOILS.

Would the project:

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|-------------------------------------|-------------------------------------|
| a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii. Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii. Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv. Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a.i. There are no earthquake faults delineated on Alquist Priolo Fault Zone maps within the Project area according to online geologic maps produced by the California Division of Mine and Geology (<https://maps.conservation.ca.gov>). Since the Project area does not contain a known active fault and is not within 200 feet of an active fault trace, surface fault rupture is not considered to be a significant hazard for the Project site. Therefore, the Project will not expose people or structures to substantial adverse effects from a fault rupture, and **no impact** would occur.
- a.ii. Earthquakes on active faults in the region have the capacity to produce a range of ground shaking intensities in the Project area. Ground shaking may affect areas hundreds of miles distant from an earthquake's epicenter. Because the Project site is located within a seismically active area, some degree of ground motion resulting from seismic activity in the region could occur during the long-term operation of the Project; however, no structures or buildings are proposed as a part of the Project. Therefore, **no impact** would occur relating to strong seismic ground shaking.
- a.iii. According to online geologic maps produced by the California Division of Mine and Geology (<https://maps.conservation.ca.gov>), the Project site is not designated as an area subject to liquefaction. The Project would not expose people or structures to potential substantial adverse effects related to seismic-related ground failure, including liquefaction, and **no impact** would occur.
- a.iv. According to the Humboldt County Web GIS system, no historic landslides are designated in or near the Project area. The Project parcels and immediately surrounding area are designated with a stability rating of 1 (low instability) or 2 (moderate instability). The Project area itself does not contain any areas of known slope instability. No buildings or structures are proposed as part of the Project. Therefore, the Project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides, and **no impact** will occur.
- b. The existing drainage and runoff patterns will be maintained, as no grading is proposed in connection with the Project. Plants will be planted in the existing natural soil and/or in "smart-pot" (or similar) above ground potting containers, which can be set on the existing terrain, and moved around easily within the Project area.

The Project does not involve the removal of any trees within the Project area, or vegetation outside of the Project footprint that could result in erosion.

The Project will maintain coverage under SWRCB Order WQ 2017-0023-DWQ, which prescribes Best Practicable Treatment or Control measures to control runoff and erosion, including monitoring of erosion control measures during and after design storm events,

and repair or replacement, as needed, of ineffective erosion control measures immediately.

Given the design elements of the Project, as well as implementation of BMPs and BPTC measures, the Project is not expected to result in significant soil erosion or loss of topsoil during the initiation phase or for the life of the Project. Therefore, the Project will not result in substantial soil erosion or the loss of topsoil, and a ***less than significant impact*** would occur.

- c. According to the Humboldt County Web GIS system, no historic landslides are designated in or near the Project area. The Project parcels and immediately surrounding area are designated with a stability rating of 1 (low instability) or 2 (moderate instability). The Project area itself does not contain any areas of known slope instability. According to online geologic maps produced by the California Division of Mine and Geology (<https://maps.conservation.ca.gov>), the Project site is not designated as an area subject to liquefaction. No buildings or structures are proposed as part of the Project. Therefore, the Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and ***no impact*** would occur.
- d. Expansive soils possess a “shrink-swell” characteristic. Shrink/swell potential is the relative change in volume to be expected with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. No expansive soils have been identified on the Project site and no buildings or structures are proposed as part of the Project; therefore, ***no impact*** from expansive soils is expected.
- e. Given that the Project involves only seasonal agricultural activities (cultivation) and a maximum seasonal demand for 16 employees, the site will utilize portable toilets to be located in the southeastern corner of the cultivation area (near the designated parking area), and no septic system will be installed. Therefore, ***no impact*** relating to use of septic tanks would occur.
- f. No unique paleontological or geologic features are known to exist on the Project site. Further, no grading is proposed in connection with the Project, as cultivation will occur in the existing natural soil and/or in “smart-pot” type above ground potting containers, which can be set on the existing terrain and moved around easily within the Project area. However, a mitigation measure is proposed to address the unlikely event that buried paleontological resources are discovered during Project activities.

Mitigation Measure GEO-1: Inadvertent Discovery Protocol

In the event that paleontological resources are discovered, work shall be stopped within 100 feet of the discovery and a qualified paleontologist shall be notified. The paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in State CEQA Guidelines

Section 15064.5. If fossilized materials are discovered during construction, excavations within 100 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agency to determine procedures that would be followed before construction is allowed to resume at the location of the find.

Level of Significance After Mitigation:

Potential impacts associated with the disturbance of paleontological resources that may be encountered during Project activities would be ***less than significant*** with implementation of Mitigation Measure GEO-1.

VIII. GREENHOUSE GAS EMISSIONS.*Would the project:*

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|-------------------------------------|--------------------------|
| a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a,b. The NCUAQMD does not have established significance thresholds for evaluating the impacts of a project's greenhouse gas (GHG) emissions. According to the NCUAQMD website, in 2011, the NCUAQMD adopted Rule 111 (Federal Permitting Requirements for Sources of Greenhouse Gases) into the District rules, to establish a threshold above which New Source Review and federal Title V permitting applies, and to establish federally enforceable limits on potential to emit greenhouse gases for stationary sources; however, according to the NCUAQMD, these are considered requirements for stationary sources and should not be used as a threshold of significance for CEQA evaluations.

The Project could generate both direct and indirect GHG emissions. Direct GHG emissions include emissions that will primarily result from mobile (vehicle/equipment) sources. Indirect GHG emissions are generated by incremental electricity consumption and waste generation. As noted above, neither the NCUAQMD nor Humboldt County has established thresholds of significance for evaluating a project's GHG emissions. Since there are no applicable thresholds for projects in the Air District or Humboldt County, the NCUAQMD recommends the use of thresholds and guidance provided by other air districts in the State such as the Bay Area Air Quality Management District (BAAQMD). The BAAQMD has developed project screening criteria to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant impacts related to greenhouse gas emissions. Projects below the applicable screening criteria would not exceed the 1,100 metric tons (MT) of CO₂e/yr GHG threshold established by the BAAQMD for land use projects, other than permitted stationary sources. The BAAQMD has not established a threshold of significance for this type of project as it is agricultural rather than commercial or industrial.

The County has previously determined that a cannabis cultivation project involving up to 360 vehicle/truck trips (180 in/180 out) per day would result in a less than significant impact (Emerald Family Farms; Case Nos.: CUP16-022, SP16-032; Apps No. 10406). For

comparison, the proposed Project will involve up to 24 vehicle/truck trips per day, which is less than 7% of a similar use project deemed to have a less than significant impact.

The long-term operation of the site would involve agricultural activities, and GHG-related emissions would be limited to miscellaneous farming equipment, transport vehicles and employees traveling to and from the site. Because of the limited amount of equipment to be used for implementing a 3.3-acre outdoor cannabis project and up to 24 vehicle/truck trips per day (which are seasonal), GHG generation could not occur at levels that have the potential to be significant in either a local or regional context.

Based on the limited potential for emissions, Project impacts related to GHG emissions and consistency with GHG emission reduction plans would be ***less than significant***.

| IX. HAZARDS AND HAZARDOUS MATERIALS. | | | | |
|---|--------------------------------------|--|-------------------------------------|-------------------------------------|
| <i>Would the project:</i> | | | | |
| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
| a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a. The Project will involve vehicles and small farming equipment that use petroleum products (gasoline and diesel fuel), vehicle fluids and lubricants; however, these fuels and oil products will be contained within the vehicles themselves, and a minimal amount (less than 110 gallons) of fuel/oils will be stored onsite in approved storage containers (Conex boxes).

As part of the proposed cultivation, common agricultural chemicals (e.g., pesticides and fungicides) would be applied to the cannabis plants to address pest and mold issues. According to the California Department of Pesticide Regulation, pesticide application is generally advised a minimum of 300 feet from sensitive receptors (e.g. residences). Given the relatively remote location of the Project site, application of pesticides will be more than 1,000 feet from the nearest offsite residence located east of the Project site.

Onsite pesticide storage will involve less than ten gallons of State of California approved compounds (e.g., Azamax, Neem Oil, or Monterey b.t), while fertilizers will be stored in 50-pound bags from the manufacturer (anticipated at up to 4 50-pound bags stored onsite). Fertilizer types will include blood meal, kelp meal, and fish meal.

In the event that storage quantities exceed applicable regulatory thresholds, the applicant will be required to file a Hazardous Materials Business Plan with the County Division of Environmental Health for the storage of the various materials described above at the site. The Project would comply with the CMMLUO performance standards. In addition, the Project would comply with the hazardous materials control measures of SWRCB Order WQ 2017-0023-DWQ. The SWRCB program and County ordinance have “standard conditions” applicable to cannabis operations that address impacts from the storage and use of hazardous materials which include the following requirements:

- Any pesticide or herbicide product application be consistent with product labeling and be managed to ensure that they will not enter or be released into surface or groundwater.
- Petroleum products and other liquid chemicals be stored in containers and under conditions appropriate for the chemical with impervious secondary containment.
- Implementation of spill prevention, control, and countermeasures (SPCC) and have appropriate cleanup materials available onsite.

The proposed outdoor cultivation activities will not produce wastewater discharge since the irrigation water and fertilizers will be administered at specific agronomic rates that will allow maximum uptake by the plants and prevent excess water beyond the root zone. Additionally, while no evidence of contaminated soils exist, no grading is proposed and no there is no risk of disturbance to any contaminated soils as a result of the project.

With appropriate storage, handling, and application practices that comply with the requirements of the SWRCB and Humboldt County, it is not anticipated that the use of these materials at the facility will pose a significant hazard. Therefore, the Project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less than significant impact*** would occur.

- b. Fuel, oils, fertilizers, and pesticides in limited quantities will be stored on-site in approved containers that include secondary containment. In the event that storage quantities

exceed applicable regulatory thresholds, the applicant will be required to file a Hazardous Materials Business Plan with the County Division of Environmental Health for the storage of hazardous materials at the site. In addition, the Project would comply with the hazardous materials control measures of SWRCB Order WQ 2017-0023-DWQ. The SWRCB program and County ordinance have “standard conditions” applicable to cannabis operations that address impacts from the storage and use of hazardous materials which include implementation of spill prevention, control, and countermeasures (SPCC) and the maintenance of appropriate cleanup materials onsite.

Given limited storage and use quantities, and with appropriate storage, handling, and application practices, it is not anticipated that the use of these materials will pose a significant hazard. In the event of foreseeable upset and accident conditions, it is unlikely that these hazardous materials would be released in a manner that would create a significant hazard to the public or the environment.

Therefore, the Project will not 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, and a ***less than significant impact*** would occur.

- c. There are no schools located within one-quarter mile of the Project site. Therefore, the Project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or pro-posed school, and ***no impact*** would occur.
- d. The State’s Hazardous Waste and Substances Sites List (Cortese List, Government Code Section 65962.5) identifies sites with leaking underground fuel tanks, hazardous waste facilities subject to corrective actions, solid waste disposal facilities from which there is a known migration of hazardous waste, and other sites where environmental releases have occurred.

According to review of the information available on the SWRCB Geotracker and the DTSC Envirostor websites, there are no open cases regarding impacted soil and groundwater from Leaking Underground Storage Tanks (LUSTs) or other sources located within the Project area. The SWRCB Geotracker website identifies a closed LUST case on an adjacent industrial parcel to the southeast (T0602300503) that was granted “Completed – Case Closed” status in August 2004 following remediation of contaminated soil associated with an underground storage tanks formerly located adjacent to the existing commercial metal building in the southeastern portion of the adjacent industrial parcel.

Therefore, the Project is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and would not create a significant hazard to the public or the environment. ***No impact*** would occur.

- e. The Project is not within two miles of a public airport (Hoopa Airport is >10 miles to the north) and is not within the vicinity of a private airstrip (Mercer-Fraser Willow Creek is > 4 miles to the north). Therefore, the Project would not result in a safety hazard for people residing or working in the Project area, and ***no impact*** would occur.
- f. The Project would be required to comply with the Humboldt County Fire Safe Ordinance (County Code Section 31111). The County Fire Safe Ordinance provides specific standards for roads providing ingress and egress, signage, and setback distances for maintaining defensible space. The Project site is accessed by existing encroachments/roads off of Friday Ridge Road. As such, the Project would not impair the implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan, and a ***less than significant impact*** would occur.
- g. Fire protection in Humboldt County is provided by local districts, cities, and CalFire. The Project site is located within the Willow Creek Fire Protection District. CalFire identifies fire hazard severity zones in State Responsibility Areas (SRA) throughout California. The Project area is located in a very high fire hazard severity zone within the SRA (CalFire 2007). The County of Humboldt Office of Emergency Services coordinates emergency response in Humboldt County through the Humboldt Operational Area. The Humboldt Operational Area is composed of the County of Humboldt, serving as the lead agency, and all political subdivisions (cities and Special Districts) within the county.

The risk of causing a wildfire would not be significant during operation because the Project involves only outdoor cultivation. The access roads will be maintained in a state such that they are paved or free of vegetation during times of activity. Fuels and other potentially flammable chemicals will be stored in containers designed for fuel storage that includes secondary containment and a Hazardous Materials Business Plan will be maintained (if applicable regulatory thresholds are exceeded) that outlines storage requirements and spill response procedures. In addition, the Project will comply with the Humboldt County Fire Safe Ordinance.

Based on the nature of the Project involving only outdoor cultivation, a ***less than significant impact*** related to wildland fires will occur.

| X. HYDROLOGY AND WATER QUALITY. | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|---|--------------------------------------|--|-------------------------------------|-------------------------------------|
| <i>Would the project:</i> | | | | | |
| a. | Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. | Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. | 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| i) | result in substantial erosion or siltation on- or off-site | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) | substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii) | create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. | In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e. | Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a. Two drainages containing Ordinary High Water Mark (OHWM) indicators were mapped on the Project site. The OHWM areas are tributaries to the main stem of the Trinity River. These tributaries are seasonally flowing watercourses and do not contain water during

the summer months. A 50-foot setback will be maintained from the top of bank or edge of riparian dripline (whichever is greater) from these ephemeral watercourses, consistent with the requirements of WQ 2017-0023-DWQ and the County's Streamside Management Areas and Wetland Ordinance.

The existing site drainage and runoff patterns will be maintained, as no grading is proposed in connection with the Project. Outdoor cultivation will occur in the existing natural soil and/or in "smart-pot" (or similar) above ground potting containers, which can be set on the existing terrain, and moved around easily within the Project area.

As part of the proposed cultivation, State of California approved agricultural chemicals (e.g., pesticides and fungicides) would be applied to the cannabis plants to address pest and mold issues. The proposed outdoor cultivation activities will not produce wastewater discharge since the irrigation water and fertilizers will be administered at specific agronomic rates that will allow maximum uptake by the plants and prevent excess water beyond the root zone.

The Project would comply with the CMMLUO performance standards. In addition, the Project would comply with the hazardous materials control measures of SWRCB Order WQ 2017-0023-DWQ. The SWRCB program and County ordinance have "standard conditions" applicable to cannabis operations that address impacts from the storage and use of hazardous materials which include the following requirements:

- Any pesticide or herbicide product application be consistent with product labeling and be managed to ensure that they will not enter or be released into surface or groundwater.
- Petroleum products and other liquid chemicals be stored in containers and under conditions appropriate for the chemical with secondary containment.
- Implementation of spill prevention, control, and countermeasures (SPCC) and have appropriate cleanup materials available onsite.

In addition, SWRCB Order WQ 2017-0023-DWQ prescribes Best Practicable Treatment or Control measures to control runoff and erosion, including monitoring of erosion control measures during and after design storm events, and repair or replacement, as needed, of ineffective erosion control measures immediately.

Given the water quality protection measures to be implemented, it is not anticipated that the Project would violate any water quality standards or waste discharge requirements or otherwise degrade water quality, and impacts would be ***less than significant***.

- b. Water for irrigation will be supplied by three existing permitted on-site groundwater wells:

- Well #1 (County Permit Number 17/18-1216) is located east of Friday Ridge Road within the Project Area. Well #1 is completed to a depth of 220 feet and has an estimated yield of 5 gallons per minute according to the Well Completion Report.
- Well #2 (County Permit Number 17/18-1401) is located on the western edge of current APN 524-073-003. Well #2 is completed to a depth of 220 feet and has an estimated yield of 15 gallons per minute according to the Well Completion Report.
- Well #3 (County Permit Number 17/18-1636) is located on the western edge of current APN 524-073-003, south of Well #2. Well #3 is completed to a depth of 200 feet and has an estimated yield of 20 gallons per minute according to the Well Completion Report.

Long term water storage (in ponds) is not proposed in connection with the Project. Short term water storage may occur in three 5,000-gallon aboveground water storage tanks. Water will be pumped from the wells to the temporary holding tanks for regulating water pressure, and then piped from the tanks to the area of cultivation. At all times, water will be applied using no more than agronomic rates using an automated irrigation system.

The Project's annual irrigation demand has been estimated at 9.2 acre-feet (3 million gallons), with a monthly maximum of approximately 1.6 acre-feet (509,000 gallons) during the month of July. Irrigation water will be needed from April through October of each year, with no irrigation water anticipated during the months of November through March. The combined output of the three existing on-site groundwater wells is approximately 0.18 acre-feet (58,000 gallons) per day (21,170,000 gallons per year), indicating sufficient water supply to service the irrigation demands of the Project. Further, the wells are located between 1,500 feet (Well #1) and 4,000 feet (Wells #2 and #3) from the Trinity River and are completed to depths greater than 200 feet below ground surface and beneath a confining layer of competent rock. As documented by the well driller (Fisch Drilling), the wells are drilled into "perched bedrock with no hydraulic connection to any surface water or any part of a larger shallow homogeneous aquifer."

Given the design of the Project and demonstration of adequate water supply using existing groundwater wells, the Project is not anticipated to substantially deplete groundwater supplies or affect the production rate of nearby wells, and a ***less than significant impact*** would occur.

- c. The Project does not propose to alter the drainages containing OHWM indicators on the Project site. The Project will observe a 50-foot setback from these ephemeral watercourses, consistent with the requirements of SWRCB Order WQ 2017-0023-DWQ and the County's Streamside Management Areas and Wetlands Ordinance.

The existing drainage and runoff patterns will be maintained, as no grading is proposed in connection with the Project. Plants will be planted in the existing natural soil and/or in "smart-pot" (or similar) above ground potting containers, which can be set on the existing

terrain and moved around easily within the Project area. No buildings, structures, paving or other areas of impervious surface are proposed.

In addition, the Project will maintain coverage under SWRCB Order WQ 2017-0023-DWQ, which prescribes Best Practicable Treatment or Control measures to control runoff and erosion, including monitoring of erosion control measures during and after design storm events, and repair or replacement, as needed, of ineffective erosion control measures immediately.

The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, polluted runoff or flooding on- or off-site, and a ***less than significant impact*** would occur.

- d. The Project is not located near a large body of water capable of producing a seiche, is not located near the coast in a tsunami inundation area, and is not located in a 100-year flood zone.

As a result, the Project would have ***no impact*** from release of pollutants due to inundation from seiche, tsunami, or floods.

- e. The Project's annual irrigation demand has been estimated at 9.2 acre-feet (3 million gallons), with a monthly maximum of approximately 1.6 acre-feet (509,000 gallons) during the month of July. Irrigation water will be needed from April through October of each year, with no irrigation water anticipated during the months of November through March. The combined output of the three existing on-site groundwater wells is approximately 0.18 acre-feet (58,000 gallons) per day, indicating sufficient water supply to service the irrigation demands of the Project. Further, the wells are located between 1,500 feet (Well #1) and 4,000 feet (Wells #2 and #3) from the Trinity River and are completed to depths greater than 200 feet below ground surface and beneath a confining layer of competent rock. As documented by the well driller (Fisch Drilling), the wells are drilled into "perched bedrock with no hydraulic connection to any surface water or any part of a larger shallow homogeneous aquifer." In addition, the Project would comply with the CMMLUO performance standards and will maintain coverage under SWRCB Order WQ 2017-0023-DWQ, which prescribes Best Practicable Treatment or Control measures to control runoff and erosion.

Therefore, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan and a ***less than significant impact*** would occur.

| XI. LAND USE AND PLANNING. | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| <i>Would the project:</i> | | | | |
| a. Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a. The Project parcels are a component of a large private land holding (500 acres+) of the Project applicant. The surrounding vicinity is sparsely populated with the closest offsite residence located approximately 1,000 feet east, separated by Hwy. 299, significant vegetation, and greater than 200 feet in elevation change. The predominant land uses in the vicinity of the Project include additional land holdings of the Project applicant, State Highway 299 (east), scattered rural residential (further east of Highway 299), and open space/recreation associated with the Six Rivers National Forest and Trinity River (south and west). The Project does not propose to block or impede Friday Ridge Road, which runs west and south of the Project area. The Project would not divide any established communities and ***no impact*** would occur.
- b. The Project would not result in changes to existing land use, zoning, or specific plans in Humboldt County. The Project would not conflict with any goals, policies, or objectives in the Humboldt County General Plan intended to mitigate potential environmental impacts. Land uses and zoning would remain unchanged. The agricultural use associated with the Project would be consistent with the allowable land uses under the Humboldt County General Plan and Zoning Ordinance. The Project has been designed to be consistent with Humboldt County Code Section 314-55.4 of Chapter 4 of Division I of Title III, Commercial Medical Marijuana Land Use Ordinance ("CMMLUO").

According to the U.S. Fish & Wildlife Service Environmental Conservation Online System (ECOS), the Project site is not located within the boundaries of a Habitat Conservation Plan. Habitat Conservation Plans in Humboldt County include the following: 1) Green Diamond Resource Company California Timberlands & Northern Spotted Owl (formerly Simpson Timber Company); 2) Humboldt Redwood Company (formerly Pacific Lumber, Headwaters); and 3) Regli Estates. These Habitat Conservation Plans primarily apply to forest lands in the County.

According to the California Department of Fish & Wildlife website, the Project site is not located in the boundaries of a Natural Community Conservation Plan. The conservation plans for Humboldt County, listed on California Regional Conservation Plans Map on the

CDFW website, include the Green Diamond and Humboldt Redwoods Company (previously Pacific Lumber Company) Habitat Conservation Plans.

As a result, ***no impact*** would occur.

XII. MINERAL RESOURCES.*Would the project:*

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a,b. The Project site does not include any lands that are classified as MRZ-2 or any known locally important mineral resources. Implementation of the Project would not result in the loss of availability of a known mineral resource, would not result in the loss of availability of a locally important mineral resource recovery site, and ***no impact*** would occur.

XIII. NOISE.*Would the project result in:*

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|-------------------------------------|-------------------------------------|
| a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a. The Project parcels are a component of a large private land holding (500 acres+) of the Project applicant. The surrounding vicinity is sparsely populated with the closest offsite residence located approximately 1,000 feet east, separated by Hwy. 299, significant vegetation, and greater than 200 feet in elevation change. The predominant land uses in the vicinity of the Project include additional land holdings of the Project applicant, State Highway 299 (east), scattered rural residential (further east of Highway 299), and open space/recreation associated with the Six Rivers National Forest and Trinity River (south and west).

Humboldt County Noise Element of the General Plan

The Noise Element of the Humboldt County General Plan establishes maximum acceptable noise levels for various land use categories. According to the Noise Element, evaluating new development projects for noise impacts should be based on a comparison of the noise compatibility standards in Table 13-C with noise contours and other available information. Appropriate standards for short-term noise levels measured by Lmax varies with the type of land use and time of day.

TABLE 3
LAND USE / NOISE COMPATIBILITY STANDARDS (TABLE 13-C OF GENERAL PLAN)

| | | | | | | | |
|---|-----------------------------------|--|---------|---------|---------|-----|--|
| | | | | | | | |
| | | LAND USE INTERPRETATION FOR CNEL (or Ldn) VALUE | | | | | |
| LAND USE CATEGORY | Maximum Interior Noise Levels* | 50 – 60 | 61 - 70 | 71 - 80 | 81 - 90 | 91+ | |
| Residential Single Family, Duplex, Mobile Homes | 45 | | | | | | |
| Residential Multiple Family, Dormitories, etc. | 45 | | | | | | |
| Transient Lodging | 45 | | | | | | |
| School Classrooms, Libraries, Churches | 45 | | | | | | |
| Hospitals, Nursing Homes | 45 | | | | | | |
| Auditoriums, Concert Halls, Music Shells | 35 | | | | | | |
| Sports Arenas, Outdoor Spectator Sports | | | | | | | |
| Playgrounds, Neighborhood Parks | | | | | | | |
| Golf Courses, Riding Stables, Water Rec., Cemeteries | | | | | | | |
| Office Buildings, Personal, Business & Professional | 50 | | | | | | |
| Commercial: Retail, Movie Theaters, Restaurants | 50 | | | | | | |
| Commercial: Wholesale, Some Retail, Ind., Mfg., Util. | | | | | | | |
| Manufacturing, Communications(Noise Sensitive) | | | | | | | |
| Livestock Farming, Animal Breeding | | | | | | | |
| Agriculture (except Livestock), Mining, Fishing | | | | | | | |
| Public Right-of-Way | | | | | | | |
| Extensive Natural Recreation Areas | | | | | | | |

*Due to exterior sources

Project activities are not expected to generate significant noise levels that will exceed the Humboldt County General Plan Noise Element standards. Vehicle use and small agricultural support equipment (e.g., ATVs and forklifts) would be the greatest source of noise from ongoing operations.

TABLE 6
VEHICLE REFERENCE NOISE LEVELS

| Type of Vehicle | Noise Level (dB) |
|-----------------|---------------------|
| Auto | 50 (at 100 feet) |
| Pickup Truck | 75 (at 50 feet) |

Reference: Construction Noise Impact Assessment
<https://www.nrc.gov/docs/ML1225/ML12250A723.pdf>

Table 6, above shows noise levels for typical vehicles (automobiles and pickup trucks). Based on these measurements, vehicle noise would be attenuated to at least 50 dB approximately 800 feet from the source. Thus, noise levels from vehicle traffic are

expected be below the “clearly acceptable CNEL level,” by the time they reach the nearest residence.

Based on the types of equipment to be utilized by the Project, and the distance to nearby receptors, impacts related to noise are expected to be ***less than significant***.

- b. The closest land uses potentially impacted from groundborne vibration and noise are the single-family residential units located a minimum of 1,000 feet to the east of the Project site, separated by Hwy. 299 and a significant elevation change. No uses are proposed that would generate excessive groundborne vibration. ***No impact*** would occur.
- c. The Project is not within two miles of a public airport and is not within an airport land use plan or the vicinity of a private airstrip. Therefore, the Project would expose people to excessive air traffic noise, and ***no impact*** would occur.

XIV. POPULATION AND HOUSING.*Would the project:*

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a, b. The Project would not directly induce population growth because it proposes no residential development. It would not indirectly induce population growth because it would not increase roadway capacity, nor would it extend roads or other infrastructure into previously undeveloped areas. Further, the Project involves no displacement of existing housing or people, as neither occur on the Project site. Because the Project would not result in population growth in the area, does not involve the creation of, or necessity for, new housing, and would not displace existing housing or people, ***no impact*** related to population and housing would occur.

XV. PUBLIC SERVICES.*Would the project:*

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|-------------------------------------|-------------------------------------|
| a. Result in substantial adverse physical impacts associated with the provisions of 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: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Fire protection | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other Public Facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a. Fire protection in Humboldt County is provided by local districts, cities, and CalFire. The Project site is located within the Willow Creek Fire Protection District. CalFire identifies fire hazard severity zones in State Responsibility Areas (SRA) throughout California. The Project area is located in a very high fire hazard severity zone within the SRA.

The risk of causing a wildfire would not be significant during operation because the Project involves only outdoor cultivation. The access roads will be maintained in a state such that they are paved or free of vegetation during times of activity. Fuels and other potentially flammable chemicals will be stored in containers designed for fuel storage that includes secondary containment and a Hazardous Materials Business Plan will be maintained (if applicable regulatory thresholds are exceeded) that outlines storage requirements and spill response procedures. In addition, the Project will comply with the Humboldt County Fire Safe Ordinance.

Due to the nature of the proposed cannabis uses and compliance with County fire safe ordinance requirements, it is not anticipated that the Project will result in a significant

increase in the number of calls-for-service related to fire. As such, the Project will not result in the need for new or physically altered fire protection facilities, and a ***less than significant impact*** would occur.

The Humboldt County Sheriff's Office is responsible for law enforcement in the unincorporated areas of the County. According to the Humboldt County General Plan Update Draft EIR, in the more rural areas of the county, like the Project area, maximum response times may reach 50 minutes because of longer travel distances, varied topography, available resources, and the location of the Sheriff Deputy on patrol in relation to the incident.

To address potential security issues, the applicant will implement the detailed security plan contained in the Operations Plans plan prepared for the Project. Implementation of the security plan measures will minimize impacts on local law enforcement. As such, the Project will not result in the need for new or physically altered law enforcement facilities, and a ***less than significant impact*** would occur.

Since the Project does not propose residential development and will not significantly increase the population in the Willow Creek area, the Project would not create a need for new schools, increase any school population, or increase the demand for public parks or other public facilities such as public health facilities and libraries. As a result, ***no impact*** would occur.

XVI. RECREATION.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a,b. As previously described, the Project does not involve the creation of new housing and would not result in population growth in the area. Similarly, new recreational facilities are not proposed as part of the Project and the demand for such facilities would not increase with implementation of the Project. Therefore, because the Project would not result in any increase in the use of, or demand for, parks or recreation facilities, ***no impact*** related to recreation would occur.

XVII. TRANSPORTATION*Would the project:*

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|-------------------------------------|--------------------------|
| a. Conflict with program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a, b. The Project area will be accessed from an existing driveway entrance off of State Highway 299 and Friday Ridge Road. The Project will utilize an existing unpaved access road with an approximate 30'+ wide entrance off of Friday Ridge Road (western portion of parcel) that extends through the cultivation area to the parcel boundary. The Project will utilize less than 0.37 miles of Friday Ridge Road (a Category 4 roadway) before reaching the intersection of Hwy. 299. Hwy. 299 near Friday Ridge Road is a two-lane highway. Its intersection at Friday Ridge Road-Martin Road is a four-way intersection. The north leg, Martin Road in the north and the south leg, Friday Ridge Road in the south are two-lane county roads and are both controlled by stop signs at the Hwy 299 intersection approaches. There are no traffic controlled signs at the Hwy 299 approaches. All four approaches at the intersection are widened to accommodate left/through and right-turn vehicle movements side by side simultaneously. The terrain along this section of Hwy 299 is mostly flat and gentle. According to traffic count obtained from Caltrans, Hwy 299 in the vicinity of Friday Ridge Road carries about 1,000 vehicles combined in both directions during the peak hour.

The Project will generate an anticipated total of 24 trips per day during peak harvest time, comprised of 16 employee round trips; 4 transport trips; and 4 additional misc. service trips per day. The amount of vehicle/truck traffic proposed by the Project would be a minor contribution to traffic on Friday Ridge Road and Highway 299.

There are currently no public transit facilities serving the Project site, and no existing or proposed bicycle or pedestrian facilities in the Project area.

According to the California Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA, published December 2018, absent substantial evidence of a project related significant level of VMT, projects that generate less than 110 trips per day may generally be assumed to cause a less than significant transportation impact. Due to the limited amount of traffic associated with the Project, it would not conflict with an applicable plan or program related to transportation and circulation or CEQA Guidelines section 15064.3(b) and a ***less than significant impact*** would occur.

- c. The Project would use existing, public roadways to access the Project site and would use gravel access roads internal to the Project site. The internal access roads would be improved to standards consistent with the envisioned level of use. The Project does not include construction of roads outside of the Project site.

At the County's request, the Applicant retained a traffic consultant (PHA Transportation Consultants) to conduct a sight distance analysis for a section of Hwy 299 (Trinity Hwy) near Friday Ridge Road in Humboldt County. The purpose of the analysis was to identify the available sight distance from Hwy 299 to Friday Ridge Road in both east and west directions. The analysis reveals available sight distances along Hwy 299 in both directions would satisfy Caltrans's recommended guidelines.

All activities associated with operation of the Project would occur entirely within the Project site, and would not involve driving or operating farm equipment external to the site. On public roads, delivery trucks and employee vehicles would use public roadways when traveling to and from the Project site. Therefore, the Project would not result in hazards due to incompatible uses.

The Project will not substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersection) or incompatible uses (e.g. farm equipment), and a ***less than significant impact*** would occur.

- d. The Project would use existing roadways (Friday Ridge Road) and encroachments to access the Project site. The Project also proposes to improve existing access roads within the Project site and construct parking areas to serve the proposed cannabis use. The Project will be required to comply with the Humboldt County Fire Safe Ordinance 1952, which the California Board of Forestry and Fire Protection has accepted as functionally equivalent to PRC 4290. The County Fire Safe Ordinance provides specific standards for roads providing ingress and egress, signage, and setback distances for maintaining defensible space. Compliance with the County's Fire Safe Ordinance will ensure that adequate access for emergency vehicles is provided. Therefore, the Project will result in adequate emergency access, and a ***less than significant impact*** would occur.

XVIII. TRIBAL CULTURAL RESOURCES.

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

Discussion

- a. Tribal cultural resources potentially affected by the Project activities were investigated by Archaeological Research and Supply Company in 2018 (updated April 2020). The investigation included a records search through the California Historical Resources Information System's regional Northwest Center (NWIC), Native American Heritage Commission (NAHC) inquiry, coordination with local tribes, and pedestrian survey of the site. In addition, Bob Benson of the Tsnungwe tribe conducted a field visit with Archaeological Research and Supply Company in May 2018.

No historic or prehistoric resources were identified during the investigation. There is one ethnographic village site (Tsunungwe village site) that is eligible for the California Registry of Historic Places on the adjacent parcel to the south of the current Project area, however; zero artifacts or associated cultural resources were identified as a result of the investigation. It is unquestionable that Tsunungwe people utilized the landscape adjacent to their main village, and the Hleldin area is of cultural and spiritual significance to the Tsunungwe people. The current Project area has been subjected to past activities that may have disturbed evidence of prehistoric use.

The cultural resources study concludes that the Project will not impact significant historic or prehistoric archaeological resources if the proposed mitigation measures (consisting of a heightened inadvertent discovery protocol) are implemented.

To address the unlikely event that buried tribal cultural resource deposits are discovered during Project activities, the following mitigation measure is proposed relating to inadvertent discovery procedures.

Mitigation Measure TCR-1: Inadvertent Discovery Protocol

If tribal cultural resources, such as lithic materials or ground stone, historic debris, building foundations, or bone are discovered during Project activities, work shall be stopped within 100 feet of the discovery. Contact will be made to the County, a professional archaeologist and representatives from the Tsunungwe Tribe. The professional historic resource consultant, Tribes and County officials will coordinate provide an assessment of the find and determine the significance and recommend next steps.

If human remains are discovered during Project activities, work will stop at the discovery location, within 100 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.

Level of Significance After Mitigation:

Potential impacts associated with the disturbance of tribal cultural resources that may be encountered during Project activities would be ***less than significant*** with implementation of Mitigation Measure TCR-1.

XIX. UTILITIES AND SERVICE SYSTEMS.*Would the project:*

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|-------------------------------------|--------------------------|
| a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. Result in a determination by the waste water 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructures, or otherwise impair the attainment of solid waste reduction goals? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a-c. The proposed outdoor cultivation activities will not produce wastewater discharge since the irrigation water and fertilizers will be administered at specific agronomic rates that will allow maximum uptake by the plants and prevent excess water beyond the root zone.

Given that the Project involves only seasonal agricultural activities (cultivation) and up to 16 employees, the site will utilize portable toilets to be located in the southeastern corner of the cultivation area (near the designated parking area).

No buildings, structures, paving or other areas of impervious surface are proposed.

The Project's annual irrigation demand has been estimated at 9.2 acre-feet (3 million gallons), with a monthly maximum of approximately 1.6 acre-feet (509,000 gallons) during the month of July. Irrigation water will be needed from April through October of

each year, with no irrigation water anticipated during the months of November through March. The combined output of the three existing on-site groundwater wells is approximately 0.18 acre-feet (58,000 gallons) per day, indicating sufficient water supply to service the irrigation demands of the Project.

The property is serviced by an existing Pacific Gas and Electric (PG&E) service line, and no new or expanded energy facilities are needed in connection with the Project.

The Project would comply with wastewater rules and regulations, has sufficient water supply from existing wells, and would not require relocation or construction of new utilities. A ***less than significant impact*** would occur.

- d. The Project's waste generation will involve miscellaneous agricultural refuse and debris, and cannabis waste. Refuse will be sorted to divert recyclables such as paper, plastic, glass, and metals from the waste stream. Those recyclables will be taken to a recycling center for recycling. The remaining solid wastes will be collected and deposited into a solid waste receptacle for temporary storage, which will be kept covered. The solid waste will be removed from the site no less frequently than weekly and disposed of at an authorized waste transfer facility. The solid waste receptacle will be sized appropriately for the volume of waste generated and may be adjusted in size periodically as conditions warrant due to production cycles and seasonal factors. It is anticipated that no more than one dumpster per week will be utilized during the peak harvest season. Cannabis waste will be made unusable and unrecognizable prior to leaving the site through a County approved method involving either grinding and/or mixing with other plant materials for composting, or grinding and incorporating the cannabis waste with approved non-consumable solid wastes such that the resulting mixture is at least 50 percent non-cannabis waste.

According to the Humboldt County General Plan, the County, currently trucks its solid waste to a site near Medford, Oregon under a long-term contract. It has a subsequent contract to utilize a landfill located in Anderson, California. Together, the County has committed to contracts which meet its landfill disposal needs over the next 20 years. Therefore, the Project will be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs, and a ***less than significant impact*** would occur.

- e. The California Integrated Waste Management Act of 1989 (Public Resources Code Division 30), enacted through Assembly Bill (AB) 939 and modified by subsequent legislation, required all California cities and counties to implement programs to divert waste from landfills (Public Resources Code Section 41780). Compliance with AB 939 is determined by the Department of Resources, Recycling, and Recovery (Cal Recycle). Each county is required to prepare and submit an Integrated Waste Management Plan for expected solid waste generation within the county to the CIWMB. In 2012, the unincorporated area of

Humboldt County met or exceeded the waste diversion mandate of 50 percent set by the Integrated Waste Management Act of 1989 (Humboldt County 2014).

The Project's construction and operation activities would comply with all federal, state, and local statutes related to solid waste, including AB 939. This would include compliance with the Humboldt Waste Management Authority's recycling, hazardous waste, and composting programs in the County to comply with AB 939.

Vegetative matter such as root balls, branches, and leaves would be chipped and composted or hauled offsite and disposed of in accordance with County and State requirements.

Therefore, the Project will not violate any federal, state, and local statutes and regulations related to solid waste, and a ***less than significant impact*** would occur.

XX. WILDFIRE.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|-------------------------------------|--------------------------|
| a. Substantially impair an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a-d. The risk of causing a wildfire would not be significant during operation because the Project involves only outdoor cultivation. The access roads will be maintained in a state such that they are paved or free of vegetation during times of activity. Fuels and other potentially flammable chemicals will be stored in containers designed for fuel storage that includes secondary containment and a Hazardous Materials Business Plan will be maintained that outlines storage requirements and spill response procedures. In addition, the Project will comply with the Humboldt County Fire Safe Ordinance, which provides specific standards for roads providing ingress and egress, signage, and setback distances for maintaining defensible space.

Accordingly, the Project would not exacerbate wildfire risks and impacts would be ***less than significant***.

| XXI. MANDATORY FINDINGS OF SIGNIFICANCE. | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|--------------------------|
| a. Does the project have the potential to 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a. All potential impacts to the environment were evaluated as part of the analysis in this document, including potential impacts to habitat for fish or wildlife species, rare or endangered plants and animals, and cultural resources. Where impacts were determined to be potentially significant, mitigation measures have been imposed to reduce those impacts to less than significant levels. Accordingly, with incorporation of the mitigation measures imposed throughout this document, the Project would not substantially degrade the quality of the environment and impacts would be ***less than significant***.

Mitigation:

- All mitigation measures discussed in this document shall apply (See Section 2.4 – Discussion of Mitigation Measures, Monitoring, and Reporting Program).
- b. There are three proposed commercial cannabis projects within one mile of the project. The Project will not have impacts that are individually limited, but cumulatively considerable. This Mitigated Negative Declaration documents the Project's design features and mitigation measures that eliminate the Project's potential impacts on the

environment or mitigate the potential impacts to a less-than-significant level. “When there is no substantial evidence of any individual potentially significant effect by a project under review, the lead agency may reasonably conclude the effects of the project will not be cumulatively considerable.” (*Leonoff v. Monterey County Bd. of Supervisors* (1990) 222 Cal.App.3d 1337, 1358; *Sierra Club v. West Side Irrigation Dist.* (2005) 128 Cal.App.4th 690, 701-702; *Hines v. California Coastal Comm’n* (2010) 186 Cal.App.4th 830, 858.)

Further, the Project is consistent with the “Mitigated Negative Declaration for Medical Marijuana Land Use Ordinance – Phase IV – Commercial Cultivation of Cannabis for Medical Use” that Humboldt County adopted in connection with its adoption of the Medical Marijuana Land Use Ordinance. The County MND expressly analyzed the cumulative environmental impacts of commercial cannabis cultivation operations as permitted under the CMMLUO.

The Project is consistent with the CMMLUO and the County MND, and has incorporated mitigation measures to lessen potentially significant impacts to less than significant. In all instances where the project has the potential to contribute to cumulatively considerable impacts to the environment mitigation measures have been imposed to reduce the potential effects to less than significant levels. Therefore, the Project would not contribute to environmental effects that are individually limited, but cumulatively considerable, and impacts would be ***less than significant***.

Mitigation:

All mitigation measures discussed in this document shall apply (See Section 2.4 – Discussion of Mitigation Measures, Monitoring, and Reporting Program).

- c. The Project’s potential to result in environmental effects that could adversely affect human beings, either directly or indirectly, has been discussed throughout this document. In instances where the proposed project has the potential to result in direct or indirect adverse effects to human beings, mitigation measures have been applied to reduce the impact to below a level of significance. With required implementation of mitigation measures identified in this document, the Project would not involve any activities that would result in environmental effects which would cause substantial adverse effects on human beings, and impacts would be ***less than significant***.

Mitigation:

All mitigation measures discussed in this document shall apply (See Section 2.4 – Discussion of Mitigation Measures, Monitoring, and Reporting Program).

2.4 Discussion of Mitigation Measures, Monitoring, and Reporting Program

The Initial Study found that the project could result in potentially significant adverse impacts unless mitigation measures are required. A list of mitigation that addresses and mitigates potentially significant adverse impacts to a level of non-significance follows.

Air Quality

Although the Project's overall scale and intensity with respect to activities that may result in air quality impacts is low, the following mitigation measure (consistent with NCUAQMD Rule 104) is recommended to reduce PM10 emissions:

Mitigation Measure AQ-1: Speed Limits

All vehicle speeds on unpaved areas shall be limited to 15 miles per hour.

Biological Resources

During the field surveys conducted as part of the SHN Biological Resources Assessment, no special status plant or animal species were documented within the Project area. However, due to the potential presence of special status plant and animal species at the site, the following mitigations are recommended:

Mitigation Measure BR-1: Preoperation Special-Status Plant Surveys

Preoperation special-status plant surveys shall be conducted by a qualified botanist prior to the start of operation activities and within the typical blooming season or spring and early summer (generally March/April to August) for easy identification. If special-status plant species are identified, the area shall be flagged for avoidance. If a special-status species is identified and cannot be fully avoided, a mitigation plan shall be prepared by a qualified botanist and approved by the County of Humboldt.

Mitigation Measure BR-2: Preoperation Special Status Animal Surveys

Preoperation special-status wildlife surveys shall be conducted by a qualified biologist. The Preoperation surveys shall be conducted no more than 30 days prior to the start of operation activities. If special-status wildlife species are identified, the area shall be flagged for avoidance. If a special-status species is identified and cannot be fully avoided, a mitigation plan shall be prepared by a qualified biologist and approved by the County of Humboldt.

Mitigation Measure BR-3: Preoperation Bird Surveys

Project-related vegetation management should occur outside the bird nesting season, (February 15 through September 1). If project-related brush clearing or infrastructure

work must occur during the breeding season, a Preoperation nesting-bird survey for migratory birds, raptors, and northern spotted owls shall be conducted by a qualified biologist no more than two weeks prior to Project initiation within the Project area and a 500-foot buffer. The timing of surveys shall be determined in consultation with the California Department of Fish and Wildlife. If active nests are found, a no-disturbance buffer zone shall be established, the size of which, the biologist shall determine. Within this buffer zone, no operations shall take place until August 31 or until the biologist determines that the nest is no longer active.

Although the oat grass prairie located in the Project area is not considered a “high quality occurrence” and will not result in a significant impact on a regional scale, the following mitigation measure is recommended to avoid or minimize impacts:

Mitigation Measure BR-4: California Oat Grass Prairie Avoidance

The California oat grass prairie should be flagged and delineated prior to any project-related activity by a qualified botanist. Project activities should occur outside of the perimeter of the delineated California oat grass prairie. If project-related impacts are expected to occur within the California oat grass prairie, a mitigation and monitoring plan should be prepared by a qualified biologist for County approval prior to impacts.

The following mitigation measures are recommended to avoid or minimize impacts to riparian habitat and waters of the U.S. associated with two seasonal drainages located on the Project site:

Mitigation Measure BR-5: Riparian Habitat Avoidance

All project-related activities should remain at least 50 feet away from the top of bank or edge of riparian dripline (whichever is greater) of the mapped seasonal drainages, and no vegetation removal should occur within these setback areas.

Mitigation Measure BR-6: Waters of the U.S. Setback

A minimum of a 50-foot setback (from top of bank or riparian dripline, whichever is greater) shall be maintained from the mapped OHWM features on the Project site. The setback shall be delineated with temporary ESA fencing (or similar) during ground disturbance activities.

Cultural Resources

To address the unlikely event that buried cultural resource deposits are discovered during Project activities, the following mitigation measure is proposed relating to inadvertent discovery procedures:

Mitigation Measure CR-1: Inadvertent Discovery Protocol

If cultural resources, such as lithic materials or ground stone, historic debris, building foundations, or bone are discovered during Project activities, work shall be stopped within 100 feet of the discovery. Contact will be made to the County, a professional archaeologist and representatives from the Tsunungwe Tribe. The professional historic resource consultant, Tribes and County officials will coordinate provide an assessment of the find and determine the significance and recommend next steps.

If human remains are discovered during Project activities, work will stop at the discovery location, within 100 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.

Geology and Soils

The following mitigation measure is proposed to address the unlikely event that buried paleontological resources are discovered during Project activities:

Mitigation Measure GEO-1: Inadvertent Discovery Protocol

In the event that paleontological resources are discovered, work shall be stopped within 100 feet of the discovery and a qualified paleontologist shall be notified. The paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in State CEQA Guidelines Section 15064.5. If fossilized materials are discovered during construction, excavations within 100 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agency to determine procedures that would be followed before construction is allowed to resume at the location of the find.

Tribal Cultural Resources

To address the unlikely event that buried tribal cultural resource deposits are discovered during Project activities, the following mitigation measure is proposed relating to inadvertent discovery procedures.

Mitigation Measure TCR-1: Inadvertent Discovery Protocol

If tribal cultural resources, such as lithic materials or ground stone, historic debris, building foundations, or bone are discovered during Project activities, work shall be stopped within 100 feet of the discovery. Contact will be made to the County, a professional archaeologist and representatives from the Tsunungwe Tribe. The professional historic resource consultant, Tribes and County officials will coordinate provide an assessment of the find and determine the significance and recommend next steps.

If human remains are discovered during Project activities, work will stop at the discovery location, within 100 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.

A Mitigation and Monitoring Report is attached.

2.5 Earlier Analyses

Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 16063(c)(3)(D). In this case a discussion should identify the following:

- a) Earlier analyses used. Identify earlier analyses and state where they are available for review.
 - 1. Humboldt County General Plan & EIR
 - 2. Humboldt County Zoning Ordinance
 - 3. CMMLUO and its Mitigated Negative Declaration for Medical Marijuana Land Use Ordinance – Phase IV – Commercial Cultivation of Cannabis for Medical Use

Items 1-3 are available for review at Humboldt County Planning Division.

Earlier analysis has been used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (CEQA Guidelines Section 15063 (c)(3)(D)).

- b) Impacts Adequately Addressed. Some of the effects from the above checklist were within the scope of and adequately analyzed in the document(s) listed in Section 2.5.a., pursuant to applicable legal standards.
- c) Mitigation Measures. It was not necessary to include mitigation measures, which were incorporated or refined from the document(s) listed in Section 2.5.a to reduce effects that are "Less than Significant with Mitigation Incorporated."

2.6 Source / Reference List

The following documents were used in the preparation of this Initial Study:

Angeloff, Nick. Archaeological Research and Supply Company. "A Cultural Resource Investigation Report for a Commercial Cultivation Permit for APN 524-091-002 Near Willow Creek." April 2020.

Bay Area Air Quality Management District. "BAAQMD California Environmental Quality Act Air Quality Guidelines." May 2017.

CalFire. "State Responsibility Area Map." Last accessed online 22 May, 2020. <https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>

California Department of Conservation. "Farmland Mapping & Monitoring Program." Last accessed online 21 May, 2020. <https://www.conservation.ca.gov/dlrp/fmmp>

California Department of Fish & Wildlife. "Natural Community Conservation Planning (NCCP)." Last accessed online 21 May, 2020. <https://wildlife.ca.gov/Conservation/Planning/NCCP>

California Department of Pesticide Regulation. Last accessed online 22 May, 2020. <https://www.cdpr.ca.gov/>

California Department of Pesticide Regulation. "Cannabis Pesticides that are legal to use." 2017. www.cdpr.ca.gov/cannabis

California Environmental Protection Agency. "Cortese List: Section 65962.5(a)." Last accessed online 22 May, 2020. <https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/>

California Geological Survey. "California Landslide Inventory" Last accessed online 22 May, 2020. <https://maps.conservation.ca.gov/cgs/lsi/>

California Geological Survey. "Fault Activity Map of California (2010)." Last accessed online 22 May, 2020. <https://maps.conservation.ca.gov/cgs/fam/>

California Government Legislature. "California Environmental Quality Act (CEQA) Statute and Guidelines." 2016.

California Government Legislature. "Health and Safety Code - HSC." Code Available Online. Last accessed online 21 May, 2020. <https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=HSC&tocTitle=+Health+and+Safety+Code+-+HSC>

California Government Legislature. "Public Resources Code PRC." Code Available Online. Last accessed online 21 May, 2020. <https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=PRC&tocTitle=+Public+Resources+Code+-+PRC>

California State Water Resource Control Board. "GeoTracker Web Map." Last accessed online 22 May, 2020. <https://geotracker.waterboards.ca.gov/>

California State Water Resource Control Board. "ORDER WQ 2017-0023-DWQ." 17 October, 2017.

Caltrans. "California State Scenic Highway System." Last accessed online 21 May, 2020. <https://www.arcgis.com/home/item.html?id=f0259b1ad0fe4093a5604c9b838a486a>

CalTrans. "Traffic Census Program." 2017. <https://dot.ca.gov/programs/traffic-operations/census>

Dirty Business Soil Consulting & Analysis, LLC. "Prime Agricultural Soil Assessment." 13 October, 2017.

Department of Toxic Substances Control. "DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List)" Last accessed online 22 May, 2020. <https://dtsc.ca.gov/dtscs-cortese-list/>

Department of Toxic Substances Control. "EnviroStor Web Map." Last accessed online 22 May, 2020. <https://www.envirostor.dtsc.ca.gov/public/>

Fisch, David. Fisch Drilling. "Hydrologic Connectivity Letters." 5 July, 2018.

Ho, Pang. PHA Transportation Consultants. "Sight Distance Analysis." 26 December, 2019.

Humboldt County Board of Supervisors. "A Codification of the General Ordinances of Humboldt County, California." Code accessed online using Code Publishing Company. Last accessed online 21 May, 2020. <https://humboldt.county.codes/Code>

Humboldt County Board of Supervisors. "Commercial Medical Marijuana Land Use Ordinance." Code accessed online using Code Publishing Company. Last accessed online 21 May, 2020. <https://humboldt.county.codes/Code>

Humboldt County Board of Supervisors. "Streamside Management Area Ordinance." Code accessed online using Code Publishing Company. Last accessed online 21 May, 2020. <https://humboldt.county.codes/Code>

Humboldt County Board of Supervisors. "Streamside Management Area and Wetlands Ordinance." Code accessed online using Code Publishing Company. Last accessed online 21 May, 2020. <https://humboldt.county.codes/Code>

Humboldt County Board of Supervisors. "Fire Safe Regulations Ordinance." Code accessed online using Code Publishing Company. Last accessed online 22 May, 2020. https://humboldt.county.codes/Code/3_Div11

Humboldt County Planning & Building Department. "Initial Study and Draft Mitigated Negative Declaration: Case Nos.:CUP16-022, SP16-032; Apps No. 10406."

Humboldt County Planning & Building Department. "Humboldt County Web GIS Map." Last accessed online 21 May, 2020. <https://humboldt.gov.org/1357/Web-GIS>

Humboldt County. "Humboldt County General Plan" 23 October, 2017. <https://humboldt.gov.org/205/General-Plan>

Leonoff v. Monterey County Bd. of Supervisors (1990) 222 Cal.App.3d 1337, 1358; *Sierra Club v. West Side Irrigation Dist.* (2005) 128 Cal.App.4th 690, 701-702; *Hines v. California Coastal Comm'n* (2010) 186 Cal.App.4th 830, 858.) (p. 71)

North Coast Unified Air Quality Management District (NCUAQMD). "District Rules & Regulations." Last accessed online 21 May, 2020. <http://www.ncuaqmd.org/index.php?page=rules.regulations>

North Coast Unified Air Quality Management District (NCUAQMD). "Criteria Pollutant Attainment Status." Last accessed online 21 May, 2020. <http://www.ncuaqmd.org/index.php?page=aqplanning.ceqa>

NRC.gov. "Biological Assessment Preparation Construction Noise Impact Assessment." 2012. <https://www.nrc.gov/docs/ML1225/ML12250A723.pdf>

Pearce, Matt. Los Angeles Times. "Does marijuana smell bad? An Oregon court issues ruling on 'olfactory assault'." 26 August, 2015. <https://www.latimes.com/nation/la-na-oregon-weed-stink-20150825-story.html>

Santa Barbara County Planning. "Cannabis Land Use Ordinance and Licensing Program Final Environmental Impact Report.: December 2017.

SHN Engineers & Geologists. "Biological Resources Assessment Outdoor Cultivation Project for Organic Liberty, LLC Willow Creek." April 2020.

SHN Engineers & Geologists. "Wetland and Other Waters Delineation Report and Wetland and Other Waters Delineation Report: Alternate Site 2." August 2017 with addendums on December 2017 and July 2019.

U.S. Department of Agriculture. Natural Resources Conservation Services. "Plant Guide California Oatgrass." 21 July, 2008.

U.S. Environmental Protection Agency. "Criteria Air Pollutants NAAQS Table." Last accessed online 21 May, 2020. <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

U.S. Fish & Wildlife Services. National Wild and Scenic River Systems. "Wild and Scenic Rivers Map." Last accessed online 21 May, 2020. <https://nps.maps.arcgis.com/apps/MapJournal/index.html?appid=ba6debd907c7431ea765071e9502d5ac#>

U.S. Fish & Wildlife Service. "ECOS Environmental Conservation Online System." Last accessed online 21 May, 2020. <https://ecos.fws.gov/ecp/>

2.7 Mitigation and Monitoring Report

HUMBOLDT COUNTY PLANNING & BUILDING DEPARTMENT MITIGATION MONITORING REPORT

Organic Liberty CA, LLC, Conditional Use Permits

APNs 524-073-003, 524-074-001, 524-091-002, 524-091-005, 524-091-006, 524-101-008, and 524-101-015; Record Number: PLN-12376-CUP; Apps. No. 12376

Record Number: PLN:12376-CUP

Assessor Parcel Numbers: 524-073-003, 524-074-001, 524-091-002, 524-091-005, 524-091-006, 524-101-008, and 524-101-015

Mitigation measures were incorporated into conditions of project approval for the above referenced project. The following is a list of these measures and a verification form that the conditions have been met. For conditions that require ongoing monitoring, attach the Monitoring Form for Continuing Requirements for subsequent verifications.

MITIGATION MEASURES:

Air Quality

AQ-1: Speed Limits

All vehicle speeds on unpaved areas shall be limited to 15 miles per hour.

| Implementation Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance | | Comments / Action Taken |
|--|----------------------|---------------|-------------------|------------|----|-------------------------|
| | | | | Yes | No | |
| During project initiation activity and project operations. | Continuous | | HCP&BD* | | | |

BIOLOGICAL RESOURCES

BR-1: Preoperation Special-Status Plant Surveys

Preoperation special-status plant surveys shall be conducted by a qualified botanist prior to the start of operation activities and within the typical blooming season or spring and early

summer (generally March/April to August) for easy identification. If special-status plant species are identified, the area shall be flagged for avoidance. If a special-status species is identified and cannot be fully avoided, a mitigation plan shall be prepared by a qualified botanist and approved by the County of Humboldt.

| Implementation Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance Yes No | Comments / Action Taken |
|---|---------------------------|---------------|-------------------|---------------------|-------------------------|
| Prior to the start of operation activities. | Once (prior to operation) | | HCP&BD* CDFW** | | |

BR-2: Preoperation Special Status Animal Surveys

Preoperation special-status wildlife surveys shall be conducted by a qualified biologist. The preoperation surveys shall be conducted no more than 30 days prior to the start of operation activities. If special-status wildlife species are identified, the area shall be flagged for avoidance. If a special-status species is identified and cannot be fully avoided, a mitigation plan shall be prepared by a qualified biologist and approved by the County of Humboldt.

| Implementation Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance Yes No | Comments / Action Taken |
|---|---------------------------|---------------|-------------------|---------------------|-------------------------|
| Prior to the start of operation activities. | Once (prior to operation) | | HCP&BD* CDFW** | | |

BR-3: Preoperation Bird Surveys

Project-related vegetation management should occur outside the bird nesting season, (February 15 through September 1). If project-related brush clearing or infrastructure work must occur during the breeding season, a preoperation nesting-bird survey for migratory birds, raptors, and northern spotted owls shall be conducted by a qualified biologist no more than two weeks prior to Project initiation within the Project area and a 500-foot buffer. The timing of surveys shall be determined in consultation with the California Department of Fish and Wildlife. If active nests are found, a no-disturbance buffer zone shall be established, the size of which, the biologist shall determine. Within this buffer zone, no operations shall take place until August 31 or until the biologist determines that the nest is no longer active.

| Implementation Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance Yes No | Comments / Action Taken |
|---------------------------|----------------------|---------------|-------------------|---------------------|-------------------------|
|---------------------------|----------------------|---------------|-------------------|---------------------|-------------------------|

| | | | | | |
|--|----------|--|-------------------|--|--|
| If vegetation removal is to occur during the bird nesting season (Feb 15 – Sept 1) | Annually | | HCP&BD* CDFW** | | |
|--|----------|--|-------------------|--|--|

BR-4: California Oat Grass Prairie Avoidance

The California oat grass prairie should be flagged and delineated prior to any project-related activity by a qualified botanist. Project activities should occur outside of the perimeter of the delineated California oat grass prairie. If project-related impacts are expected to occur within the California oat grass prairie, a mitigation and monitoring plan should be prepared by a qualified biologist for County approval prior to impacts.

| Implementation Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance Yes No | Comments / Action Taken |
|---|---------------------------|---------------|-------------------|---------------------|-------------------------|
| Prior to the start of operation activities. | Once (prior to operation) | | HCP&BD* CDFW** | | |

BR-5: Riparian Habitat Avoidance

All project-related activities should remain at least 50 feet away from the top of bank or edge of riparian dripline (whichever is greater) of the mapped seasonal drainages, and no vegetation removal should occur within these setback areas.

| Implementation Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance Yes No | Comments / Action Taken |
|---|---------------------------|---------------|-------------------|---------------------|-------------------------|
| Prior to the start of operation activities. | Once (prior to operation) | | HCP&BD* CDFW** | | |

BR-6: Waters of the U.S. Setback

A minimum of a 50-foot setback (from top of bank or riparian dripline, whichever is greater) shall be maintained from the mapped OHWM features on the Project site. The setback shall be delineated with temporary ESA fencing (or similar) during ground disturbance activities.

| Implementation Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance Yes No | Comments / Action Taken |
|--|----------------------|---------------|-------------------|---------------------|-------------------------|
| During project initiation activity and project operations. | Continuous | | HCP&BD* | | |

Cultural Resources

CR-1: Inadvertent Discovery Protocol

If cultural resources, such as lithic materials or ground stone, historic debris, building foundations, or bone are discovered during Project activities, work shall be stopped within 100 feet of the discovery. Contact will be made to the County, a professional archaeologist and representatives from the Tsunungwe Tribe. The professional historic resource consultant, Tribes and County officials will coordinate provide an assessment of the find and determine the significance and recommend next steps.

If human remains are discovered during Project activities, work will stop at the discovery location, within 100 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 Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance Yes No | Comments / Action Taken |
|---|----------------------|---------------|-------------------|---------------------|-------------------------|
| During project initiation and project operations. | Continuous | | HCP&BD* | | |

Geology and Soils

GEO-1: Inadvertent Discovery Protocol

In the event that paleontological resources are discovered, work shall be stopped within 100 feet of the discovery and a qualified paleontologist shall be notified. The paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in State CEQA Guidelines Section 15064.5. If fossilized materials are discovered during construction, excavations within 100 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agency to determine procedures that would be followed before construction is allowed to resume at the location of the find.

| Implementation Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance Yes No | Comments / Action Taken |
|---|----------------------|---------------|-------------------|---------------------|-------------------------|
| During project initiation and project operations. | Continuous | | HCP&BD* | | |

Tribal Cultural Resources

Mitigation Measure TCR-1: Inadvertent Discovery Protocol

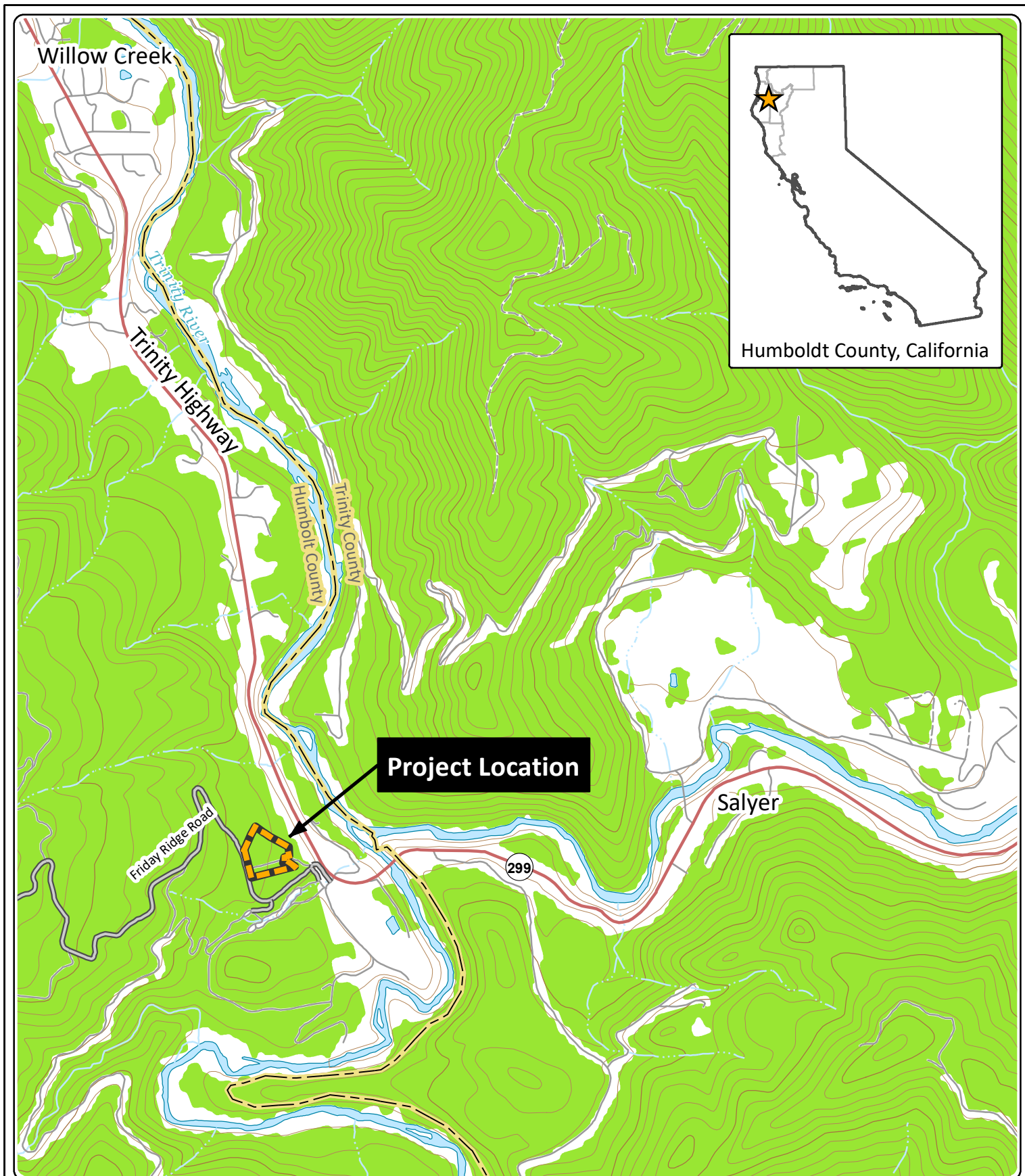
If cultural resources, such as lithic materials or ground stone, historic debris, building foundations, or bone are discovered during Project activities, work shall be stopped within 100 feet of the discovery. Contact will be made to the County, a professional archaeologist and representatives from the Tsunungwe Tribe. The professional historic resource consultant, Tribes and County officials will coordinate provide an assessment of the find and determine the significance and recommend next steps.

If human remains are discovered during Project activities, work will stop at the discovery location, within 100 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 Time Frame | Monitoring Frequency | Date Verified | To Be Verified By | Compliance Yes No | Comments / Action Taken |
|---|----------------------|---------------|-------------------|---------------------|-------------------------|
| During project initiation and project operations. | Continuous | | HCP&BD* | | |

* HCP&BD = Humboldt County Planning and Building Department

** CDFW = California Department of Fish & Wildlife



Data: United State Geological Survey, Salyer Quadrangle California 7.5'. 2015. Data Downloadable Online. Accessed [06/15/2018].

Legend:



Project Boundary

0 0.5 Miles



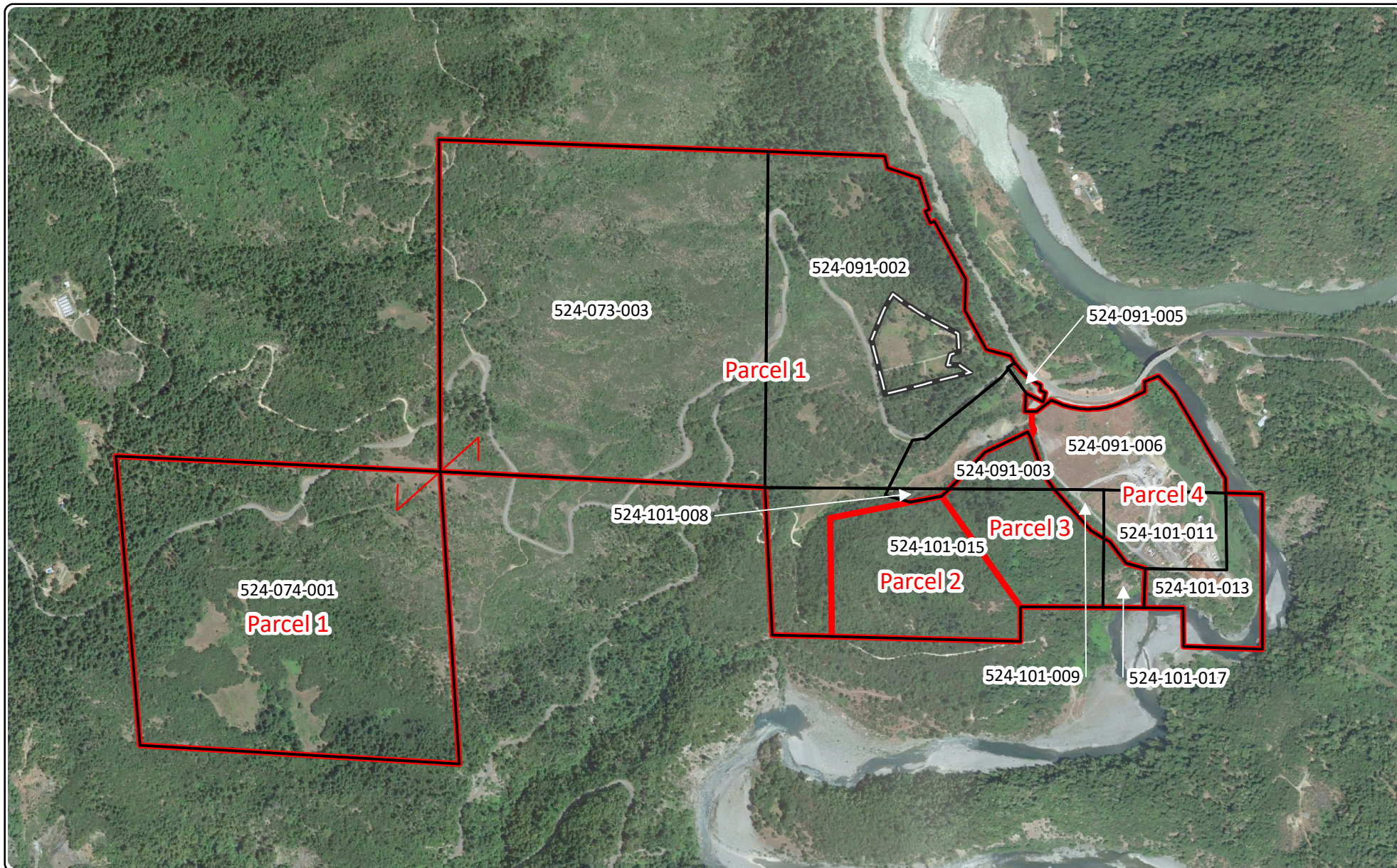
Site and Vicinity Map
Outdoor Cultivation Project
Organic Liberty, LLC
Humboldt County, California

Figure 1

4/24/2020

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

COMPASS LAND
GROUP



Aerial photo adapted from Google Earth Maps Imagery Date 5/27/2016.
Parcels mapped per Lot Line Adjustment & Merger by Kelly O'Hern Associates, May 2018.

Legend:

- Project Boundary (8.1 acres)
- Existing Legal Parcels
- Adjusted & Merged Legal Parcels

0 500 1,000 2,000 Feet



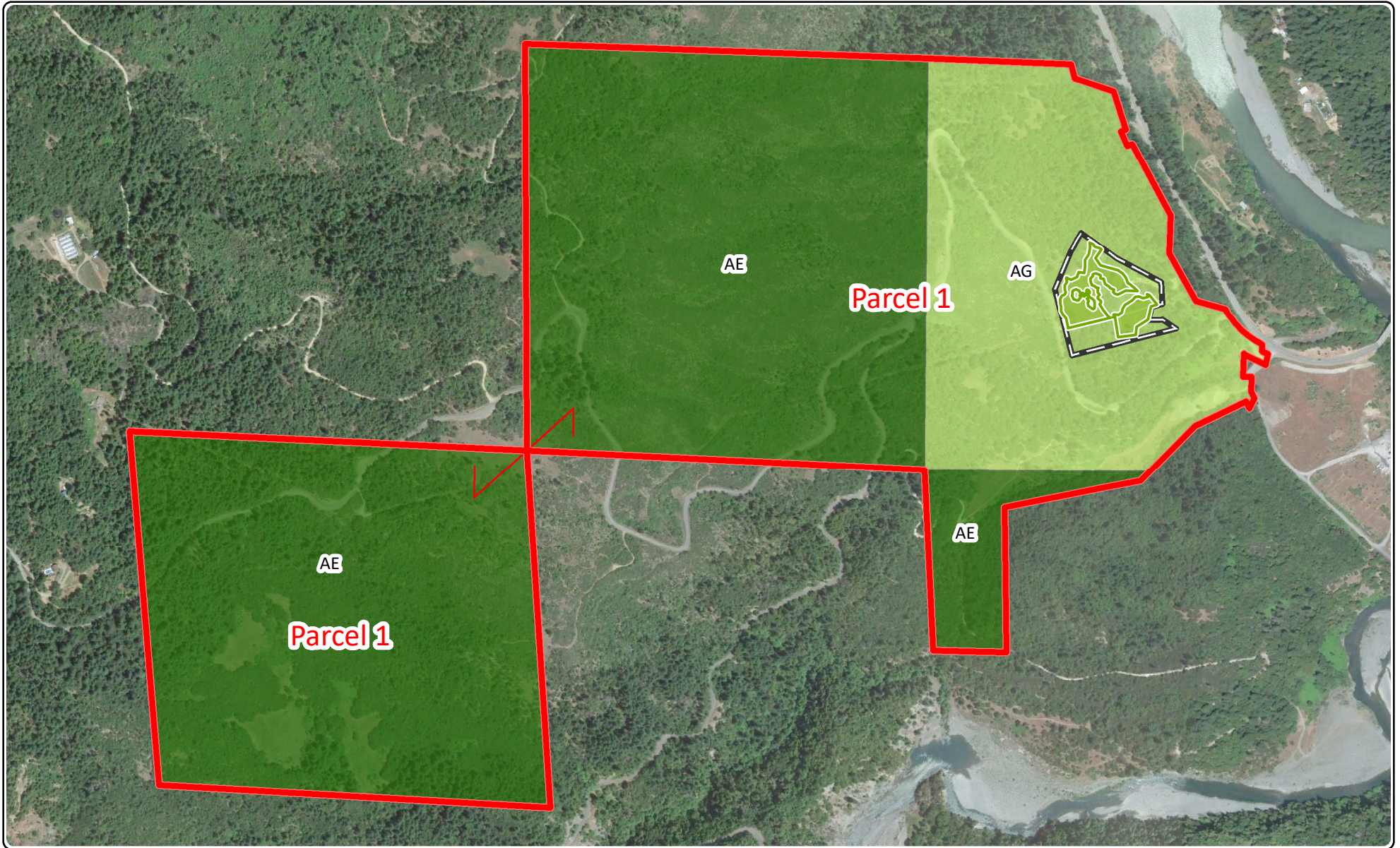
Adjusted Legal Parcels Map
Outdoor Cultivation Project
Organic Liberty, LLC
Humboldt County, California

Figure 2

4/24/2020




Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

COMPASS LAND
GROUP





Aerial photo adapted from Google Earth Maps Imagery Date 5/27/2016.
 Parcels mapped per Lot Line Adjustment & Merger by Kelly O'Hern Associates. May 2018.
 Humboldt County Building & Planning, Humboldt County GIS Zoning. 10/02/2017. Realigned to match Lot Line Adjustment & Merger by Kelly O'Hern Associates.

Legend:

-  Project Boundary (8.1 acres)
-  Cultivation Area (3.3 acres)
-  Adjusted Legal Parcel

Zoning Ordinance

-  Agriculture Exclusive (AE)
-  Agriculture General (AG)

0 400 800 1,600 Feet



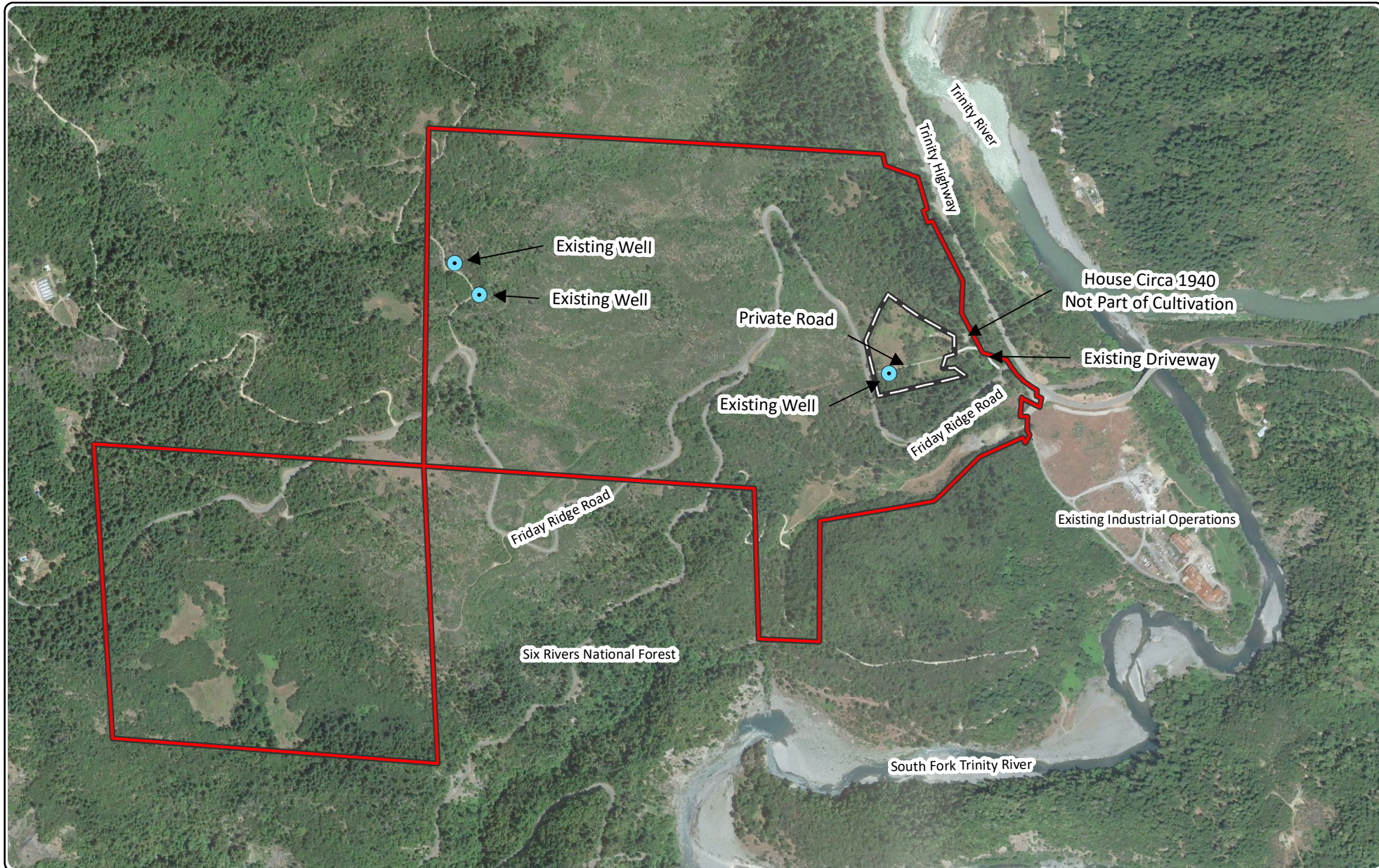
Zoning Map
Outdoor Cultivation Project
Organic Liberty, LLC
Humboldt County, California

Figure 3

4/24/2020

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

COMPASS LAND
 GROUP



Aerial photo adapted from Google Earth Maps Imagery Date 5/27/2016.

- Legend:
- Existing Well
 - Project Parcel
 - Project Boundary

Existing Conditions Site Map
Outdoor Cultivation Project
Organic Liberty, LLC
Humboldt County, California

Figure 4

4/24/2020

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

COMPASS LAND
GROUP

0 500 1,000 2,000 Feet





Data: Aerial photo adapted from Google Earth Maps Imagery Date 5/27/2016
 Young, J.C., 1978, Geology of the Willow Creek 15' quadrangle,
 Humboldt and Trinity Counties, California: California Division of
 Mines and Geology, Map Sheet 31, scale 1:62,500. Viewable Online.
 Accessed [06/14/2018].

Jg - Galice Formation
 Qt - Quaternary terrace gravels

Legend:

Project Parcel

Project Boundary

0 100 200 300 400 Feet

N

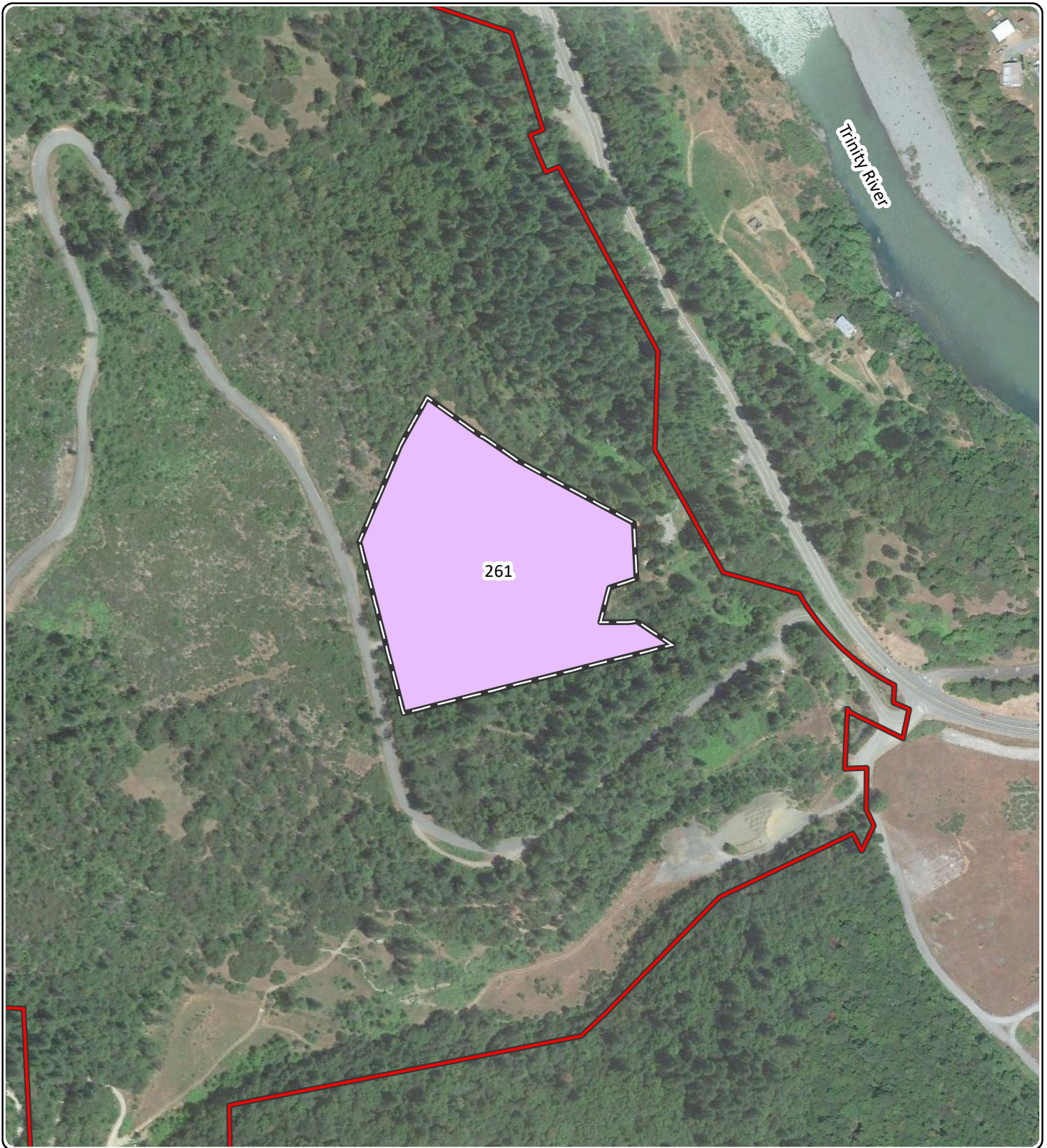
Site Geology Map
 Outdoor Cultivation Project
 Organic Liberty, LLC
 Humboldt County, California

Figure 5

4/24/2020

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

COMPASS LAND
 GROUP



Data: Aerial photo adapted from Google Earth Maps Imagery Date 5/27/2016.
 Soil Survey Staff, Natural Resources Conservation Service,
 United States Department of Agriculture.
 Soil Survey Geographic (SSURGO) database for Six Rivers National Forest Area, California.
 Available online. Accessed [06/13/2018].

NRCS Soil Survey
 261 - Holland-Goldridge families
 association, deep, 5 to 35 percent slopes

Legend:

Project Boundary

Project Parcel

0 100 200 300 400 Feet

N

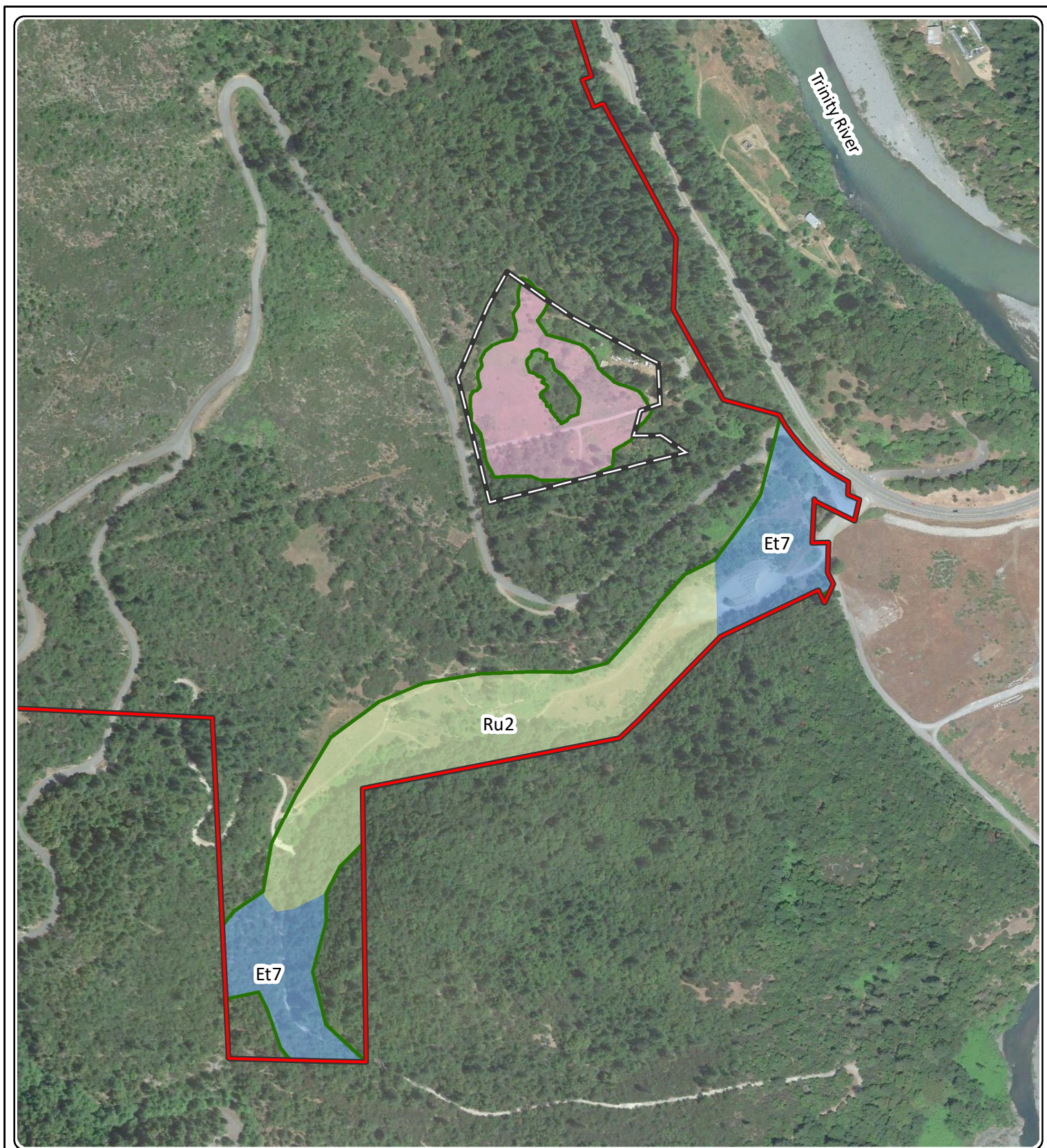
NRCS Soils Map
Outdoor Cultivation Project
Organic Liberty, LLC
Humboldt County, California

Figure 6 **4/24/2020**

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

COMPASS LAND
 GROUP

Projects\033 - Organic Liberty\OrganicLibertySoilPortrait.mxd



Data: Aerial photo adapted from Google Earth Maps Imagery Date 5/27/2016.
 Dirty Business Soil, Prime Agriculture Soil Assessment, 10/13/2018.
 Humboldt County Community Development Services, Humboldt County
 Agricultural Land Soils, 2001. Accessible Online.

Humboldt County Prime Agricultural Soil
 DBS Lab Tested Prime Agricultural Soil
 Et7 - Gravelly loam
 Ru2 - Silt loam

Legend:
 Project Boundary
 Total Prime Ag Soil (23.7 acres)
 Project Parcel

Prime Agricultural Soils Map
 Outdoor Cultivation Project
 Organic Liberty, LLC
 Humboldt County, California

Figure 7

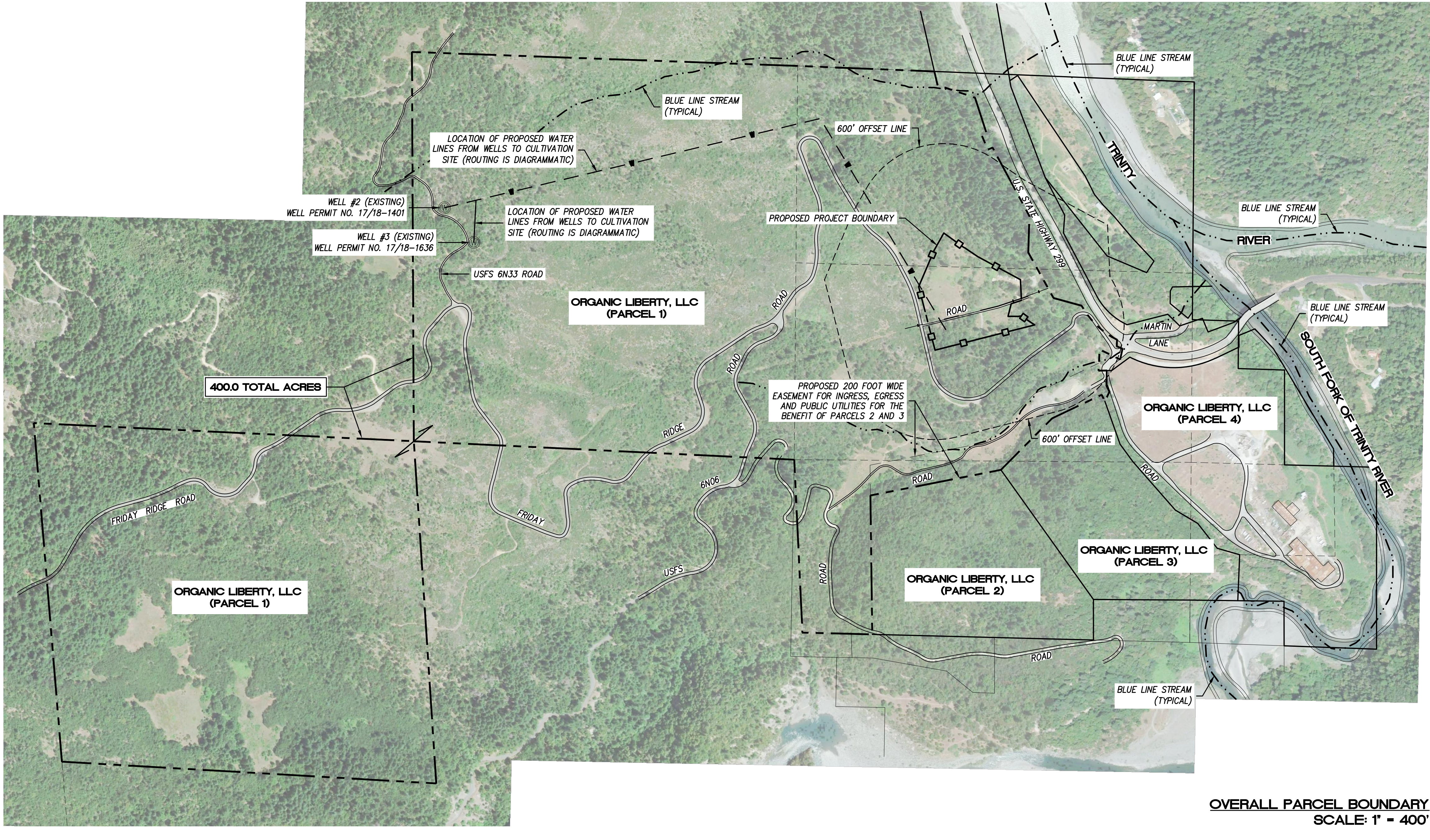
4/24/2020

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

COMPASS LAND
 GROUP

0 150 300 450 600 Feet

C:\Users\wayne\Documents\Chang Consultants\Friday Ridge.dwg | 2020-0423 | Organic Liberty 4-acre v2.dwg



GENERAL NOTES:

1. ACCORDING TO FEMA MAPPING THERE IS NO FLOOD MAP FOR THIS AREA.
2. PROPERTY LINES, ROAD, AND BUILDING LOCATIONS SHOWN ON THIS PLOT PLAN ARE PER AERIAL MAPPING AND ARE APPROXIMATE.
3. NO TREES TO BE REMOVED IN CULTIVATION AREA. WHERE TREES ARE LOCATED WITHIN THE CULTIVATION BOUNDARY, THEY WILL BE AVOIDED.
4. NO GRADING OR FILL REQUIRED.
5. CULTIVATION AREAS IS SET BACK AT LEAST 30 FEET FROM PROPERTY LINES.
6. THERE ARE NO OFF-SITE RESIDENCES WITHIN 300 FEET OF CULTIVATION SITE.
7. THERE ARE NO SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, OR PUBLIC PARKS WITHIN 600 FEET OF THE CULTIVATION SITE.
8. NO DRYING OR PROCESSING FACILITIES ARE PROPOSED. PROCESSING TO OCCUR AT A PERMITTED, OFFSITE LOCATION.
9. TOTAL CULTIVATION AREA IS APPROXIMATELY 3.3 ACRES.
10. TOTAL PARCEL AREA (FOLLOWING LOT LINE ADJUSTMENT) IS 400.0 ACRES
11. EXISTING APN BOUNDARIES TAKEN FROM HUMBOLDT COUNTY GIS. PROPOSED PARCEL BOUNDARIES TAKEN FROM LOT LINE ADJUSTMENT AND MERGER MAP PREPARED BY KELLY O'HERN ASSOCIATES DATED MAY 2018.

PROJECT DATA

OWNER/DEVELOPER: ORGANIC LIBERTY, LLC
501 W. BROADWAY #1750
SAN DIEGO, CA 92101

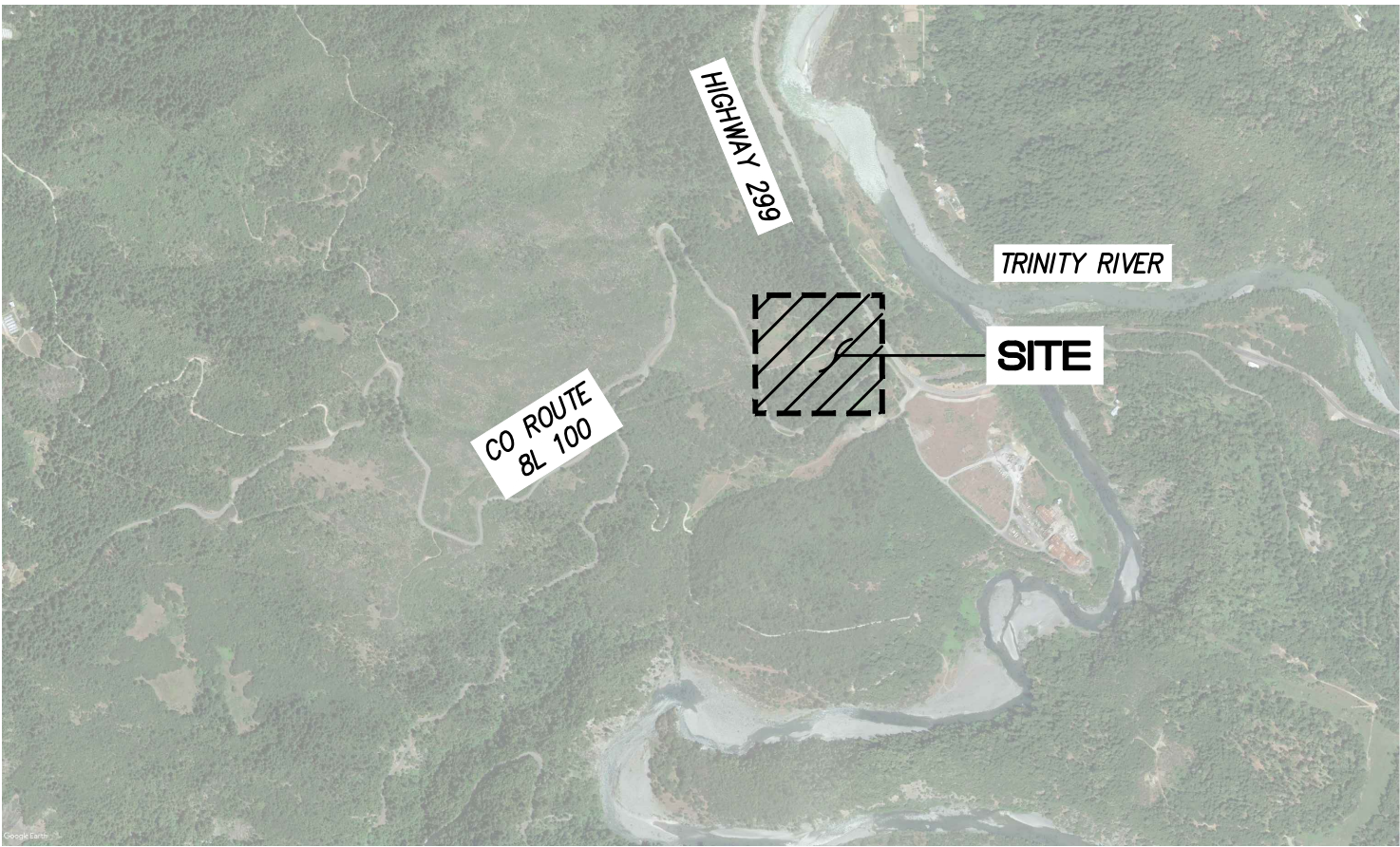
1. PARCEL LINES INDICATED HEREON ARE PER THE HUMBOLDT COUNTY GEOGRAPHIC INFORMATION SYSTEM. THESE PARCEL LINES ARE NOT BASED UPON A FIELD SURVEY AND SHOULD BE CONSIDERED APPROXIMATE ONLY.
2. PARCEL LINES WILL BE ADJUSTED PER LOT LINE ADJUSTMENTS. APNs WILL BE ASSIGNED BY HUMBOLDT COUNTY.

| Parcel | Before LLA & Merger Acreage ¹ | After LLA & Merger Acreage ² |
|-------------|---|--|
| 524-073-003 | 160.00 | |
| 524-074-001 | 135.50 | |
| 524-091-002 | 69.00 | |
| 524-091-005 | 1.683 | |
| 524-091-006 | 32.00 | |
| 524-101-008 | 1.00 | |
| 524-101-015 | 68.30 | |
| Parcel 1 | | 400.01 |

1 – Acreage from Parcel Quest assessor data.

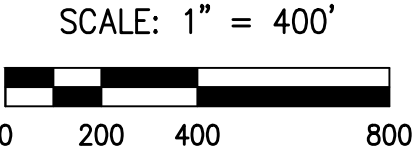
2 – Acreage from Lot Line Adjustment & Merger Map prepared by Kelly O'Hern Associates, May 2018.

Note: Parcel 1 is comprised of only a portion of 524-091-006, resulting in the acreage discrepancy between the pre and post merger totals.



VICINITY MAP
NOT TO SCALE

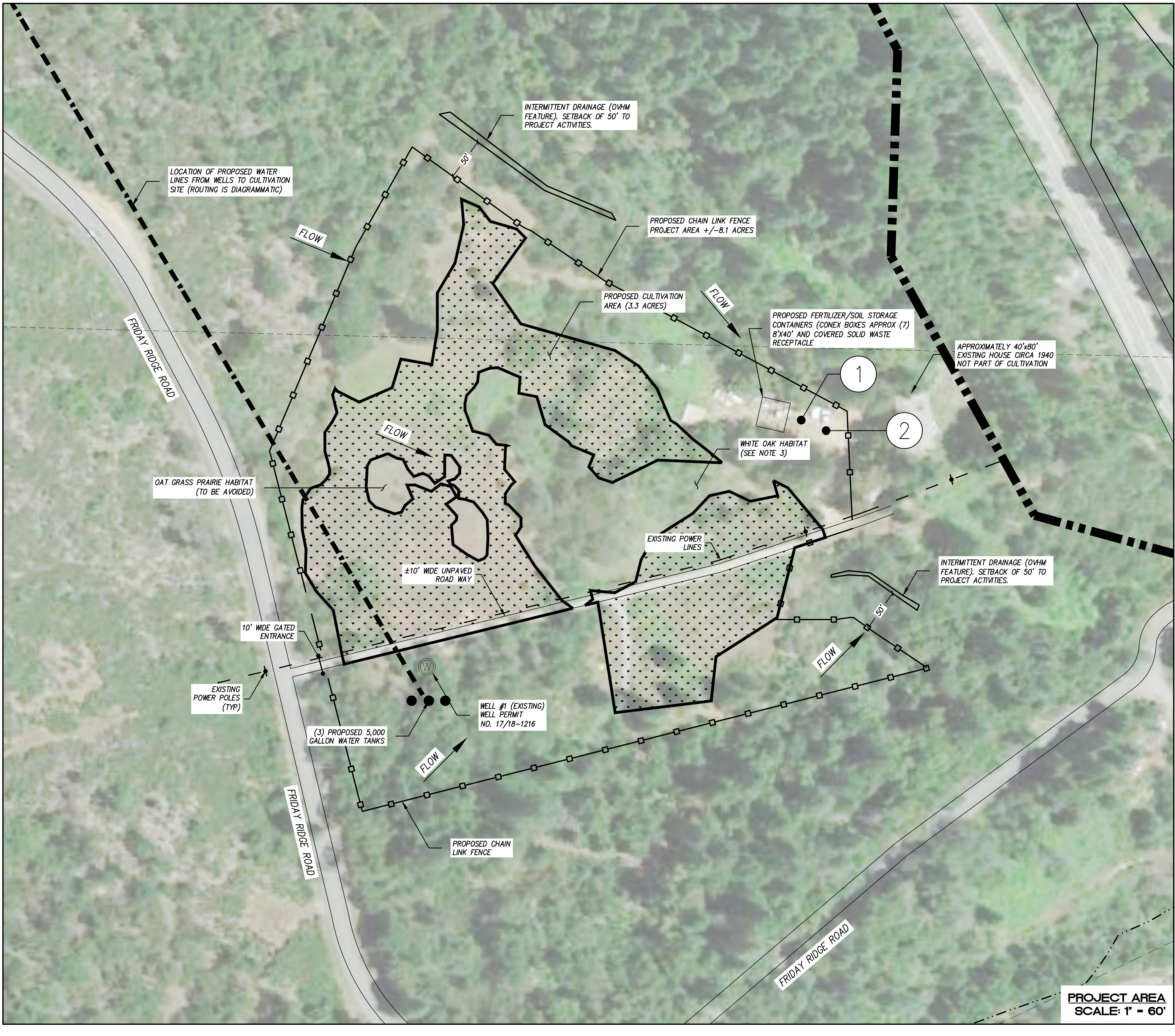
OVERALL PARCEL BOUNDARY
SCALE: 1" = 400'



PRELIMINARY

| VERIFY SCALES | | | |
|---|--|----------|------|
| BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY | | | |
| Chang Consultants Civil Engineering-Hydrology-Hydraulics-Sedimentation P.O. Box 9486 Reno, Nevada, CA 95502-4486 www.changconsultants.com | | | |
| T: 866 652-0700 F: 866 652-1602 info@changconsultants.com | | | |
| DSGN | | NO. | DATE |
| DR | | REVISION | BY |
| CHK | | | |
| APVD | | | |
| SITE PLAN - OVERALL PARCEL BOUNDARY OUTDOOR CULTIVATION PROJECT ORGANIC LIBERTY, LLC HUMBOLDT COUNTY, CALIFORNIA | | | |
| SHEET 1 | | | |
| SEQ 1 | | | |
| DATE 4/23/20 | | | |
| PROJ. NO. | | | |

C:\Users\wayne\Documents\Chang Consultants\Friday Ridge\dwg\2020-0423\organic liberty 4-acre v2.dwg

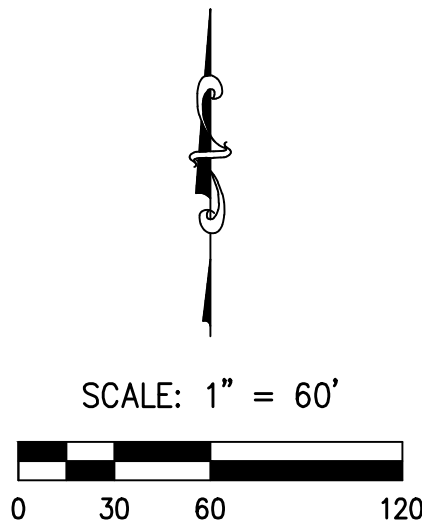


GENERAL NOTES:

1. ACCORDING TO FEMA MAPPING THERE IS NO FLOOD MAP FOR THIS AREA.
2. PROPERTY LINES, ROAD, AND BUILDING LOCATIONS SHOWN ON THIS PLOT PLAN ARE PER AERIAL MAPPING AND ARE APPROXIMATE.
3. NO TREES TO BE REMOVED IN CULTIVATION AREA. WHERE TREES ARE LOCATED WITHIN THE CULTIVATION BOUNDARY, THEY WILL BE AVOIDED. THE PLANTINGS AND/OR SMART POTS WILL BE LOCATED OUTSIDE THE DRIPLINE OF WHITE OAK TREES WITHIN THE PROJECT AREA.
4. NO GRADING OR FILL REQUIRED.
5. CULTIVATION AREAS IS SET BACK AT LEAST 30 FEET FROM PROPERTY LINES.
6. THERE ARE NO OFF-SITE RESIDENCES WITHIN 300 FEET OF CULTIVATION SITE.
7. THERE ARE NO SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, OR PUBLIC PARKS WITHIN 600 FEET OF THE CULTIVATION SITE.
8. NO DRYING OR PROCESSING FACILITIES ARE PROPOSED. PROCESSING TO OCCUR AT A PERMITTED, OFFSITE LOCATION.
9. TOTAL CULTIVATION AREA IS APPROXIMATELY 3.3 ACRES.
10. TOTAL PARCEL AREA (FOLLOWING LOT LINE ADJUSTMENT) IS 400.0 ACRES
11. EXISTING APN BOUNDARIES TAKEN FROM HUMBOLDT COUNTY GIS. PROPOSED PARCEL BOUNDARIES TAKEN FROM LOT LINE ADJUSTMENT AND MERGER MAP PREPARED BY KELLY O'HERN ASSOCIATES DATED MAY 2018.

CONSTRUCTION NOTES:

1. PROPOSED LOCATION OF TEMPORARY SANITATION FACILITIES
2. LOCATION OF ON-SITE PARKING SPACES. 2-3 RANCH VEHICLES ANTICIPATED TO PARK ONSITE ON A DAILY BASIS. DURING HARVEST, ADDITIONAL EMPLOYEE PARKING TO OCCUR ON ADJACENT PARCEL UNDER COMMON OWNERSHIP, WITH SHUTTLE SERVICE.



PRELIMINARY

| VERIFY SCALES | | | |
|--|--|----------|------|
| BAR IS ONE INCH ON ORIGINAL DRAWING | | | |
| IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY | | | |
| Chang Consultants Civil Engineering-Hydrology-Hydraulics-Sedimentation | | | |
| P.O. Box 9496 Humboldt, CA 99924-9496 T: 866 662-0700 F: 866 662-1002 www.changconsultants.com | | | |
| DSGN | | NO. | DATE |
| DR | | REVISION | BY |
| CHK | | | |
| APVD | | | |
| SITE PLAN - PROJECT AREA OUTDOOR CULTIVATION PROJECT ORGANIC LIBERTY, LLC HUMBOLDT COUNTY, CALIFORNIA | | | |
| SHEET 2 | | | |
| SEQ 1 | | | |
| DATE 4/23/20 | | | |
| PROJ. NO. | | | |

APPENDIX A – OPERATIONS PLAN

Commercial Cannabis Outdoor Cultivation Facility

APPS 12376 -- APN's: 524-073-003, 524-074-001, 524-091-002, 005, 006, 524-101-008, 015

227 Friday Ridge Road, Willow Creek, CA

Outdoor Cultivation Operations Plan & Manual

Rev. 4/27/2020

Table of Contents

| | |
|--|-----------|
| OPERATIONS PLAN & MANUAL | 3 |
| 1) County's Access to the Facility: | 3 |
| 2) Staffing & Staff Screening Processes | 3 |
| 3) Vehicle Trips: | 3 |
| 4) Days and Hours of Operation..... | 3 |
| 5) Security Measures | 4 |
| 6) Customer Screening, Registration, and Validation Process and Procedures. | 4 |
| 7) Inventory control processes and procedures | 5 |
| 8) Not Used: | 5 |
| 9) Description of chemicals stored or discharged: | 5 |
| 10) Consumer safety control processes, procedures, and documentation. | 7 |
| 12) Health and Safety:..... | 7 |
| 13) Solid Waste:..... | 10 |
| Cultivation Plan | 12 |

OPERATIONS PLAN & MANUAL

1) County's Access to the Facility:

- a) All facility personnel will cooperate fully with the County, its agents, and employees, to grant access to the facility to seek verification of the information contained within the permit, permit applications, the Operations Manual, and the Operating Standards at any time before or after the permits are issued.
- b) The Humboldt County Sheriff's Department will be authorized to have access to the facility's security surveillance video.

2) Staffing & Staff Screening Processes

- a) The facility will require up to 16 FTE employees.
- b) All candidates for staff positions will undergo criminal background checks as part of the standard screening process (to the extent allowed by law). To the maximum effect allowed by California and federal employment law, candidates with a felony criminal history or a history of drug abuse will be screened from employment.

3) Vehicle Trips:

- a) The combination of employees, delivery, and other traffic is expected to result in up to twenty-four (24) trips per day depending upon the season and stage of development.

4) Days and Hours of Operation

- a) The facility is not open to the public and will not accept visitors without a specific business purpose.
- b) Hours of operation will typically be from 7 AM to 7 PM; however, during periods of seasonally high workload, the hours of operations within the facility may increase to sixteen (16) hours per day (5:00 AM to 9:00 PM).

5) Location Map (See Site Plan)

6) Security Measures

- a) The security measures located on the premises will include the following:
 - i) Lighting -- outdoor lighting will be minimized and controlled by photocell switching, timers, infrared motion sensors and/or other state-of-the-art control systems to provide an appropriate light level at the exterior of the facilities to ensure that personnel and the video surveillance system can effectively monitor the space in and around the facility. Exterior lighting will be directed so as to not pose a nuisance to neighboring properties.
 - ii) Alarm – a security/burglar alarm system will be installed and operated at all appropriate times within the facility. When technologically feasible, this system will be monitored by a third-party remote central control station which will have the responsibility for automatically providing notification to law enforcement of any breach in the facility's security system.
 - iii) Access Control -- all entrances to the facility will be restricted by an access control system. Twenty-four (24) hour access to the facility by emergency responders (Fire Dept.) will be provided via a Knox Box if requested.
 - iv) Fencing – the cultivation area will be fenced with chain-link fencing.
 - v) The Safety of Staff -- working in concert together, the access control system, lighting, fencing, and alarm system, will provide a secure and protected facility for the staff to occupy.
 - vi) The security measures will secure the cannabis against diversion for non- commercial purposes by protecting against theft not only from intruders, but also from staff members and visitors. This is done by limiting access into the facility as necessary and by surveillance monitoring of personnel and visitors at all times when in close proximity to the product. Strict inventory control measures will also be engaged to prevent and detect diversion.
 - vii) All cannabis other than lab samples will be transported to state licensed and/or locally permitted licensed commercial cannabis processing, distribution, or manufacturing facilities by a state licensed and/or locally permitted licensed transport company.

7) Customer Screening, Registration, and Validation Process

and Procedures.

- a) The facility is for the purpose of cultivation only, and all products will be sold to state licensed facilities on a wholesale basis. As this is the case, the facility will not be open to the public and will not accept visitors without a specific pre-authorized business purpose. Only authorized representatives of state licensed customer facilities and appropriately licensed vendors will be allowed to enter the facility and be in close proximity to commercial cannabis, but in all cases supervised at all times. Any other vendors or maintenance workers allowed in the facility will be at all times escorted and sequestered from the finished products and harvested materials.

8) Inventory control processes and procedures

- a) The facilities inventory control process includes tracking of all incoming seedlings, including the name and state license number of the licensee, the testing lab data (as applicable), the strain, the supplier's product tracking identification data, and bill of lading from the transport company or nursery.
- b) All incoming plants will be assigned a unique number or identifier that can be cross-referenced to the above referenced data and stays with the product through the cultivation, harvesting, off-site processing, and to final sale to our authorized customers.
- c) All outgoing product will be tracked by SKU, batch number, invoice, and shipping documents; unless the product is not for sale and will be destroyed. The process for documenting product to be destroyed is described separately in this manual.
- d) The methodologies for tracking and inventory control of commercial cannabis may be modified subject to requirements imposed by the County, Department of Health, or Bureau of Cannabis Control, and will be adjusted accordingly as required under law.

9) Not Used:

10) Description of chemicals stored or discharged:

- a) The facility may handle routine agricultural products and support chemicals (e.g., fertilizers, pesticides, fuels, lubricants) in amounts requiring a Hazardous Material Business Plan (HMBP). If so, it will register its hazardous materials with the local agency using the Hazardous Materials/Waste Registration Form so that the local agency can evaluate the storage or use and give notice of any permits or storage/use fees that may apply.
- b) If the facility begins to handle any individual hazardous material or mixture containing a hazardous material which has a quantity at any time during the reporting year equal to or greater than those listed below, it will complete a Hazardous Material Business Plan (HMBP) and submit a copy to the local agency (Humboldt County DHHS Division of Environmental Health):
 - i) 500 pounds for solid hazardous materials. [H&SC §25503.5(a)]
 - ii) The following amounts for liquid hazardous materials:
 - (a) Lubricating oil as defined by H&SC §25503.5(b)(2)(B): 55 gallons of any type or 275 gallons aggregate quantity on site. H&SC §25503.5(b)(2)(A)]
 - (b) All others, including waste oil: 55 gallons. [H&SC §25503.5(a)]
 - iii) The following amounts of hazardous material gases:
 - (a) Oxygen, Nitrogen, or Nitrous Oxide stored/handled at a physician, dentist, podiatrist, veterinarian, or pharmacist's place of business: 1,000 cubic feet of each material on site. [H&SC §25503.5(b)(1)]
 - (b) All others: 200 cubic feet. [H&SC §25503.5(a)]
 - iv) Amounts of radioactive materials requiring an emergency plan under Parts 30, 40, or 70 of Title 10 Code of Federal Regulations or equal to or greater than applicable amounts specified in items 1, 2, or 3, above, whichever amount is smaller. [H&SC §25503.5(a)]
 - v) Applicable federal threshold planning quantities for extremely hazardous substances listed in 40 CFR Part 355, Appendix A.
- c) Disposal of any chemical, dangerous, or hazardous waste will be conducted in a manner consistent with federal, state and local laws, regulations, rules or other requirements. Any waste solvents or other chemicals will be handled and disposed of properly by *Safety-Kleen* or another highly qualified and properly licensed contractor.

11) Consumer safety control processes, procedures, and documentation.

- a) Product Quality Control:
 - i) In addition to meeting all state and local requirements for product quality control, the standard procedures for operation will include the following:
 - (1) Samples from each batch of finished products will be screened and tested by a state licensed and/or locally permitted licensed independent laboratory for pesticides, mold, and other undesirable qualities prior to release for sale to wholesalers and retailers.
 - (2) Documentation of all lab test results will be kept on file.
- b) Packaging:
 - i) All final packaging of processed goods will meet state requirements for packaging.

12) Health and Safety:

- a) Training:
 - i) Prior to engaging in the harvesting of any product, the licensee will have an owner or employee who has successfully passed an approved and accredited food safety certification examination as specified in Sections 113947.2 and 113947.3 of the California Retail Food Code. Food safety certification will be achieved by successfully passing an examination from an accredited food protection manager certification organization. The certification organization will be accredited by the American National Standards Institute as meeting the requirements of the Conference for Food Protection's "Standards for Accreditation of Food Protection Manager Certification Programs."

b) Employee Knowledge:

- i) All employees will have adequate knowledge of, and will be properly trained in, food safety as it relates to their assigned duties.
- ii) There will be at least one food safety certified owner or employee at the facility responsible for setting policy and providing training to employees. The certified owner or employee need not be present at the facility during all hours of operation.
- iii) The certified owner or employee will be responsible for ensuring that all employees who handle, or have responsibility for handling harvested commercial cannabis, have sufficient knowledge to ensure the safe handling of the product. The nature and extent of the knowledge that each employee is required to have may be tailored, as appropriate, to the employee's duties.

c) Facility Inspection:

- i) The facility will welcome inspection of the commercial cannabis cultivation area by the local fire department, building inspector, or code enforcement officer to confirm that no health or safety concerns are present. It is understood that the inspections may result in additional specific standards to meet local jurisdiction restrictions related to commercial cannabis. An annual fire safety inspection may result in the required installation of fire suppression devices, or other means necessary for adequate fire safety.

d) Sanitary Conditions:

The facility will take all reasonable measures and precautions to ensure the following:

- i) That any person who, by commercial examination or supervisory observation, is shown to have, or appears to have, an illness, open lesion, including boils, sores, or infected wounds, or any other abnormal source of microbial contamination for whom there is a reasonable possibility of contact with commercial cannabis will be excluded from any operations which may be expected to result in contamination until the condition is corrected;
- ii) Hand washing facilities will be clean, functional, and be furnished with running water. Hand washing facilities shall be located in close proximity to

- where good sanitary practices require employees to wash or sanitize their hands, and provide effective hand-cleaning and sanitizing preparations and sanitary towel service or suitable drying devices;
- iii) That all persons working in direct contact with commercial cannabis will conform to hygienic practices while on duty, including but not limited to:
 - (1) Maintaining adequate personal cleanliness;
 - (2) Washing hands thoroughly in an adequate hand washing area(s) before starting work and at any other time when the hands may have become soiled or contaminated; and
 - (3) Refraining from having direct contact with commercial cannabis if the person has or may have an illness, open lesion(s), including boils, sores, or infected wounds, or any other abnormal source of microbial contamination, until such condition is corrected.
 - iv) That waste is properly removed and the operating systems for waste disposal are maintained in an adequate manner so that they do not constitute a source of contamination in areas where cannabis is exposed;
 - v) That there is appropriate lighting in all areas where commercial cannabis is stored, and where equipment or utensils are cleaned;
 - vi) That there is adequate screening or other protection against the entry of pests. Rubbish will be disposed of so as to minimize the development of odor and minimize the potential for the waste becoming an attractant, harborage, or breeding place for pests;
 - vii) That fixtures and other facilities are maintained in a sanitary condition;
 - viii) That toxic cleaning compounds, sanitizing agents, and other chemicals will be identified, held, stored and disposed of in a manner that protects against contamination of cannabis in a manner that is in accordance with any applicable local, state or federal law, rule, regulation or ordinance;
 - ix) That all operations will be conducted in accordance with adequate sanitation principles;
 - x) That employees are provided with adequate and readily accessible toilet facilities that are maintained in a sanitary condition and good repair; and
 - xi) That any cannabis or cannabis waste that can support the rapid growth of undesirable microorganisms are held in a manner that prevents the growth of these microorganisms.

13) Solid Waste:

- a) Refuse will be sorted to divert recyclables such as paper, plastic, glass, and metals from the waste stream. Those recyclables will be taken to a recycling center for recycling.
- b) The remaining solid wastes will be collected and deposited into a solid waste receptacle for temporary storage, which will be kept covered. The solid waste will be removed from the site no less frequently than weekly and disposed of at an authorized waste transfer facility. The solid waste receptacle will be sized appropriately for the volume of waste generated and may be adjusted in size periodically as conditions warrant due to production cycles and seasonal factors.

14) Disposal of Product Waste and Destroyed Product:

- a) Methods to make waste unusable and unrecognizable.
 - i) Cannabis waste will be made unusable and unrecognizable prior to leaving the facility through one of the following methods unless another method is prescribed by the County of Humboldt or the State of California:
 - (1) Grinding and/or mixing with other plant materials for composting; or if required;
 - (2) Grinding and incorporating the cannabis waste with non-consumable, solid wastes listed below such that the resulting mixture is at least 50 percent non-cannabis waste:
 - (a) Non-recyclable solid waste;
 - (b) Grease or other compostable oil waste;
 - (c) Bokashi, or other compost activators;
 - (d) Other wastes approved by the State Licensing Authority that will render the cannabis waste unusable and unrecognizable as cannabis; and
 - (e) Soil.
 - ii) The methodology for destroying and disposing of cannabis waste shall be in compliance with all state regulatory requirements.
- b) Records of destroyed product:

- i) Records of destroyed raw materials and product will be kept and cross-referenced by batch number and SKU and/or another unique identifier. The weight or volume, as appropriate, will be recorded along with the method of disposal.
- ii) The methodology for recording destroyed cannabis waste shall be in compliance with all state regulatory requirements.

Cultivation Plan

15) Basic Requirements

- a) Water Quality, Conservation, & Use
 - i) Description of water source, storage, irrigation plan, and projected water usage.
 - (1) Water for irrigation will be supplied by three existing permitted on-site groundwater wells. Well #1 (County Permit Number 17/18-1216) is located east of Friday Ridge Road within the project area. Well #1 is completed to a depth of two hundred twenty (220) feet and has an estimated yield of five (5) gallons per minute according to the Well Completion Report. Well #2 (County Permit Number 17/18-1401) is located on the western edge of current APN 524-073-003. Well #2 is completed to a depth of two hundred twenty (220) feet and has an estimated yield of fifteen (15) gallons per minute according to the Well Completion Report. Well #3 (County Permit Number 17/18-1636) is located on the western edge of current APN 524-073-003, south of Well #2. Well #3 is completed to a depth of two hundred (200) feet and has an estimated yield of twenty (20) gallons per minute according to the Well Completion Report. The wells are located between 1,500 feet (Well #1) and 4,000 feet (Wells #2 and #3) from the Trinity River and are completed to depths greater than two hundred (200) feet below ground surface and beneath a confining layer of competent rock. As such, the groundwater wells are not hydrologically connected to the Trinity River or its tributaries.
 - (2) Water will be pumped from the wells to temporary holding tanks for regulating water pressure, and piped from the tank to the cultivation site. Short term water storage may occur in three (3) 5,000-gallon above ground water storage tanks, as shown in the Site Plan. If necessary, supplemental water will be supplied by new non-jurisdictional water wells.
 - (3) No diversionary sources of water are proposed to be used; therefore, the standard forbearance period from May 15 through October 15 for diversionary sources does not apply to this project.
 - (4) At all times, water will be applied using no more than agronomic rates.

(5) Project Water Usage (Cubic Feet per month):

The Project's estimated irrigation water use, by month, is shown below.

| PROJECTED IRRIGATION WATER USAGE | | | | | | | |
|----------------------------------|--------------------|---------|---------|---------|---------|-----------|---------|
| | Month ¹ | | | | | | |
| | April | May | June | July | August | September | October |
| Gallons | 419,000 | 494,000 | 501,000 | 509,000 | 456,000 | 359,000 | 277,000 |
| Acre-Feet | 1.3 | 1.5 | 1.5 | 1.6 | 1.4 | 1.1 | 0.8 |

Notes:

1. No irrigation water expected during the months of November through March.

- (6) If required by Cal Fire, water will be stored on site for fire protection purposes in the requisite amounts.
 - ii) A copy of the Notice of Intent and Monitoring Self-Certification and other documents filed with the North Coast Regional Water Quality Control Board demonstrating enrollment either has been or will be provided.
 - iii) An approval from the RWQCB has been or will be sought through enrollment pursuant to State Water Resources Control Board (SWRCB) Order WQ 2017-0023-DWQ. The facility will comply with all applicable water quality control measures in the order.
 - iv) No permits, licenses or registrations with the State Water Resources Control Board, Division of Water Rights are required in connection with this Project.
 - v) The applicant/operator acknowledges that the County reserves the right to reduce the size of the area allowed for cultivation under any clearance or permit issued in accordance with this Section in the event that environmental conditions, such as a sustained drought or low flows in the watershed will not support diversions for irrigation.
- b) Drainage, Run-off, and Erosion Control:
- i) Drainage, Run-off, and Erosion Control will all be managed within the RWQCB's requirements for dischargers.
 - ii) Site maintenance, erosion control and drainage features may include the

following:

- (1) Roads will be maintained as appropriate (with adequate surfacing and drainage features) to avoid developing surface ruts, gullies, or surface erosion that results in sediment delivery to surface waters.
- (2) Roads, driveways, trails, and other defined corridors for foot or vehicle traffic of any kind will have adequate ditch relief drains or rolling dips and/or other measures to prevent or minimize erosion along the flow paths and at their respective outlets.
- (3) Roads and other features will be maintained so that surface runoff drains away from potentially unstable slopes or earthen fills. Where road runoff cannot be drained away from an unstable feature, an engineered structure or system will be installed to ensure that surface flows will not cause slope failure.
- (4) Roads, clearings and work areas (cleared/developed areas with the potential for sediment erosion and transport) will be maintained so that they are hydrologically disconnected, as feasible, from surface waters, including wetlands, ephemeral, intermittent and perennial streams.
- (5) Ditch relief drains, rolling dip outlets, and road pad or terrace surfaces will be maintained to promote infiltration/dispersal of outflows and have no apparent erosion or evidence of soil transport to receiving waters.
- (6) Stockpiled construction materials, if necessary, will be stored in a location and manner so as to prevent their transport to receiving waters.

c) Watershed and habitat protection:

- i) Watershed and habitat protection will be provided through compliance with the RWQCB's requirements associated with their respective permits and agreements.

d) Storage of fertilizers, pesticides, and other regulated products:

- i) Storage and use of fertilizers and pesticides will be conducted in accordance with the BPTC measures of SWRCB Order WQ 2017-0023-DWQ, which include requirements to apply fertilizers and soil amendments at only the proper agronomic rates, and to store materials in a manner that is protected from rainfall and erosion.

- (1) Fertilizers, potting soils, compost, and other soils and soil amendments

will be stored in fully enclosed, watertight, shipping containers in which they cannot enter or be transported into surface waters and such that nutrients or other pollutants cannot be leached into groundwater.

- (2) Pesticides/Herbicides: Under California law, the only pesticide products not illegal to use on cannabis are those that contain an active ingredient that is exempt from residue tolerance requirements and either registered and labeled for a broad enough use to include use on cannabis or exempt from registration requirements as a minimum risk pesticide under FIFRA section 25(b) and California Code of Regulations, title 3, section 6147. For the purpose of compliance with conditions of this Order, any uses of pesticide products will be consistent with product labelling and any products on the site will be placed, used, and stored in a manner that ensures that they will not enter or be released into surface or ground waters.

- (3) Fertilizers and Soil Amendments:

- (a) Fertilizers, potting soils, compost, and other soils and soil amendments will be stored in locations and in a manner in which they cannot enter or be transported into surface waters and such that nutrients or other pollutants cannot be leached into groundwater.
- (b) Fertilizers and soil amendments will be applied and used per packaging instructions and/or at proper agronomic rates.
- (c) Cultivation areas will be maintained so as to prevent nutrients from leaving the site during the growing season and post-harvest.

- e) Soils Management Plan:

- i) Soils used for outdoor cultivation will be refortified after harvest by means of regenerative farming practices so that it may be used again for future cultivation, and the cycle repeated as many times as feasible to minimize the amount of imported soil necessary. In the event that soil cannot be reused, it will be disposed of appropriately as solid waste in compliance with state and local law.

- f) Electrical Power:

- i) The site is on the electrical grid. Generator power will not be used for cultivation.

- g) Cultivation Activities:

- i) Cultivation activities are described as “Outdoor” as defined in Humboldt

County's CMMLUO.

h) Schedule of activities:

- (1) The outdoor cultivation using all-natural sunlight will have one or two cultivation cycle(s) during the year generally beginning in April and ending in mid-late October. Plants will be planted in the existing natural soil and/or in smart-pots or similar containers resting on the existing soil. Raised beds may also be used in some locations.
- (2) Activities will include preparation for planting and propagation, planting seeds and immature plants in the native soil and pots, plant care, and harvesting.

i) Cultivation-related wastes

- i) Cultivation related wastes including, but not limited to, empty soil bags, soil amendment bags, fertilizer bags and containers, empty plant pots or containers, dead or harvested plant waste, and spent growth medium will, for as long as they remain on the site, be stored at locations where they will not enter or be blown into surface waters, and in a manner that ensures that residues and pollutants within those materials do not migrate or leach into surface water or groundwaters.

j) Refuse and human waste

- i) Refuse and garbage will be stored in a location and manner that prevents its discharge to receiving waters and prevents any leachate or contact water from entering or percolating to receiving waters.
- ii) Garbage and refuse will be disposed of at an appropriate waste disposal location (see "Solid Waste" Section above for more details).

16) General Performance Requirements:

a) Water Quality – See "Water Quality, Conservation, & Use" above.

b) Setbacks –

- i) The area of cannabis cultivation is located as shown on the application site plan, appropriately set back at least 30 feet from any property line (unless adjoining parcel is of common ownership), and more than 600 feet from any School, School Bus Stop, Church or other Place of Religious Worship, Public Park, or Tribal Cultural Resource as requested by a tribal THPO.
- ii) Cultivation areas and associated facilities observe all required setbacks from

watercourses, wetlands and Environmentally Sensitive Habitat Areas, as described within sections 313-33 and 313-38 of the code, as well as applicable resource protection policies. Where enhanced, reduced, or modified watercourse or wetland setbacks have been agreed to by the operator and RWQCB under enrollment pursuant to NCRWQB Order No. 2017-0023 and/or preparation of a Water Resources Protection Plan, these may control and supersede any setback applied pursuant to 314-61.1.

c) Land Use –

- i) The cultivation is located on land with a zoning classification of AG.

d) Chemical, Hazardous, and Dangerous Materials –

- i) Operator will refrain from the improper storage or use of any fuels, fertilizer, pesticide, fungicide, rodenticide, or herbicide. It is recognized that hazardous materials and wastes from agricultural businesses are regulated by the Humboldt County Environmental Health Division, that administers the Hazardous Materials program as one of the Certified Unified Program Agencies (CUPA).

e) Electrical Generators:

- i) Electrical Generators are not planned to be used at this facility.

17) Cultivation Operations Performance Standards:

a) Labor:

- i) Pursuant to the Medicinal and Adult Use Cannabis Regulation and Safety Act (“MAUCRSA”), Health and Safety Code section 19322(a)(9), the applicant hereby declares that it is an ‘agricultural employer,’ as defined in the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 (Part 3.5 commencing with Section 1140) of Division 2 of the Labor Code), to the extent not prohibited by law.”
- ii) In addition to the above declaration of status as an “Agricultural Employer” per Labor Code Sections 1140-1166.3, the applicant/employer hereby agrees to comply with all applicable federal, state, and local laws and regulations governing California agricultural employers, which may include: federal and state wage and hour laws, CAL/OSHA, OSHA, California Agricultural Labor Relations Act, and the Humboldt County Code

(including the Building Code).

b) Processing Practices:

- i) After being harvested, commercial cannabis is taken to an off-site CMMLUO permitted processing facility where it is trimmed, hung to dry, processed, cured and sorted.

c) Employee/Worker Safety

- i) Regarding employees engaging in commercial cannabis cultivation and processing, the licensee/employer will comply with the following Employee Safety Practices:

- (1) Cultivation operations will implement safety protocols and provide all employees with adequate safety training relevant to their specific job functions, which may include:

- (a) Emergency action response planning as necessary;
 - (b) Employee accident reporting and investigation policies;
 - (c) Fire prevention;
 - (d) Hazard communication policies, including maintenance of material safety data sheets (MSDS);
 - (e) Materials handling policies;
 - (f) Job hazard analyses; and
 - (g) Personal protective equipment policies, including respiratory protection.

d) Emergency Contact List:

- i) The licensee/employer will visibly post and maintain an emergency contact list which includes at a minimum:
 - (1) Operation manager contacts;
 - (2) Emergency responder contacts;
 - (3) Poison control contacts.

e) Safe Drinking Water, Toilets, & Sanitary Facilities:

- i) At all times, employees will have access to safe drinking water and toilets and hand washing facilities that comply with applicable federal, state, and local laws and regulations. The licensee/employer will contract with a professional temporary sanitation facilities services provider to provide and maintain toilet and hand washing facilities in accordance with the

requirements of Cal-OSHA and ADA/California Accessibility regulations.

f) On-Site Housing:

- i) Any and all on site-housing provided to employees, if any, will comply with all applicable federal, state, and local laws and regulations. There is no intent to provide on-site housing to workers at this time.

APPENDIX B – COUNTY WELL PERMITS



RECEIVED

DEC 11 2017

HUMBOLDT CO. DIVISION
OF ENVIRONMENTAL HEALTH

Division of Environmental Health

2 Street - Suite 100 - Eureka, CA 95501

Phone: 707-445-6215 - Toll Free: 800-963-9241

Fax: 707-441-5699

envhealth@co.humboldt.ca.us

**WATER WELL APPLICATION
CONSTRUCTION – REPAIR – DESTRUCTION**

1718-1216

The Well Permit will be returned to the property owner when approved by
Humboldt County Division of Environmental Health (DEH)

Instructions:

1. Complete both sides and submit the Water Well Application with required fee. Include Well Driller's signature and property owner's signature.
2. Work on a well shall not be started prior to approval of the Water Well Application by DEH.
3. Any changes made to the location of a new well shall be approved by DEH prior to commencement of drilling.
4. Well Driller shall notify DEH a minimum of 24 hours prior to sealing the annular space.

| | | | |
|---|---|---|-------------------------------|
| Site Address | <u>229 Friday Ridge Rd</u> | APN | <u>524-091-002-000</u> |
| City/State/Zip | <u>Willow Creek Ca 95573</u> | CA | <u>95573</u> |
| Directions to Site | <u>Rt on Friday Ridge Rd, Rt 1st Driveway</u> | | |
| Applicant | <u>Organic Liberty LLC</u> | Contact | <u>Matt Primm</u> |
| Mailing Address | <u>501 West Broadway Ste 1750</u> | Work Phone | <u>916 236 0048</u> |
| City/State/Zip | <u>San Diego Ca 92101</u> | Cell Phone | <u>mprimm@bremerwhyte.com</u> |
| Property Owner | | Home Phone | |
| Mailing Address | <u>Same</u> | Work Phone | |
| City/State/Zip | | Cell Phone | |
| I hereby grant 'right-of-entry' for inspection purposes | | <u>[Signature]</u> | |
| Drilling Contractor | <u>Fisch Drilling</u> | C-57 License # | <u>083865</u> |
| I hereby agree to comply with all laws and regulations of the County of Humboldt and the State of California Department of Water Resources Bulletin 74 pertaining to water well construction. I will contact Humboldt County Division of Environmental Health (DEH) when I commence work. Within 30 days after completion of work, I will furnish DEH a report of the work performed. | | | |
| Well Driller Signature: | | <u>[Signature]</u> | |
| Would driller like a copy of approved application? | | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| <input checked="" type="checkbox"/> U.S. Mail address: | | | |
| <input type="checkbox"/> Email address: | | | |
| Type of Application: | Construction: | Intended Use: | |
| <input checked="" type="checkbox"/> Construction | Estimated Depth (ft.) | <input type="checkbox"/> Domestic - private | |
| <input type="checkbox"/> Destruction | Diameter (in.) | <input type="checkbox"/> Community Supply | |
| <input type="checkbox"/> Repair/Modification | Depth of Seal (ft.) | <input type="checkbox"/> Irrigation | |
| | Sealing Material | <input type="checkbox"/> Other | |

2722

| | | |
|---|--|--|
| Estimated Work Dates: Start _____ Completion _____ | Size: Diameter (in.) _____ Material _____ | Type of Sewage System: <input type="checkbox"/> Community Sewer <input type="checkbox"/> OWTS (Septic) Distance from well site to OWTS _____ |
| Special Requirements/Comments: _____ _____ _____ _____ | | |
| PLOT PLAN | | |
| Coastal Zone: <input type="checkbox"/> Yes <input type="checkbox"/> No | | |

PE 2722

FOR OFFICE USE ONLY

| | | |
|--|--|--|
| Fee: <u>373.</u> Date: <u>12/11/17</u> Receipt: <u>confirmation #180233</u> Project #: <u>17/18-1216</u> Paid by: <u>Isiah O'Donnell</u> | Site Approved by: <u><i>A. M. O'Leary</i></u> Site Approved Date: <u>12/21/17</u> Sealed to Depth of: _____ Seal observed: <input type="checkbox"/> Yes <input type="checkbox"/> No Final Approved Date: _____ | |
|--|--|--|



RECEIVED

MAR 26 2018

Environmental Health

100 H Street, Suite 100, Eureka, CA 95501

phone: (707) 445-6215 fax: (707) 441-5699

HUMBOLDT CO. DIVISION
OF ENVIRONMENTAL HEALTH

WATER WELL APPLICATION

17/18-1636

CONSTRUCTION – REPAIR – DESTRUCTION

The Well Permit will be returned to the property owner when approved by
Humboldt County Division of Environmental Health (DEH)

Instructions:

1. Complete pages 1 and 2 of the application and submit the required fee with the Well Permit application, including Well Driller's signature and property owner's signature.
2. Work on the well shall not be started prior to approval of the Well Permit Application by DEH.
3. Any changes made to the location of a new well shall be approved by DEH prior to commencement of drilling.
4. DEH shall be notified by the Well Driller a minimum of 24 hours prior to sealing the annular space.

| | | |
|---|-------------------------------------|--|
| Site Address | <u>Friday Ridge Road</u> | APN <u>524-073-003</u> |
| City/State/Zip | <u>Willow Creek, CA 95573</u> | |
| Directions to Site | <u>#5</u> | |
| Applicant | <u>FISCH DRILLING</u> | Contact <u>CHRIS FISCH</u> |
| Mailing Address | <u>3150 JOHNSON RD</u> | Work Phone <u>(707) 768-9800</u> |
| City/State/Zip | <u>HYDESVILLE, CA 95547</u> | Cell Phone <u>(707) 601-3042</u> |
| Property Owner | <u>Organic Liberty, LLC</u> | Home Phone <u>619-236-0048</u> |
| Mailing Address | <u>501 West Broadway Suite 1750</u> | Work Phone _____ |
| City/State/Zip | <u>San Diego, CA 92101</u> | Cell Phone _____ |
| I hereby grant 'right-of-entry' for inspection purposes _____ | | |
| Drilling | C-57 | |
| Contractor <u>FISCH DRILLING</u> | License # <u>683865</u> | |
| I hereby agree to comply with all laws and regulations of the County of Humboldt and the State of California Department of Water Resources Bulletin 74 pertaining to water well construction. I will contact Humboldt County Division of Environmental Health (DEH) when I commence work. Within 30 days after completion of work, I will furnish DEH a report of the work performed. | | |
| Well Driller Signature: | <u>Chris Fisch</u> | |
| Would driller like a copy of approved application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | |
| <input type="checkbox"/> U.S. Mail address: _____ | | |
| <input checked="" type="checkbox"/> Email address: <u>chris@fischdrilling.com</u> | | |
| Type of Application: | Construction: | Intended Use: |
| <input checked="" type="checkbox"/> Construction | Estimated Depth (ft.) _____ | <input type="checkbox"/> Domestic - private |
| <input type="checkbox"/> Destruction | Diameter (in.) <u>10"</u> | <input type="checkbox"/> Community Supply |
| <input type="checkbox"/> Repair/Modification | Depth of Seal (ft.) <u>20'</u> | <input checked="" type="checkbox"/> Irrigation |
| | Sealing Material <u>Bentonite</u> | <input type="checkbox"/> Other _____ |

| | | |
|------------------------------|--------------------------|---|
| Estimated Work Dates: | Casing: | Type of Sewage System: |
| Start _____ | Diameter (in.) <u>5"</u> | <input type="checkbox"/> Community Sewer |
| Completion _____ | Material <u>PVC</u> | <input checked="" type="checkbox"/> OWTS (Septic) |
| | | Distance from well site to OWTS <u>none</u> |

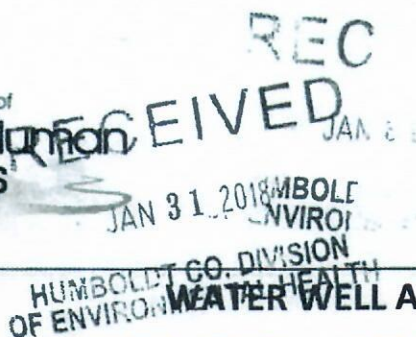
Special Requirements/Comments:

PLOT PLAN

✓ # 16388

FOR OFFICE USE ONLY

| | |
|--------------------------------|---|
| Fee: <u>B 373⁰⁰</u> | Site Approved by: <u>AMolofsky</u> |
| Date: <u>3-26-18</u> | Site Approved Date: <u>3/28/18</u> |
| Receipt: <u>706323</u> | Sealed to Depth of: _____ |
| Project #: _____ | Seal observed: <input type="checkbox"/> Yes <input type="checkbox"/> No |
| | Final Approved Date: _____ |



Environmental Health
100 H Street, Suite 100, Eureka, CA 95501
phone: (707) 445-6215 fax: (707) 441-5699

WATER WELL APPLICATION

CONSTRUCTION – REPAIR – DESTRUCTION

The Well Permit will be returned to the property owner when approved by
Humboldt County Division of Environmental Health (DEH)

1718-1401

Instructions:

1. Complete pages 1 and 2 of the application and submit the required fee with the Well Permit application, including Well Driller's signature and property owner's signature.
2. Work on the well shall not be started prior to approval of the Well Permit Application by DEH.
3. Any changes made to the location of a new well shall be approved by DEH prior to commencement of drilling.
4. DEH shall be notified by the Well Driller a minimum of 24 hours prior to sealing the annular space.

| | | | |
|---|--------------------------------------|--|-----------------------|
| Site Address | <u>Friday Ridge Rd. & Hwy 99</u> | APN | <u>524-073-003</u> |
| City/State/Zip | <u>Willow Creek, CA 95573</u> | | |
| Directions to Site | | | |
| Applicant | <u>FISCH DRILLING</u> | Contact | <u>CHRIS FISCH</u> |
| Mailing Address | <u>3150 JOHNSON RD</u> | Work Phone | <u>(707) 768-9800</u> |
| City/State/Zip | <u>HYDESVILLE, CA 95547</u> | Cell Phone | <u>(707) 601-3042</u> |
| Property Owner | <u>Organic Liberty, LLC</u> | Home Phone | |
| Mailing Address | <u>501 West Broadway Suite 1750</u> | Work Phone | |
| City/State/Zip | <u>San Diego, CA 92101</u> | Cell Phone | <u>916-236-0048</u> |
| I hereby grant 'right-of-entry' for inspection purposes _____ | | | |
| Drilling Contractor | <u>FISCH DRILLING</u> | C-57 License # | <u>683865</u> |
| I hereby agree to comply with all laws and regulations of the County of Humboldt and the State of California Department of Water Resources Bulletin 74 pertaining to water well construction. I will contact Humboldt County Division of Environmental Health (DEH) when I commence work. Within 30 days after completion of work, I will furnish DEH a report of the work performed. | | | |
| Well Driller Signature: <u>Chris Fisch</u> | | | |
| Would driller like a copy of approved application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| <input type="checkbox"/> U.S. Mail address: _____ | | | |
| <input checked="" type="checkbox"/> Email address: <u>chris@fischdrilling.com</u> | | | |
| Type of Application: | Construction: | Intended Use: | |
| <input checked="" type="checkbox"/> Construction | Estimated Depth (ft.) _____ | <input checked="" type="checkbox"/> Domestic - private | |
| <input type="checkbox"/> Destruction | Diameter (in.) <u>10"</u> | <input type="checkbox"/> Community Supply | |
| <input type="checkbox"/> Repair/Modification | Depth of Seal (ft.) <u>20'</u> | <input type="checkbox"/> Irrigation | |
| | Sealing Material <u>Bentonite</u> | <input type="checkbox"/> Other _____ | |



| | | |
|------------------------------|--------------------------|---|
| Estimated Work Dates: | Casing: | Type of Sewage System: |
| Start _____ | Diameter (in.) <u>5"</u> | <input type="checkbox"/> Community Sewer |
| Completion _____ | Material <u>PVC</u> | <input checked="" type="checkbox"/> OWTS (Septic) |
| | | Distance from well site to OWTS <u>none</u> |

Special Requirements/Comments:

PLOT PLAN

17/18-1401

| | |
|----------------------------|---|
| FOR OFFICE USE ONLY | |
| Fee: <u>\$ 373.00</u> | Site Approved by: <u>A. Molodtsov</u> |
| Date: <u>1-31-18</u> | Site Approved Date: <u>2/7/18</u> |
| Receipt: <u>705939</u> | Sealed to Depth of: _____ |
| Project #: _____ | Seal observed: <input type="checkbox"/> Yes <input type="checkbox"/> No |
| | Final Approved Date: _____ |

paid for by Fisch Drilling

FISCH DRILLING

3150 Johnson Rd.

Hydesville, CA 95547

Invoice

| DATE | INVOICE NO. |
|----------|-------------|
| 1/5/2018 | W1953 |

| BILL TO |
|--|
| Organic Liberty, LLC 501 West Broadway, Suite 1750 San Diego, CA 92101 |

PAID

| P.O. NO. | TERMS | DUE DATE |
|-------------|----------------|----------|
| 524-091-002 | Due on receipt | 1/5/2018 |

| QTY | DESCRIPTION | RATE | AMOUNT |
|---|-------------------------------------|--------------|--------------------|
| 1 | Set up and Take Down Equipment | 3,000.00 | 3,000.00 |
| 1 | Drive Shoe For Driving Steel Casing | 225.00 | 225.00 |
| 60 | Steel Casing | 70.00 | 4,200.00 |
| 60 | 4" PVC Inside Steel Casing | 25.00 | 1,500.00 |
| 160 | 4" PVC Under Steel Casing | 40.00 | 6,400.00 |
| 1 | CK# 10423 Credit Applied | -2,754.00 | -2,754.00 |
| Questions regarding this invoice. Call Chris (707)768-9800 | | Total | \$12,571.00 |

State of California
Well Completion Report
 Form DWR 188 Submitted 1/19/2018
 WCR2018-000543

Owner's Well Number 1 Date Work Began 01/04/2018 Date Work Ended 01/12/2018
 Local Permit Agency Humboldt County Department of Health & Human Services - Land Use Program
 Secondary Permit Agency _____ Permit Number 17/18-1216 Permit Date 12/21/2017

| Well Owner (must remain confidential pursuant to Water Code 13752) | | Planned Use and Activity |
|--|--|--------------------------|
| Name <u>ORGANIC LIBERTY, LLC,</u> | Activity <u>New Well</u> | |
| Mailing Address <u>501 West Broadway Ste 1750</u> | Planned Use <u>Water Supply Irrigation - Agriculture</u> | |
| City <u>San Diego</u> State <u>CA</u> Zip <u>92101</u> | | |

| Well Location | | | |
|---|--------------------------------|--------------------------------------|----------------------|
| Address <u>229 Friday Ridge RD</u> | | APN <u>524-091-002</u> | |
| City <u>Willow Creek</u> | Zip <u>95573</u> | County <u>Humboldt</u> | Township <u>06 N</u> |
| Latitude _____ N | Longitude _____ W | Range <u>05 E</u> | Section <u>15</u> |
| Dec. Lat. <u>40.8883880</u> | Dec. Long. <u>-123.6086720</u> | Baseline Meridian <u>Humboldt</u> | |
| Vertical Datum _____ Horizontal Datum <u>WGS84</u> | | Ground Surface Elevation _____ | |
| Location Accuracy _____ Location Determination Method _____ | | Elevation Accuracy _____ | |
| | | Elevation Determination Method _____ | |

| Borehole Information | | Water Level and Yield of Completed Well | |
|--|---------------------------|---|----------------------------------|
| Orientation <u>Vertical</u> | Specify _____ | Depth to first water <u>14</u> (Feet below surface) | |
| Drilling Method <u>Other - Under-ream Down-Hole Hammer</u> | Drilling Fluid <u>Air</u> | Depth to Static _____ | |
| Total Depth of Boring <u>220</u> Feet | | Water Level <u>12</u> (Feet) | Date Measured <u>01/12/2018</u> |
| Total Depth of Completed Well <u>220</u> Feet | | Estimated Yield* <u>5</u> (GPM) | Test Type <u>Air Lift</u> |
| | | Test Length <u>4</u> (Hours) | Total Drawdown <u>208</u> (feet) |
| *May not be representative of a well's long term yield. | | | |

| Geologic Log - Free Form | | |
|------------------------------------|-----|------------------|
| Depth from Surface Feet to Feet | | Description |
| 0 | 4 | top soil |
| 4 | 11 | brown silty clay |
| 11 | 33 | over berdin |
| 33 | 133 | shale |
| 133 | 167 | basalt |
| 167 | 220 | shale |

| Casings | | | | | | | | | | |
|----------|------------------------------------|-----|-------------|------------------|--|----------------------------|------------------------------|--------------|------------------------------|-------------|
| Casing # | Depth from Surface Feet to Feet | | Casing Type | Material | Casings Specificatons | Wall Thickness (inches) | Outside Diameter (inches) | Screen Type | Slot Size if any (inches) | Description |
| 1 | 0 | 40 | Blank | Low Carbon Steel | Grade: ASTM A53 | 0.188 | 6 | | | |
| 1 | 40 | 60 | Screen | Low Carbon Steel | Grade: ASTM A53 | 0.188 | 6 | Milled Slots | 0.05 | |
| 2 | 0 | 40 | Blank | PVC | OD: 4.500 in. SDR: 21 Thickness: 0.214 in. | 0.214 | 4.5 | | | |
| 2 | 40 | 220 | Screen | PVC | OD: 4.500 in. SDR: 21 Thickness: 0.214 in. | 0.214 | 4.5 | Milled Slots | 0.032 | |

| Annular Material | | | | | | |
|------------------------------------|-----|-------------|-------------------|------------------|---------------|--|
| Depth from Surface Feet to Feet | | Fill | Fill Type Details | Filter Pack Size | Description | |
| 0 | 20 | Bentonite | Other Bentonite | | Sanitary Seal | |
| 20 | 220 | Filter Pack | Other Gravel Pack | 3/8 Inch | Pea Gravel | |

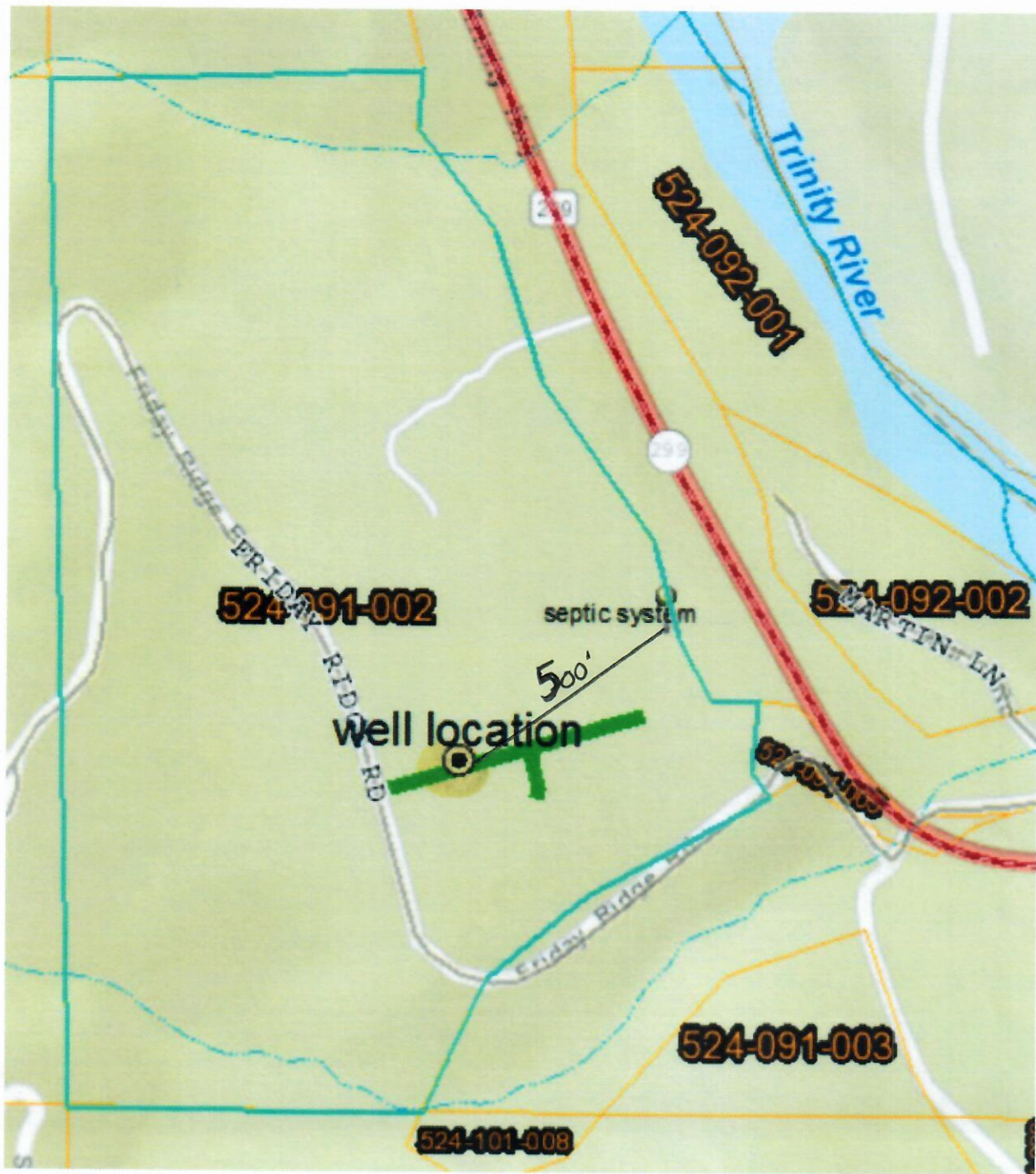
Other Observations:

| Borehole Specifications | | |
|------------------------------------|-----|----------------------------|
| Depth from Surface Feet to Feet | | Borehole Diameter (inches) |
| 0 | 220 | 10 |

| Certification Statement | | | |
|--|--------------------------------------|-------------|---------------------|
| I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief | | | |
| Name <u>FISCH DRILLING</u> | | | |
| Person, Firm or Corporation | | | |
| 3150 JOHNSON ROAD | | HYDESVILLE | CA 95547 |
| Address | | City | State Zip |
| Signed | <i>electronic signature received</i> | 01/19/2018 | 683865 |
| C-57 Licensed Water Well Contractor | | Date Signed | C-57 License Number |

| Attachments |
|-------------------------|
| Scan.pdf - Location Map |

| DWR Use Only | | | | | | | | | | | |
|----------------------|-------------------|-----------|-------------------|--|--|--|--|-----------------------|--|--|--|
| CSG # | State Well Number | Site Code | Local Well Number | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Latitude Deg/Min/Sec | | | | | | | | Longitude Deg/Min/Sec | | | |
| TRS: | | | | | | | | | | | |
| APN: | | | | | | | | | | | |



Organic Liberty, LLC
229 Friday Ridge Road, Willow Creek
APN 524-091-002

FISCH DRILLING

3150 Johnson Rd.

Hydesville, CA 95547

Invoice

| DATE | INVOICE NO. |
|-----------|-------------|
| 2/16/2018 | W1959 |

| BILL TO |
|--|
| Organic Liberty, LLC 501 West Broadway, Suite 1750 San Diego, CA 92101 |

PAID
ck 108227
3/5/18

| P.O. NO. | TERMS | DUE DATE |
|-------------|----------------|-----------|
| 524-073-003 | Due on receipt | 2/16/2018 |

| QTY | DESCRIPTION | RATE | AMOUNT |
|-----|------------------------------------|----------|----------|
| 1 | Set up and Take Down Equipment | 3,000.00 | 3,000.00 |
| 1 | Humboldt County Permit #17/18-1401 | 373.00 | 373.00 |
| 220 | Completed Water Well Footage | 40.00 | 8,800.00 |

Questions regarding this invoice. Call Chris
(707)768-9800

| | |
|-------------------------|-------------|
| Total | \$12,173.00 |
| Payments/Credits | -\$6,175.00 |
| Balance Due | \$5,998.00 |

State of California
Well Completion Report
 Form DWR 188 Submitted 3/13/2018
 WCR2018-002421

Owner's Well Number 1 Date Work Began 02/15/2018 Date Work Ended 03/12/2018
 Local Permit Agency Humboldt County Department of Health & Human Services - Land Use Program
 Secondary Permit Agency _____ Permit Number 17/18-1401 Permit Date 02/07/2018

| Well Owner (must remain confidential pursuant to Water Code 13752) | | | | Planned Use and Activity | |
|--|--|-----------------|--|--|--|
| Name <u>ORGANIC LIBERTY, LLC,</u> | | | | Activity <u>New Well</u> | |
| Mailing Address <u>501 West Broadway Suite 1750</u> | | | | Planned Use <u>Water Supply Irrigation - Agriculture</u> | |
| City <u>San Diego</u> | | State <u>CA</u> | | Zip <u>92101</u> | |

| Well Location | | | | | |
|--|--|-------------------------------------|------------------------|--------------------------------------|--|
| Address <u>0 Friday Ridge Road & Hwy 299</u> | | | APN <u>524-073-003</u> | | |
| City <u>Willow Creek</u> | | Zip <u>95573</u> | | County <u>Humboldt</u> | |
| Latitude _____ N | | Longitude _____ W | | Township <u>07 N</u> | |
| Range <u>04 E</u> | | Section <u>12</u> | | | |
| Baseline Meridian <u>Humboldt</u> | | Ground Surface Elevation _____ | | | |
| Dec. Lat. <u>40.9983300</u> | | Dec. Long. <u>-123.6816600</u> | | Elevation Accuracy _____ | |
| Vertical Datum _____ | | Horizontal Datum <u>WGS84</u> | | Elevation Determination Method _____ | |
| Location Accuracy _____ | | Location Determination Method _____ | | | |

| Borehole Information | | | Water Level and Yield of Completed Well | | |
|--|--|--|---|--|--|
| Orientation <u>Vertical</u> Specify _____ | | | Depth to first water <u>118</u> (Feet below surface) | | |
| Drilling Method <u>Direct Rotary</u> Drilling Fluid <u>Air</u> | | | Depth to Static _____ | | |
| Total Depth of Boring <u>220</u> Feet | | | Water Level <u>114</u> (Feet) Date Measured <u>03/12/2018</u> | | |
| Total Depth of Completed Well <u>220</u> Feet | | | Estimated Yield* <u>15</u> (GPM) Test Type <u>Air Lift</u> | | |
| | | | Test Length <u>4</u> (Hours) Total Drawdown <u>106</u> (feet) | | |
| *May not be representative of a well's long term yield. | | | | | |

| Geologic Log - Free Form | | |
|------------------------------------|-----|----------------------|
| Depth from Surface Feet to Feet | | Description |
| 0 | 4 | top soil |
| 4 | 13 | brown clay |
| 13 | 26 | fractured basalt |
| 26 | 121 | serpentine |
| 121 | 132 | fractured serpentine |
| 132 | 192 | fractured shale |
| 192 | 220 | shaley clay |



GRAPHIC SCALE



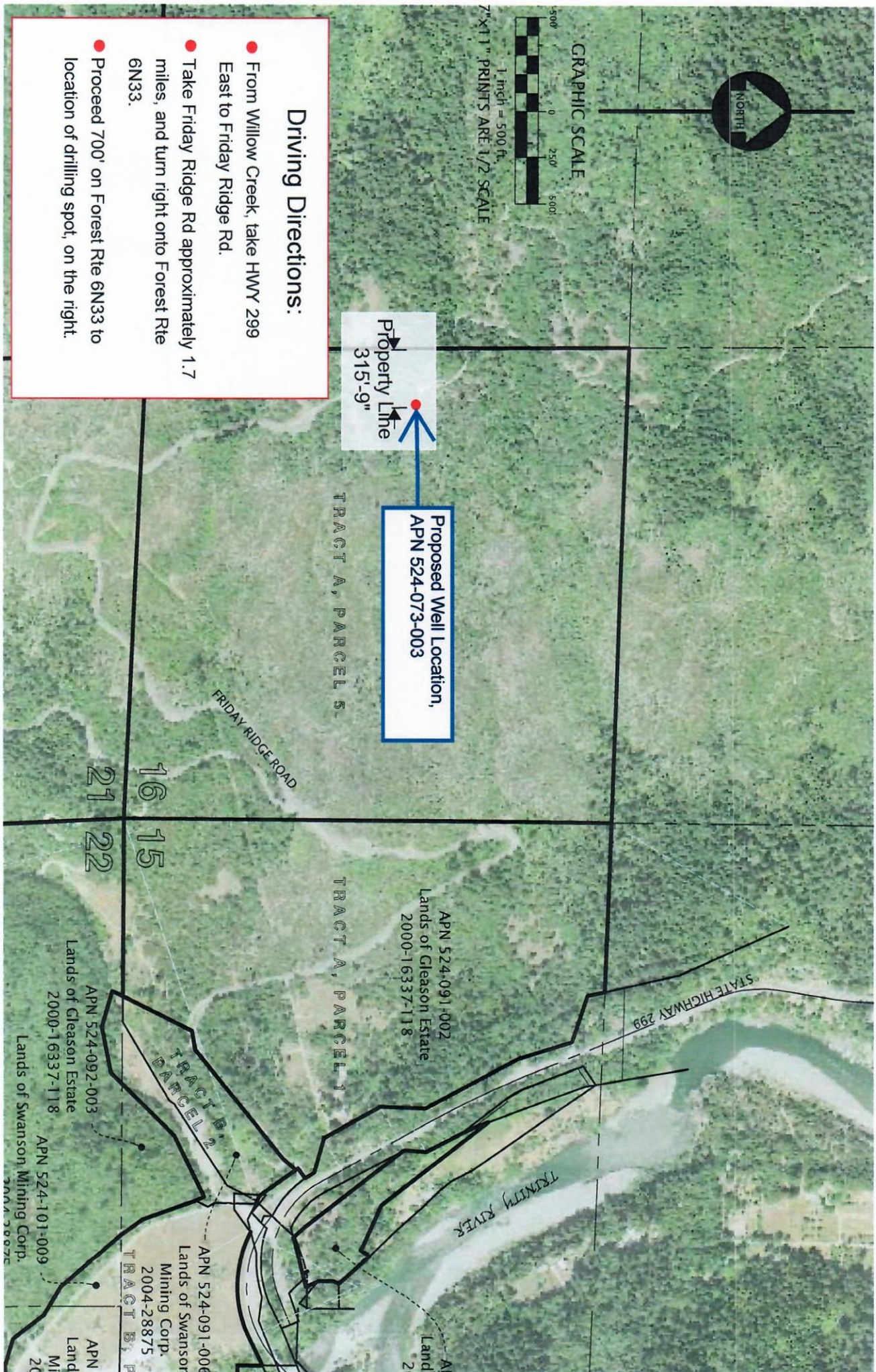
1 inch = 500 ft.
7"x11" PRINTS ARE 1/2 SCALE

Property Line
315'-9"

Proposed Well Location,
APN 524-073-003

Driving Directions:

- From Willow Creek, take HWY 299 East to Friday Ridge Rd.
- Take Friday Ridge Rd approximately 1.7 miles, and turn right onto Forest Rte 6N33.
- Proceed 700' on Forest Rte 6N33 to location of drilling spot, on the right.





3150 Johnson Rd.
Hydesville, Ca 95547
(707)768-9800
A, C-57, Haz Lic#683865

Well Inspection Report/Pump Test

WP1959

Property Info: Friday Ridge Rd, Willow Creek

Date: 3/1/18

Water source: WW, Spring, Diversion

Contact: Matt Primm

PH# 858-245-3277

Other Info: Bill Atkission 530-629-2358 (h) 530-261-1738 cell

Well Dia. 5"pvc

Well Depth 220'

Water Level 78'

AC /GEN/ SOLAR

GPM Estimate/Pumptest
15gpm

Pump/s Info. N/A

Type Treatment Equip. N/A

Storage Tanks + Gal. N/A

Overall hygiene of well site: (poor) (fair) (good) (excellent)

Fixes: N/A

Plumbing System: (poor) (fair) (good) (excellent)

Fixes: N/A

Electrical System: (poor) (fair) (good)(excellent)

Fixes: N/A

Treatment System: (poor) (fair) (good) (excellent)

Fixes: N/A

Notes: NEEDS SEAL SCHEDULED

Need Pump: Y N

Need Generator: Y N

Samples Taken:

Travel Time: 3HRS

Test Time: 4HRS

Set Up Time: 2HRS

of Workers: 1

State of California
Well Completion Report
 Form DWR 188 Submitted 6/27/2018
 WCR2018-005069

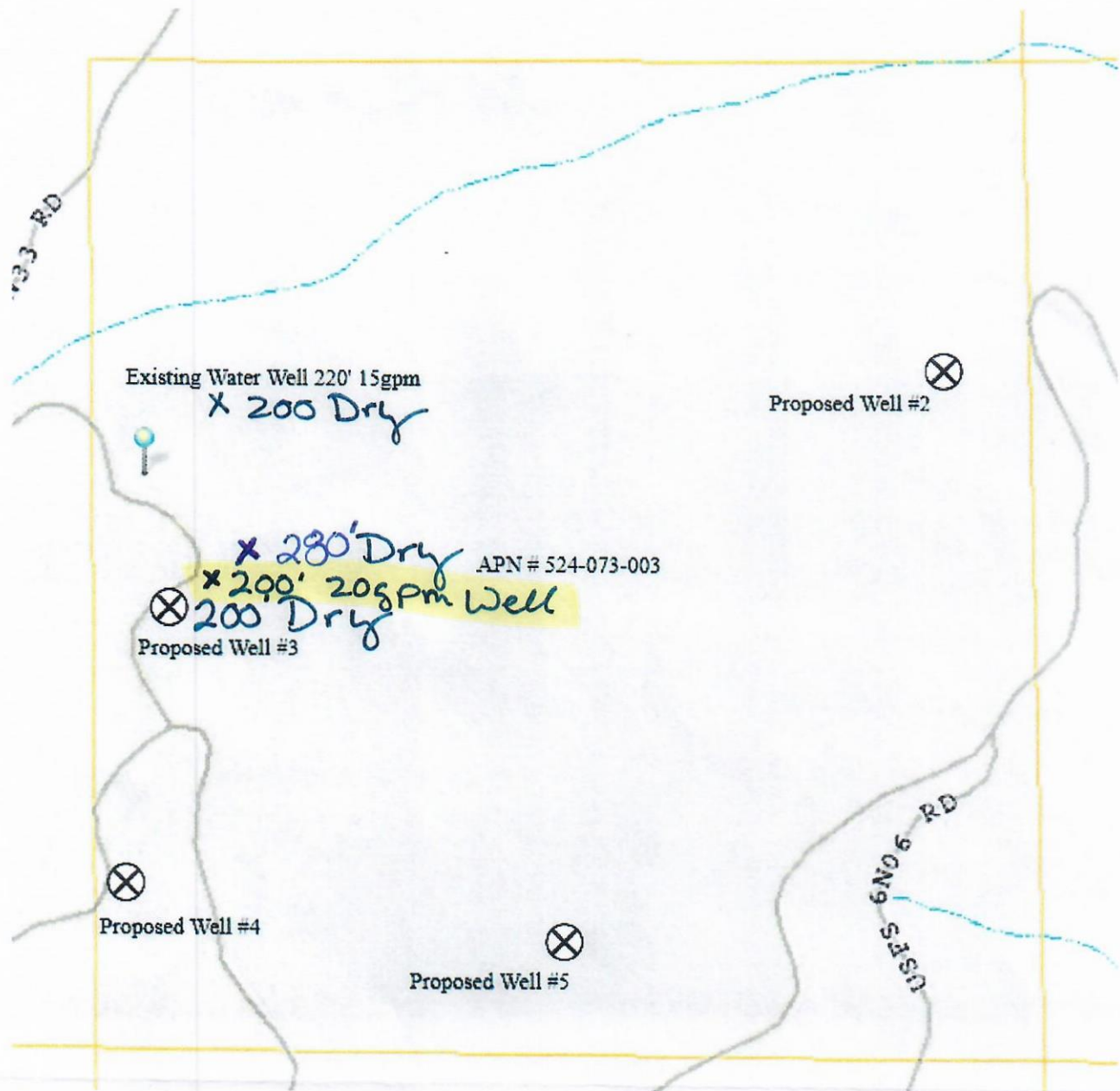
Owner's Well Number _____ Date Work Began 06/13/2018 Date Work Ended 06/27/2018
 Local Permit Agency Humboldt County Department of Health & Human Services - Land Use Program
 Secondary Permit Agency _____ Permit Number 17/18-1636 Permit Date 03/28/2018

| Well Owner (must remain confidential pursuant to Water Code 13752) | Planned Use and Activity |
|--|--|
| Name <u>ORGANIC LIBERTY, LLC,</u> | Activity <u>New Well</u> |
| Mailing Address <u>501 West Broadway Suite 1750</u> | Planned Use <u>Water Supply Irrigation - Agriculture</u> |
| City <u>San Diego</u> State <u>CA</u> Zip <u>92101</u> | |

| Well Location | | | | | |
|-------------------------------------|----------------------------------|------------------------|--------------------------------------|--|--|
| Address <u>0 Friday Ridge RD</u> | | | APN <u>524-073-003</u> | | |
| City <u>Willow Creek</u> | Zip <u>95573</u> | County <u>Humboldt</u> | Township <u>06 N</u> | | |
| Latitude _____ N | Longitude _____ W | Range <u>05 E</u> | | | |
| Deg. _____ Min. _____ Sec. _____ | Deg. _____ Min. _____ Sec. _____ | Section <u>16</u> | | | |
| Dec. Lat. <u>40.8896700</u> | | | Dec. Long. <u>-123.6200250</u> | | |
| Vertical Datum _____ | | | Baseline Meridian <u>Humboldt</u> | | |
| Horizontal Datum <u>WGS84</u> | | | Ground Surface Elevation _____ | | |
| Location Accuracy _____ | | | Elevation Accuracy _____ | | |
| Location Determination Method _____ | | | Elevation Determination Method _____ | | |

| Borehole Information | Water Level and Yield of Completed Well |
|--|---|
| Orientation <u>Vertical</u> Specify _____ | Depth to first water <u>95</u> (Feet below surface) |
| Drilling Method <u>Other - under-ream down-hole hammer</u> Drilling Fluid <u>Air</u> | Depth to Static _____ |
| Total Depth of Boring <u>200</u> Feet | Water Level <u>70</u> (Feet) Date Measured <u>06/27/2018</u> |
| Total Depth of Completed Well <u>200</u> Feet | Estimated Yield* <u>20</u> (GPM) Test Type <u>Air Lift</u> |
| | Test Length <u>4</u> (Hours) Total Drawdown <u>130</u> (feet) |
| | *May not be representative of a well's long term yield. |

| Geologic Log - Free Form | | |
|------------------------------------|-----|----------------------|
| Depth from Surface Feet to Feet | | Description |
| 0 | 4 | top soil |
| 4 | 36 | silty clay |
| 36 | 92 | serpentine |
| 92 | 145 | fractured serpentine |
| 145 | 200 | shale |



Organic Liberty, LLC
Matt Primm 858-245-3277
Friday Ridge Road
Willow Creek, CA 95573
APN# 524-073-003



3150 JOHNSON RD.
HYDESVILLE, CA.
(707) 768-9800
dave@fischdrilling.com

July 5 2018

Matthew Primm
Organic Liberty, LLC.
501 West Broadway Suite 1750
San Diego, CA. 92101

Organic Liberty, LLC
Friday Ridge Road
Willow Creek, CA. 95573

Result of site review of Organic Liberty LLC, APN's 524-091-002. The well site in question is located Friday Ridge Road on parcel 524-091-002 the well was completed 6/7/18.

These wells were completed in the Franciscan Sandstone. The well was drilled into perched bedrock with no hydraulic connection to any surface water or any part of a larger shallow homogeneous aquifer.

Considering the depth of the wells, it appears to fall in line with the guide lines of a non-jurisdictional well of similar depth in the surrounding area.
Any questions please call (707)768-9800.

Thank You,

A handwritten signature in black ink, appearing to be "David Fisch", written over a horizontal line.

David Fisch
Fisch Drilling



3150 JOHNSON RD.
HYDESVILLE, CA.
(707) 768-9800
dave@fischdrilling.com

July 5 2018

Matthew Primm
Organic Liberty, LLC.
501 West Broadway Suite 1750
San Diego, CA. 92101

Organic Liberty, LLC
Friday Ridge Road
Willow Creek, CA. 95573

Result of site review of Organic Liberty LLC, APN's 534-073-003. The 2 well sites in question is located Friday Ridge Road on parcel 534-073-003 these wells were completed between completed; well #1, 12/16/18 and well #2, 6/27/18.

These wells were completed in the Franciscan Sandstone; the well was drilled into perched bedrock with no hydraulic connection to any surface water or any part of a larger shallow homogeneous aquifer.

Considering the depth of the wells, it appears to fall in line with the guide lines of a non-jurisdictional well of similar depth in the surrounding area.
Any questions please call (707)768-9800.

Thank You,



David Fisch
Fisch Drilling

APPENDIX D – SIGHT DISTANCE ANALYSIS

PHA Transportation Consultants

2711 Stuart Street Berkeley CA 94705

Phone (510) 848-9233

Email: Pangho1@yahoo.com



December 2 26, 2020

Jordan Main
Compass Land Group
Via Email

Dear Jordan,

In response to your request, PHA Transportation Consultants (PHA) has conducted a sight distance analysis for a section of Hwy 299 (Trinity Hwy) near Friday Ridge Road in Humboldt County. The purpose of the analysis is to identify the available sight distance from Hwy 299 to Friday Ridge Road in both east and west directions.

Study Location Description

Hwy 299 near Friday Ridge Road is a two-lane highway. Its intersection at Friday Ridge Road-Martin Road is a four-way intersection. The north leg, Martin Road in the north and the south leg, Friday Ridge Road in the south are two-lane county roads and are both controlled by stop signs at the Hwy 299 intersection approaches. There are no traffic controlled signs at the Hwy 299 approaches. All four approaches at the intersection are widened to accommodate left/through and right-turn vehicle movements side by side simultaneously. The terrain along this section of Hwy 299 is mostly flat and gentle. According to traffic count obtained from Caltrans, Hwy 299 in the vicinity of Friday Ridge Road carries about 1,000 vehicles combined in both directions during the peak hour. There are no posted speed limits signs observed along the study section. In general state highways speeds are set for 55 mph.

Sight Distance Analysis

According to Caltrans Design Manual the recommended stopping sight distance for a 55 mph speed should be 500 feet based on a wet pavement condition (see attached Table 201.1 from Caltrans's Design Manual).

Sight distance (stopping sight distance) is the length of roadway ahead that is visible to the driver. The available sight distance on a roadway should be sufficiently long to enable a vehicle travelling at or near the speed limit to stop before reaching a stationary object at its path. Our sight distance measurements for the study location are 520 feet from the east direction and

about 735 feet from the west direction. Table 1 below summarizes the recommended sight distance and available sight distance for the study location.

| Table 1 Hwy 299 at Friday Ridge Road Sight Distance Analysis | | | | |
|--|-----------------------------------|---------------------------------|-----------|-----------|
| Pavement Conditions | Recommended Sight Distance (feet) | Available Sight Distance (feet) | | Satisfied |
| | Caltrans | From East | From West | |
| Wet Conditions | 500 | 520 | 735 | Yes/Yes |
| | | | | |
| Caltrans' recommended sight distance is based on data obtained from Caltrans "Design Manual" Table 201.1 | | | | |

As indicated, the available sight distances along Hwy 299 in both directions would satisfy Caltrans's recommended guidelines. There are vegetations along this section of roadway and they should be monitored and cut back as needed so that they would not obstruct the line of sight for motorists.

It should be pointed out that Friday Ridge Road is an existing county road and traffic at the approach to Hwy 299 is controlled by stop signs. Current traffic and the estimated traffic travelling to and from your project site will not change these conditions. Please feel free to contact me if you have any question about our analysis.

Sincerely,



Pang Ho, AICP
PHA Transportation Consultants
Attachments

Caltrans Recommend Sight Distances

CHAPTER 200 GEOMETRIC DESIGN AND STRUCTURE STANDARDS

Topic 201 - Sight Distance

Index 201.1 - General

Sight distance is the continuous length of highway ahead, visible to the highway user. Four types of sight distance are considered herein: passing, stopping, decision, and corner. Passing sight distance is used where use of an opposing lane can provide passing opportunities (see Index 201.2). Stopping sight distance is the minimum sight distance for a given design speed to be provided on multilane highways and on 2-lane roads when passing sight distance is not economically obtainable. Stopping sight distance also is to be provided for all users, including motorists and bicyclists, at all elements of interchanges and intersections at grade, including private road connections (see Topic 504, Index 405.1, & Figure 405.7). Decision sight distance is used at major decision points (see Indexes 201.7 and 504.2). Corner sight distance is used at intersections (see Index 405.1, Figure 405.7, and Figure 504.31).

Table 201.1 shows the minimum standards for stopping sight distance related to design speed for motorists. Stopping sight distances given in the table are suitable for Class II and Class III bikeways. The stopping sight distances are also applicable to roundabout design on the approach roadway, within the circulatory roadway, and on the exits prior to the pedestrian crossings. Also shown in Table 201.1 are the values for use in providing passing sight distance.

See Chapter 1000 for Class I bikeway sight distance guidance.

Chapter 3 of "A Policy on Geometric Design of Highways and Streets," AASHTO, contains a thorough discussion of the derivation of stopping sight distance.

201.2 Passing Sight Distance

Passing sight distance is the minimum sight distance required for the driver of one vehicle to pass another vehicle safely and comfortably. Passing must be

accomplished assuming an oncoming vehicle comes into view and maintains the design speed, without reduction, after the overtaking maneuver is started.

**Table 201.1
Sight Distance Standards**

| Design Speed ⁽¹⁾ (mph) | Stopping ⁽²⁾ (ft) | Passing (ft) |
|--------------------------------------|---------------------------------|-----------------|
| 10 | 50 | — |
| 15 | 100 | — |
| 20 | 125 | 800 |
| 25 | 150 | 950 |
| 30 | 200 | 1,100 |
| 35 | 250 | 1,300 |
| 40 | 300 | 1,500 |
| 45 | 360 | 1,650 |
| 50 | 430 | 1,800 |
| 55 | 500 | 1,950 |
| 60 | 580 | 2,100 |
| 65 | 660 | 2,300 |
| 70 | 750 | 2,500 |
| 75 | 840 | 2,600 |
| 80 | 930 | 2,700 |

(1) See Topic 101 for selection of design speed.

(2) For sustained downgrades, refer to underlined standard in Index 201.3.

The sight distance available for passing at any place is the longest distance at which a driver whose eyes are 3 1/2 feet above the pavement surface can see the top of an object 4 1/2 feet high on the road. See Table 201.1 for the calculated values that are associated with various design speeds.

In general, 2-lane highways should be designed to provide for passing where possible, especially those routes with high volumes of trucks or recreational vehicles. Passing should be done on tangent horizontal alignments with constant grades or a slight sag vertical curve. Not only are drivers reluctant to pass on a long crest vertical curve, but it is impracticable to design crest vertical curves to provide for passing sight distance because of high cost where crest cuts are involved. Passing sight

2017 Peak Hour Traffic Volume on Hwy 299

| OTM32420 | | | CALTRANS TRAFFIC VOLUMES | | | | | | | | | | | | | | | | | | PAGE # 40 | |
|------------|-----|-----|------------------------------|-----------|-----|----|-----|---------|-------|-------|-------|---------|-----|------|-----|------|-------|-------|-------|----|-----------|------|
| 08/15/2018 | | | LATEST TRAFFIC YEAR SELECTED | | | | | | | | | | | | | | | | | | | |
| 14:59:55 | | | PEAK HOUR VOLUME DATA | | | | | | | | | | | | | | | | | | | |
| DI | RTE | CO | PRE | PM CS | LEG | YR | Dir | AM PEAK | | | | PM PEAK | | | | | | | | | | |
| | | | | | | | | 1 WAY | % | % | % | 1 WAY | % | % | % | | | | | | | |
| | | | | | | | | PHV | K | D | KD | HR | DAY | MNTH | Dir | PHV | K | D | KD | HR | DAY | MNTH |
| 05 | 269 | KIN | | 0 930 | A | 17 | S | 207 | 12.18 | 85.81 | 10.21 | 5 | FRI | SEP | S | 113 | 9.47 | 58.85 | 5.57 | 17 | MON | SEP |
| 05 | 269 | FRE | | 082 935 | B | 16 | N | 274 | 9.23 | 55.8 | 5.15 | 6 | TUE | OCT | S | 298 | 8.12 | 68.98 | 5.6 | 16 | WED | NOV |
| 05 | 269 | FRE | | 12.75 306 | B | 17 | N | 390 | 11.38 | 75.44 | 8.58 | 5 | WED | JUN | S | 339 | 10.96 | 68.07 | 7.46 | 16 | TUE | SEP |
| 05 | 269 | FRE | | 24.76 940 | B | 17 | S | 217 | 11.86 | 70 | 8.3 | 5 | THU | JUN | N | 216 | 11.66 | 70.82 | 8.26 | 15 | THU | JUN |
| 09 | 270 | MNO | | 0 978 | A | 17 | R | 66 | 27.11 | 84.19 | 24.18 | 9 | WED | AUG | W | 63 | 35.9 | 64.29 | 23.68 | 13 | THU | AUG |
| 01 | 271 | MEN | | 5.28 198 | B | 17 | S | 38 | 13.95 | 55.52 | 7.47 | 11 | MON | JUL | S | 38 | 13.56 | 55.07 | 7.47 | 13 | WED | APR |
| 01 | 271 | MEN | | 7.29 196 | B | 17 | N | 85 | 13.54 | 52.15 | 10.19 | 11 | WED | AUG | S | 85 | 19.31 | 52.8 | 10.19 | 13 | MON | JUN |
| 02 | 273 | SHA | | 3.812 155 | A | 15 | S | 416 | 8.93 | 59.04 | 5.27 | 11 | MON | MAY | S | 476 | 8.76 | 68.59 | 6.01 | 14 | MON | MAY |
| 02 | 273 | SHA | | 11.1 203 | O | 17 | N | 1053 | 3.07 | 64.48 | 5.2 | 7 | WED | APR | S | 1089 | 8.91 | 60.4 | 5.38 | 17 | WED | SEP |
| 02 | 273 | SHA | | 14.18 156 | A | 17 | N | 1143 | 3.59 | 62.26 | 5.97 | 7 | TUE | SEP | S | 1087 | 9.65 | 58.82 | 5.67 | 15 | THU | DEC |
| 02 | 273 | SHA | | 17.34 704 | A | 17 | S | 835 | 9.51 | 64.84 | 5.22 | 7 | THU | MAY | N | 980 | 11.07 | 55.12 | 6.1 | 14 | THU | NOV |
| 02 | 273 | SHA | | 18.92 315 | B | 15 | N | 606 | 3.07 | 55.85 | 4.88 | 12 | WED | FEB | N | 689 | 9.41 | 58.84 | 5.53 | 17 | TUE | NOV |
| 02 | 273 | SHA | | 20.03 157 | B | 15 | S | 396 | 3.41 | 67.46 | 5.67 | 7 | FRI | NOV | N | 455 | 10.12 | 64.45 | 6.52 | 17 | TUE | NOV |
| 04 | 280 | SM | R | 5.6 904 | B | 17 | S | 7495 | 10.58 | 59.41 | 6.28 | 8 | WED | MAR | N | 7247 | 10.61 | 57.25 | 6.08 | 16 | THU | MAR |
| 04 | 280 | SF | R | 0 112 | A | 17 | N | 6420 | 7.49 | 60.81 | 4.55 | 7 | THU | OCT | S | 6544 | 8.68 | 53.51 | 4.64 | 15 | FRI | OCT |
| 01 | 281 | LAK | | 15.3 281 | A | 15 | E | 496 | 11.84 | 80.78 | 9.56 | 7 | THU | JAN | W | 420 | 11.22 | 72.17 | 8.1 | 17 | WED | JAN |
| 11 | 282 | SD | | 0 894 | A | 15 | W | 2282 | 3.05 | 84.86 | 6.83 | 6 | WED | NOV | E | 1873 | 8.37 | 67.01 | 5.61 | 14 | WED | APR |
| 02 | 284 | PLU | | 0 186 | A | 16 | S | 99 | 26.84 | 60.37 | 16.2 | 12 | MON | MAY | S | 72 | 20.3 | 58.07 | 11.78 | 15 | SUN | MAY |
| 01 | 299 | HUM | | 0 192 | A | 17 | W | 678 | 9.1 | 59.32 | 5.4 | 8 | TUE | JAN | W | 717 | 10.68 | 53.43 | 5.71 | 15 | THU | AUG |
| 01 | 299 | HUM | R | 7.6 475 | O | 15 | W | 238 | 11.36 | 55.13 | 6.03 | 12 | FRI | AUG | E | 272 | 13.13 | 52.51 | 6.9 | 16 | FRI | AUG |
| 02 | 299 | TRI | | 52.07 292 | O | 15 | E | 611 | 11.09 | 50.62 | 5.62 | 12 | FRI | MAY | E | 599 | 10.47 | 52.59 | 5.51 | 15 | FRI | NOV |
| 02 | 299 | TRI | R | 53.11 208 | B | 17 | W | 281 | 9.11 | 65.2 | 5.94 | 10 | TUE | JUL | E | 307 | 12.43 | 52.21 | 6.49 | 16 | FRI | JUN |
| 02 | 299 | TRI | | 72.25 159 | O | 15 | R | 179 | 7.54 | 60.27 | 4.54 | 12 | SUN | MAY | W | 250 | 10.61 | 59.81 | 6.35 | 16 | THU | FEB |
| 02 | 299 | SHA | | 0 159 | O | 15 | E | 179 | 7.54 | 60.27 | 4.54 | 12 | SUN | MAY | W | 250 | 10.61 | 59.81 | 6.35 | 15 | THU | FEB |
| 02 | 299 | SHA | | 21.65 209 | O | 17 | W | 612 | 10.31 | 56.88 | 5.86 | 12 | SAT | JUL | E | 658 | 10.91 | 57.77 | 6.3 | 15 | SAT | JUN |
| 02 | 299 | SHA | | 23.81 301 | B | 17 | W | 1054 | 3.93 | 52.2 | 5.18 | 7 | THU | NOV | E | 1076 | 10.41 | 50.83 | 5.29 | 14 | FRI | MAR |
| 02 | 299 | SHA | | 24.02 316 | A | 15 | W | 966 | 9.1 | 55.05 | 4.83 | 7 | WED | NOV | W | 1020 | 9.61 | 53.04 | 5.1 | 14 | MON | AUG |
| 02 | 299 | SHA | | 24.09 317 | A | 15 | W | 1118 | 3.69 | 51.59 | 4.48 | 12 | MON | AUG | E | 1273 | 9.63 | 52.98 | 5.1 | 17 | THU | FEB |
| 02 | 299 | SHA | | 24.82 162 | A | 17 | W | 1126 | 3.22 | 58.4 | 5.38 | 12 | THU | NOV | W | 1170 | 9.27 | 60.34 | 5.59 | 14 | MON | AUG |
| 02 | 299 | SHA | | 27.24 191 | A | 17 | W | 574 | 3.33 | 63.71 | 5.95 | 7 | TUE | OCT | E | 539 | 8.71 | 64.09 | 5.58 | 17 | FRI | JUN |
| 02 | 299 | SHA | | 31.69 213 | A | 17 | W | 250 | 3.42 | 54.95 | 5.18 | 7 | WED | AUG | E | 285 | 9.77 | 60.38 | 5.9 | 17 | FRI | SEP |
| 02 | 299 | SHA | | 73.13 163 | O | 17 | R | 149 | 3.23 | 55.99 | 4.98 | 12 | WED | AUG | E | 169 | 9.77 | 57.88 | 5.65 | 15 | TUE | NOV |
| 02 | 299 | SHA | | 75.63 244 | O | 17 | E | 429 | 3.85 | 52.19 | 5.14 | 12 | FRI | MAY | E | 457 | 10.82 | 50.61 | 5.47 | 15 | WED | AUG |

Photo Below: Intersection of HWY 299 / Friday Ridge Rd – Looking North West



APPENDIX E – PRIME AGRICULTURAL SOIL ASSESSMENT



Dirty Business Soil
1115 11th Street
Arcata, CA 95521
707.633.8885
DBSanalytics.com

Prime Agricultural Soil Assessment

Organic Liberty
Friday Ridge Rd, Salyer, CA 95563

October 13, 2017

Prepared For: Organic Liberty, LLC

Prepared By: Dirty Business Soil Consulting & Analysis, LLC

Table of Contents

| | |
|--|----|
| 1.0 Introduction | 1 |
| 2.0 Results | 1 |
| Table 1. Storie Index Scoring | 2 |
| 3.0 Site/Hole Descriptions | 2 |
| 3.1 Site 1 – North Hole | 2 |
| 3.2 Site 1 – East Hole | 3 |
| 3.3 Site 1 – South Hole | 4 |
| 3.4 Site 1 – West Hole | 4 |
| 4.0 Conclusion | 5 |
| Appendix A. Methodology for Prime Agricultural Soil Assessment | 6 |
| Appendix B. Representative Landscape Photographs | 13 |
| Appendix C. Site Maps | 16 |
| Appendix D. Storie Index Scoring | 19 |

1.0 INTRODUCTION

The purpose of this report is to disclose the findings and methodologies of the prime agricultural soil assessment conducted February 24th and September 29th, 2017 on Friday Ridge Road in Salyer, CA; approximately half a mile from its junction with Highway 299.

Per the Humboldt County's Commercial Medical Marijuana Land Use Ordinance (CMMLUO), prime agricultural soils are defined as *"all lands which qualify for rating as Class I or Class II in the Soil Conservation Service land use capability classifications or qualify for rating 80 through 100 in the Storie Index Rating. Additionally, where determined through site-specific fieldwork prepared by a qualified professional, soils meeting these characteristics may be recognized as prime."*

Prime agricultural soil assessments are conducted either by desktop assessment of existing Natural Resource Conservation Service (NRCS) surveys, Humboldt County GIS portal, and/or field assessment to determine the Storie Index or Land Capability Classification (LCC). The previous methods were examined and it was determined that the Storie Index could be effectively utilized to assess prime agricultural soil throughout this property. Please see Appendix A for detailed methodology of Storie Index assessment.

2.0 RESULTS

The property tested on Friday Ridge Road in Salyer, CA is part of an 80-acre parcel. The Storie Index assessment yielded 217,271 square feet (5.0 acres) of prime agricultural soil on one site consisting of a series of inter-connected meadows bordered by forest. Appendix B contains landscape photographs capturing the general topography and vegetation for prime agricultural site areas. The site is on alluvial terrace soils with moderately dense subsoils, 4-to-6-feet in depth. Slopes averaged 11% on site, with steeper slopes at the margins. Drainage was classified as moderately well drained (MWD), due to iron depletions beginning between 30 to 32-inches. The soil was moderately acidic to slightly acidic, with pH measurements ranging between 5.6 and 6.1. This indicates no accumulation of alkaline minerals in soil. Electrical Conductivity (EC) measurements ranged between 0.3 to 0.8 dS/m, indicating no accumulation of phytotoxic nutrients. Erosion and microrelief (as well as slope) are used to preliminarily vet low-risk cultivation areas, thus this site had little to no erosional and microrelief features. The Storie Index scores for all holes on site were 81.2%, see Appendix D for a table comparing individual Storie Index characteristics. Site and soil auger hole descriptions are discussed in the following section. Appendix C contains maps of the delineated prime agricultural site, with auger hole locations and boundary descriptors, as well as a GIS-calculated total prime agricultural soil area.

Table 1. Storie Index Scoring

| Organic Liberty, Friday Ridge Rd. - Prime Ag Figures | | | | |
|---|---------------------|---------------------------|-------------------------|-------------------|
| APN(s) | Site Name | Storie Index Score | Area Square Feet | Area Acres |
| 524-091-002 | Site 1 - North Hole | 81.2 | 217,271 | 5.0 |
| 524-091-002 | Site 1 - East Hole | 81.2 | | |
| 524-091-002 | Site 1 - South Hole | 81.2 | | |
| 524-091-002 | Site 1 - West Hole | 81.2 | | |
| TOTAL | | | 217,271 | 5.0 |

3.0 SITE/HOLE DESCRIPTIONS

The following sections contain in-depth descriptions of each prime agricultural assessment, for each of the four holes that were given a Storie Index assessment. Each assessment followed the methodology contained in Appendix A. Each hole description includes the final Storie Index score, total area of the site, a boundary description of the site perimeter, as well as details of soil characteristics for each Storie Index parameter. Maps of each site are in Appendix C; and a table containing all Storie Index scores for each site is in Appendix D.

3.1 SITE 1 – NORTH HOLE

Storie Index Score: 81.2

The total area mapped for Site 1 is 217,271 square feet (5.0 acres). This acreage is spread across a single site with cohesive similarities in slope, vegetation, and soil characteristics. Appendix C contains maps showing the delineated area, area total in square feet, and plot holes. Appendix D shows the tabular data used to assess the Storie Index.

Boundary Description

Boundaries were based entirely on slope and vegetation, namely tree-lines. The general slope increases to the west, averaging about 11% at the west margin, however, the majority of the west border is formed by a continuous tree-/shrub-line. The southwest boundary is formed by a very gradually declining back-slope, averaging about 11%. A tree-line forms the remainder of the boundaries to the southeast, east, and north. The center of the site features an exclusion featuring trees, and a small drainage channel that is wet for some parts of the year. The exclusion area's boundaries are formed by tree-/shrub-lines.

Factor A – Physical Profile

Storie Index Characteristic III – Alluvial terrace profile. Soil depth between 4 and 6-feet. Likely not greater than 4-feet because of dense sub-soils.

Factor B – Surface Texture

Texture by Feel: Loam with 20% gravel

Factor C – Slope

Slope was gentle on-site, typically between 5-10%; and becoming more pronounced near the margins, averaging closer to 11%. Surrounding slopes were between 10-20%.

Factor X -

Drainage: Moderately well drained. Iron depletions beginning around 32-inches accompanied by a significant increase in clay. No restrictive layers. Increasing bulk density with depth.

Alkali: Measured pH of 5.6 indicates no accumulation of alkaline minerals in soil. Well leached soil.

Nutrient: No accumulation of phytotoxic nutrients. EC measured at 0.5 dS/m.

Acidity: Moderately acidic. Measured pH, 5.6.

Erosion: No erosion features observed.

Microrelief: No significant microrelief observed.

3.2 SITE 1 – EAST HOLE

Storie Index Score: 81.2

The total area mapped for Site 1 is 217,271 square feet (5.0 acres). This acreage is spread across a single site with cohesive similarities in slope, vegetation, and soil characteristics. Appendix C contains maps showing the delineated area, area total in square feet, and plot holes. Appendix D shows the tabular data used to assess the Storie Index.

Boundary Description

Boundaries were based entirely on slope and vegetation, namely tree-lines. The general slope increases to the west, averaging about 11% at the west margin, however, the majority of the west border is formed by a continuous tree-/shrub-line. The southwest boundary is formed by a very gradually declining back-slope, averaging about 11%. A tree-line forms the remainder of the boundaries to the southeast, east, and north. The center of the site features an exclusion featuring trees, and a small drainage channel that is wet for some parts of the year. The exclusion area's boundaries are formed by tree-/shrub-lines.

Factor A – Physical Profile

Storie Index Characteristic III – Alluvial terrace profile. Soil depth between 4 and 6-feet. Likely not greater than 4-feet because of dense sub-soils.

Factor B – Surface Texture

Texture by Feel: Loam with 20% gravel

Factor C – Slope

Slope was gentle on-site, typically between 5-10%; and becoming more pronounced near the margins, averaging closer to 11%. Surrounding slopes were between 10-20%.

Factor X -

Drainage: Moderately well drained. Iron depletions beginning around 30-inches. No restrictive layers. Increasing bulk density with depth.

Alkali: Measured pH of 5.8 indicates no accumulation of alkaline minerals in soil. Well leached soil.

Nutrient: No accumulation of phytotoxic nutrients. EC measured at 0.6 dS/m.

Acidity: Moderately acidic. Measured pH, 5.8.

Erosion: No erosion features observed.

Microrelief: No significant microrelief observed.

3.3 SITE 1 – SOUTH HOLE

Storie Index Score: 81.2

The total area mapped for Site 1 is 217,271 square feet (5.0 acres). This acreage is spread across a single site with cohesive similarities in slope, vegetation, and soil characteristics. Appendix C contains maps showing the delineated area, area total in square feet, and plot holes. Appendix D shows the tabular data used to assess the Storie Index.

Boundary Description

Boundaries were based entirely on slope and vegetation, namely tree-lines. The general slope increases to the west, averaging about 11% at the west margin, however, the majority of the west border is formed by a continuous tree-/shrub-line. The southwest boundary is formed by a very gradually declining back-slope, averaging about 11%. A tree-line forms the remainder of the boundaries to the southeast, east, and north. The center of the site features an exclusion featuring trees, and a small drainage channel that is wet for some parts of the year. The exclusion area's boundaries are formed by tree-/shrub-lines.

Factor A – Physical Profile

Storie Index Characteristic III – Alluvial terrace profile. Soil depth between 4 and 6-feet. Likely not greater than 4-feet because of dense sub-soils.

Factor B – Surface Texture

Texture by Feel: Sandy loam

Factor C – Slope

Slope was gentle on-site, typically between 5-10%; and becoming more pronounced near the margins, averaging closer to 11%. Surrounding slopes were between 10-20%.

Factor X -

Drainage: Moderately well drained. Iron depletions beginning around 30-inches. No restrictive layers. Increasing bulk density with depth.

Alkali: Measured pH of 6.1 indicates no accumulation of alkaline minerals in soil. Well leached soil.

Nutrient: No accumulation of phytotoxic nutrients. EC measured at 0.3 dS/m.

Acidity: Slightly acidic. Measured pH, 6.1.

Erosion: No erosion features observed.

Microrelief: No significant microrelief observed.

3.4 SITE 1 – WEST HOLE

Storie Index Score: 81.2

The total area mapped for Site 1 is 217,271 square feet (5.0 acres). This acreage is spread across a single site with cohesive similarities in slope, vegetation, and soil characteristics. Appendix C contains maps

showing the delineated area, area total in square feet, and plot holes. Appendix D shows the tabular data used to assess the Storie Index.

Boundary Description

Boundaries were based entirely on slope and vegetation, namely tree-lines. The general slope increases to the west, averaging about 11% at the west margin, however, the majority of the west border is formed by a continuous tree-/shrub-line. The southwest boundary is formed by a very gradually declining back-slope, averaging about 11%. A tree-line forms the remainder of the boundaries to the southeast, east, and north. The center of the site features an exclusion featuring trees, and a small drainage channel that is wet for some parts of the year. The exclusion area's boundaries are formed by tree-/shrub-lines.

Factor A – Physical Profile

Storie Index Characteristic III – Alluvial terrace profile. Soil depth between 4 and 6-feet. Likely not greater than 4-feet because of dense sub-soils.

Factor B – Surface Texture

Texture by Feel: Loam with 20% gravel

Factor C – Slope

Slope was gentle on-site, typically between 5-10%; and becoming more pronounced near the margins, averaging closer to 11%. Surrounding slopes were between 10-20%.

Factor X -

Drainage: Moderately well drained. Redoximorphic features beginning around 30-inches accompanied by a big increase in clay. No restrictive layers. Increasing bulk density with depth.

Alkali: Measured pH of 5.7 indicates no accumulation of alkaline minerals in soil. Well leached soil.

Nutrient: No accumulation of phytotoxic nutrients. EC measured at 0.8 dS/m.

Acidity: Moderately acidic. Measured pH, 5.7.

Erosion: No erosion features observed.

Microrelief: No significant microrelief observed.

4.0 CONCLUSION

This report disclosed the findings and justifications for the prime agricultural soil assessments that were conducted at the property referenced on Friday Ridge Road in Salyer, CA. These assessments adhered to the detailed methods and measurements of the Storie Index as set forth in the attached methodology (Appendix A). Landscape details and soil characteristics varied a little around the site, but most were relatively similar with regards to the Storie Index parameters. A single site was mapped of an interconnected series of meadows and margin-areas, for a total area of 217,271 square feet (5.0 acres), that met with the standards set forth by the CMMLUO (i.e., Storie Index of 80% or higher).

Appendix A. Methodology for Prime Agricultural Soil Assessment

Methodology for Determining Prime Agricultural Soils

Desktop Assessment

Existing soil data can be found through the Humboldt County GIS portal which is based on Humboldt County's 1967 soil survey as well as the NRCS Web Soil Survey (WSS) which is based on Humboldt County's most recent soil survey. Surveyed soils are mapped at the third-order, which means boundaries are plotted by observation and interpretation of remotely sensed data. The soil boundaries are verified by traversing representative areas and by some transects. Third-order surveys are made for land uses that do not require precise knowledge of small areas or detailed soils information. Delineations have a minimum size of up to 40-acres (USDA, 1993).

It is important to note that although the Humboldt County soil survey ground mapping has been finished, it has not yet been completely published on the WSS. When a soil survey query in WSS yields a "NOTCOM" result, it means no digital data is available for the project area. Standard practice in "NOTCOM" areas is to contact the local NRCS Soil Survey Field Office to identify if any data exists within the area of interest.

Field Assessment

The Storie Index and LCC are methods for rating soils on their potential for use and productivity. Both methods look at the same characteristics: slope, soil profile depth, drainage, salinity, etc. The Storie Index derives its rating from current conditions; while the Land Capability Classification derives its rating not only from current conditions, but on the potential to overcome those conditions using proper management techniques. LCC Class I soils are broadly defined as soils that "have few limitations which restrict their use." In contrast, LCC Class II soils are those that "have some limitations that reduce the choice of plants or require moderate conservation practices." (Storie, 1978; USDA SCS, 1961). Due to the nature of the Storie Index to assess only the current conditions, the parameters and ratings are generally more rigid in their interpretation than the LCC.

The Storie Index method of soil rating is based on soil characteristics that govern the land's potential utilization and productive capacity and is independent of other physical or economic factors that might determine the desirability of growing certain plants at a given location (Storie, 1932). A rating, between 0% and 100%, is assigned to definable soil properties that are measured either in the field or in the lab. The overall Storie Index Rating is determined by factoring all the ratings together:

$$\text{Storie Index Rating} = [(\text{Factor A}) / 100 \times (\text{Factor B}) / 100 \times (\text{Factor C}) / 100 \times (\text{Factor X}) / 100] \times 100$$

Table 1 describes the Storie Index parameters and general conditions for ratings. More detail on methodology for each parameter and the results for the assessed site are provided below.

Table 1. Storie Index soil properties and field methods (Storie, 1978).

| Factor | Property | Highest Rating | Lowest Rating |
|----------|---|---|------------------------------------|
| A | Physical Profile Group | Based on landform type and soil development | |
| B | Surface Texture | Loamy Soils | Stony Soils, Dense Soils |
| C | Slope | Nearly Level/Gently Sloping (0 to 8%) | Steep/Very Steep (30 to over 45%) |
| X | <i>Rating of conditions other than A, B, or C</i> | | |
| | Drainage | Well-drained | Waterlogged |
| | Alkali | Alkali-free | Strongly affected |
| | Nutrient (Fertility) Level | Very Low - Optimal | Detrimental nutrient accumulations |
| | Acidity | Neutral/Slight | Extremely Acidic/Extremely Basic |
| | Erosion | None/Slight | Severe |
| | Microrelief | Smooth | Hummocks and dunes |

Methodology

Plots to undergo a complete Storie Index rating are found by slope measurements between 0 and 15%, vegetation (mostly open space, no wetland vegetation), and an examination of surface gravels. Locations that undergo a Storie Index rating are chosen because it has been determined to be the most representative part of the plot being evaluated. A soil core is excavated using a hand auger and the Storie Index rating is conducted. A sample of surface soil is taken for lab analysis, as well as the location being recorded with a Garmin GPS unit (accuracy < 15 meters). These rated soil holes are included on the site map.

The total number of holes excavated, rated, and sampled is based on the size of the plot area, uniformity of landscape surface, and vegetation within the plot area. Generally, inclusions of approximately an acre or less, if landscape variables (surface, vegetation) are consistent throughout, one hole is rated. If the plot exceeds an acre 1-2 holes per acre are rated and sampled or a transect is made.

Additionally, within each plot, confirmation holes are dug to evaluate the uniformity of the soil within a specific area and assist in the decision to include or exclude a portion from the plot. Confirmation holes are dug in areas where there is potential soil variation (i.e., in areas of vegetation change or topographic changes). For plots approximately one acre or less, 1-2 confirmation holes are dug. For plots over an acre, 1-4 confirmation holes per acre are dug. If a transect was made, confirmation holes are not necessary since a transect spans the entire plot. The confirmation holes are noted on field data sheets and the location is recorded with a Garmin GPS unit. These confirmation hole locations are included on the site map.

Plot boundaries are delineated by changes in land surface. Slope, soil type, gravel increases, vegetation change, and geomorphological features can all impact perimeter delineations. Field data sheets are used to record perimeter descriptions and these descriptions are included on the site maps along with a plot boundary and total square footage of passing area.

Factor A – Physical Profile Group

Factor A of the Storie Index rates the development of a soil profile. In alluvial soils, a high score indicates a younger undeveloped profile with an absence of gravelly subsoils and no Bt horizon (a horizon containing an accumulation of translocated clay). A lower score is given to older alluvial fans, plains and terraces when the presence of a Bt horizon or other restrictive features (i.e., clay pan, duripan, hardpan) can be confirmed (Storie, 1978; UC ANR,2008).

Upland soils that are formed from bedrock are rated based on depth to lithic (consolidated geologic material) or paralithic (softly consolidated or unconsolidated geologic material) contact (Storie, 1978; UC ANR,2008). The deeper the profile the higher the Storie Index score with a 100 being scored for upland soils that have profile of more than 6 feet (Storie, 1978). It should be noted that soil mapping parameters for Prime Farmland and Farmland of Statewide Importance have been established since the publication of the Storie Index in 1978. Both Prime Farmland and Farmland of Statewide Importance require an examination of effective rooting depth and other soil characteristics up to a depth of 40 inches (FMMP, 2016). Additionally, the LCC I requires a rooting depth of at least 36 inches and the LCC II requires a rooting depth of 20-36 inches (USDA SCS, 1961). These requirements demonstrate a consensus within the USDA and California Department of Conservation that farmland mapping include soils with profile depths of 40 inches or more as prime or agriculturally significant. Table 2 shows a revised scoring for upland soils to include effective rooting depth definitions of Prime Farmland and Farmland of Statewide Importance.

Table 2. Upland Soils/Effective Rooting Depth Score

| Rooting Depth | Storie Index Score |
|---------------|--------------------|
| >40 inches | 100 |
| 30-40 inches | 95 |
| 20-30 inches | 90 |

Factor B – Surface Texture

Surface soil texture is determined using the texture by feel method. This method is the USDA standard field protocol for particle size analysis. If necessary, samples are sent to a lab for further particle size analysis using the hydrometer or micro-pipette method (USDA, 2014). Scoring rubric from Storie, 1978 is used for this rating.

Factor C – Slope

Slopes are measured in the field with clinometer (NRCS, 2012). Table 3 shows scoring rubric based on Storie 1978 but this scoring index removes the ranges for a more reproducible scoring method.

Table 3. Slope Scoring

| Storie Class | Index | Description | Score |
|--------------|-------|----------------------|-------|
| A | | Nearly Level (0-2%) | 100 |
| AA | | Gently Undulating 0% | 100 |
| | | Gently Undulating 1% | 98 |
| | | Gently Undulating 2% | 95 |
| B | | Gently sloping 3% | 100 |

| | | |
|----|---------------------------|-----|
| | Gently sloping 4-6% | 98 |
| | Gently sloping 6-8% | 95 |
| BB | Undulating 3% | 100 |
| | Undulating 4-6% | 93 |
| | Undulating 6-8% | 85 |
| C | Moderately Sloping 9-11% | 95 |
| | Moderately Sloping 12-14% | 90 |
| | Moderately Sloping 15% | 80 |
| CC | Rolling 9-11% | 95 |
| | Rolling 12-14% | 90 |
| | Rolling 15% | 80 |

Factor X - Rating of conditions other than A, B, or C

Drainage – The subjectivity of the Storie Index drainage ratings has been addressed by an application of the natural drainage classes (i.e., the prevailing wetness conditions) as determined by the NRCS Soil Survey Manual (USDA, 1993) and the Drainage in Soil Surveys of California (USDA, 1989). Drainage is determined by observation to a four-foot depth of wetness, redoximorphic features, restrictive subsurface soil features (claypans, hardpans, etc...), increase in bulk density with depth, depth to bedrock, depth to unconsolidated bedrock (USDA, 1989). The Storie Index Rating, for various drainage classes is summarized in Table 4.

Table 4. Natural Drainage Classes and associated Storie Index Rating.

| NRCS Classes | Storie Index Classes | Storie Index Rating (%) |
|-------------------------------|------------------------|-------------------------|
| Well Drained (WD) | Well Drained | 100 |
| Moderately Well Drained (MWD) | Fairly Well Drained | 90 |
| Somewhat Poorly Drained (SPD) | | 85 |
| Poorly Drained (PD) | Moderately Waterlogged | 40-80 |
| Very Poorly Drained (VPD) | Badly Waterlogged | 10-40 |

USDA, 1993; USDA, 1989

Alkali – If a pH value is 7.3 or more, it is considered alkaline (NRCS, 1998) and a carbonate test is conducted to quantify alkalinity (WREP, 2005). Generally, pH values for this region's soils are neutral to acidic, thus the alkali factor generally receives high scores.

Nutrient – Electrical conductivity (EC) and Sodium Absorption Ratio (SAR) are used to measure nutrient concentration in the soil. Having a low EC and SAR indicates a quality agriculture soil as management issues center mainly around accumulation of detrimental nutrients in soils (UC ANR, 2008). To evaluate nutrient levels, an EC measurement is taken from a saturation paste extract (WREP, 2005). If the EC result is 4 ds/m or lower, no SAR measurement is needed and a Storie Index rating of 100 is given. In this region, the heavily leached soils generally do not have high nutrient content, and typically receive high Storie Index ratings for nutrient level.

Acidity – pH is used to measure the acidity of the soil and is determined with a saturation paste (WREP, 2005). The Storie Index Rating, for various pH classes, is summarized in Table 5.

Table 5. Acidity Class, pH range and associated Storie Index Rating.

| Classes | pH Range | Storie Index Rating (%) |
|----------------------|-----------------|--------------------------------|
| Extremely acidic | 3.5 – 4.4 | 40-90 |
| Very strongly acidic | 4.5 – 5.0 | 90 |
| Strongly acidic | 5.1 – 5.5 | 90-100 |
| Moderately acidic | 5.6 – 6.0 | 100 |
| Slightly acidic | 6.1 – 6.5 | 100 |
| Neutral | 6.6 – 7.3 | 100 |

NRCS, 1998; UC ANR 2008 (Figure 5A); FMMP

Erosion – Interpretation of erosion features in the field is conducted following the NRCS Field Book (NRCS, 2012) to properly evaluate erosion rating. Erosion types include none to slight, detrimental deposition, sheet erosion, gullies, and wind erosion.

Microrelief – Microrelief is small, relative differences in elevation between adjacent areas. Interpretation of the site’s microrelief was conducted following the NRCS Field Book (NRCS, 2012) to evaluate microrelief features. Examples include smooth, channels, hummocks, and dunes.

Citations

- CMMLUO, 2016 – Humboldt County’s Commercial Medical Marijuana Land Use Ordinance. Ordinance No. 2544. Humboldt County Board of Supervisors. January 26, 2016.
- USDA, 1993 - Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
- Storie, 1978 – Storie Index Rating. Storie, Earl R. University of California Cooperative Extension. 1978.
- USDA SCS 1961 – Land Capability Classification. Soil Conservation Service. 1961.
- Storie, 1932 – Storie, R. Earl. An index for rating agricultural values of soils. Bulletin 556. Berkeley: California Experimental Station.
- UC ANR, 2008 – A Revised Storie Index for Use with Digital Soils Information. University of CA, Division of Agriculture and Natural Resources. SEP 2008.
- USDA, Natural Resources Conservation Service. National soil survey handbook, title 430-VI.
http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054242 accessed (October 5, 2016).
- FMMP, 2016 - California Department of Conservation Farmland Mapping and Monitoring Program. Important Farmland Mapping Categories and Soil Taxonomy Terms.
http://www.conservation.ca.gov/dlrp/fmmp/Documents/soil_criteria.pdf accessed (October 12, 2016)
- NRCS, 2012 – Field Book for Describing and Sampling Soils, Version 3. National Soil Survey Center, Natural Resources Conservation Service, U. S. Department of Agriculture. 2012.
- USDA, 1989 – United States Department of Agriculture Soil Conservation Service. California Bulletin No. CA430-0-4. Drainage in Soil Surveys of California. 1989.
- NRCS, 1998 – Soil Quality Information. USDA NRCS. January 1998.
http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052208.pdf
- WREP, 2005 - Gavlak, Ray; Horneck, Donald; Miller, Robert O. Plant, Soil and Water Reference Methods for the Western Region, Third Ed. 2005.

Appendix B. Representative Landscape Photographs

Image 1. South-facing landscape



Image 2. North-facing landscape



Image 3. South-east facing landscape



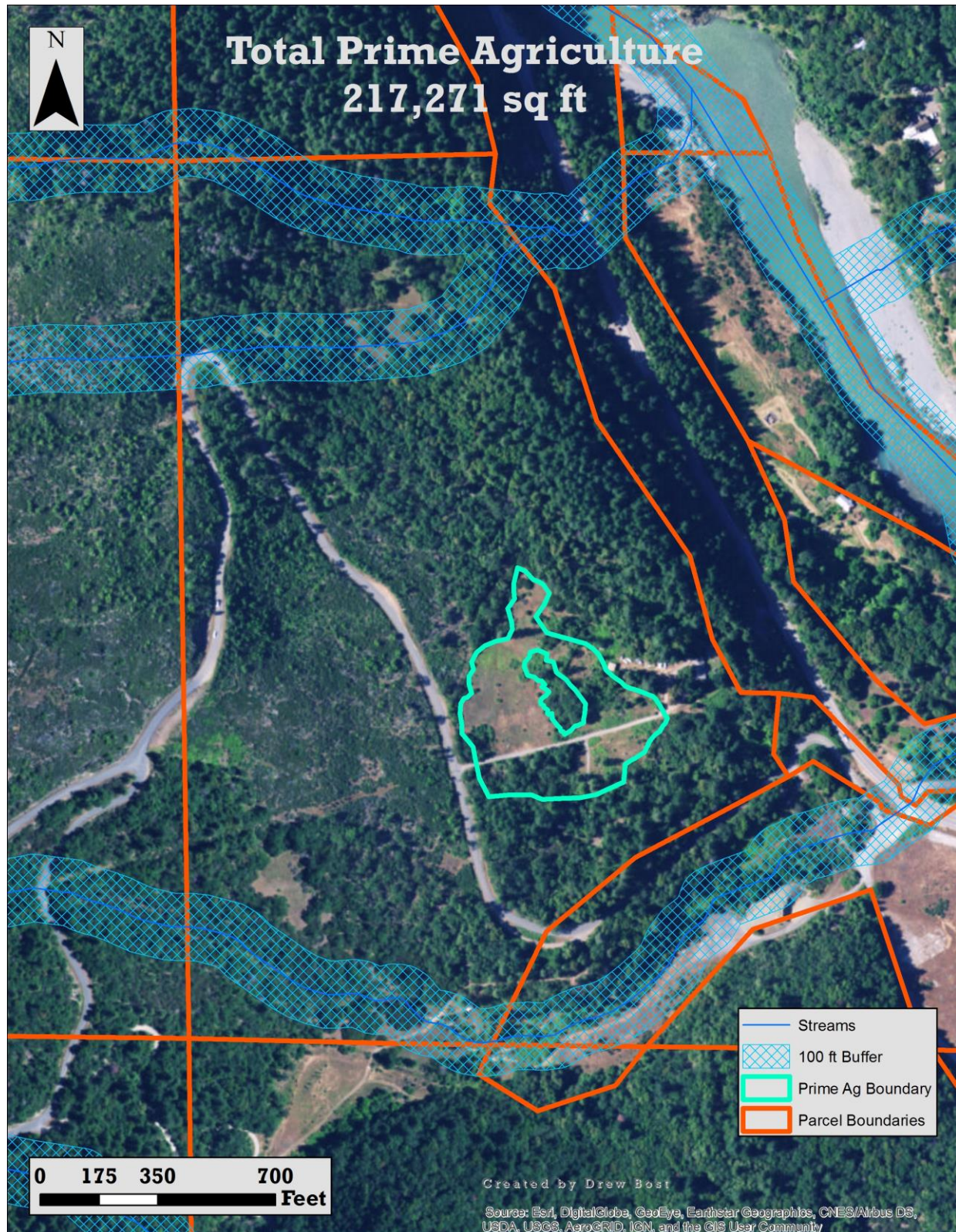
Appendix C. Site Maps

Image 1. Site Map of prime agricultural soil area. Total area 217,270 square feet (5.0 acres).



The information on this map was derived from digital data from sources referenced above. Care was taken in the creation of this map but depictions of boundaries are not authoritative. DBS cannot accept any responsibility for errors, omissions, or positional accuracy. There are no warranties, expressed or implied, including the warranty of merchantability or fitness for a particular purpose, accompanying this image.

Image 2. Site Map of prime agricultural soil area with parcel lines and stream set-backs of 100-feet.



The information on this map was derived from digital data from sources referenced above. Care was taken in the creation of this map but depictions of boundaries are not authoritative. DBS cannot accept any responsibility for errors, omissions, or positional accuracy. There are no warranties, expressed or implied, including the warranty of merchantability or fitness for a particular purpose, accompanying this image.

Appendix D. Storie Index Scoring

| Site Name | Factor A Physical Profile | | Factor B Surface Texture | | Factor C Slope | | Factor X | | | | | | | | | | | | *Final Storie Score (%) |
|------------------------|------------------------------|--------------|-----------------------------|--------------|--------------------------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|------------------------------|--------------|----------------|--------------|----------------|--------------|----------------------------------|
| | Characteristic | Score (%) | Characteristic | Score (%) | Characteristic | Score (%) | Drainage | | Alkali | | Nutrient Level | | Acidity | | Erosion | | Microrelief | | |
| | | | | | | | Characteristic | Score (%) | Characteristic | Score (%) | Characteristic | Score (%) | Characteristic | Score (%) | Characteristic | Score (%) | Characteristic | Score (%) | |
| Site 1 - North Hole | III - Alluvial Terrace | 95 | Loam w/ 20% gravel | 100 | Moderately sloping, Avg 11% | 95 | MWD | 90 | Not alkaline | 100 | Fair, EC = 0.5 | 100 | Moderately Acid, pH = 5.6 | 100 | None | 100 | Smooth | 100 | 81.2 |
| Site 1 - East Hole | III - Alluvial Terrace | 95 | Loam w/ 20% gravel | 100 | Moderately sloping, Avg 11% | 95 | MWD | 90 | Not alkaline | 100 | Fair, EC = 0.6 | 100 | Moderately Acid, pH = 5.8 | 100 | None | 100 | Smooth | 100 | 81.2 |
| Site 1 - South Hole | III - Alluvial Terrace | 95 | Loam w/ 20% gravel | 100 | Moderately sloping, Avg 11% | 95 | MWD | 90 | Not alkaline | 100 | Fair, EC = 0.3 | 100 | Slightly Acid, pH = 6.1 | 100 | None | 100 | Smooth | 100 | 81.2 |
| Site 1 - West Hole | III - Alluvial Terrace | 95 | Loam w/ 20% gravel | 100 | Moderately sloping, Avg 11% | 95 | MWD | 90 | Not alkaline | 100 | Fair, EC = 0.8 | 100 | Moderately Acid, pH = 5.7 | 100 | None | 100 | Smooth | 100 | 81.2 |

Storie Index Rating Calculation = [(Factor A)/100 x (Factor B) /100 x (Factor C) /100 x (Factor X) /100] x 100

Intersection of Hwy 299 /Friday Ridge Rd-Looking to the East



APPENDIX F – BIOLOGICAL RESOURCES ASSESSMENT

Biological Resources Assessment Outdoor Cultivation Project

Organic Liberty, LLC
Willow Creek, California



Prepared for:

Organic Liberty, LLC



April 2020
017014.100

Reference: 017014.100

Biological Resources Assessment

Outdoor Cultivation Project

Organic Liberty, LLC Willow Creek, California

Prepared for:
Organic Liberty, LLC

Prepared by:



1062 G Street, Suite I
Arcata, CA 95521
707-822-5785

April 2020

QA/QC:GAO 

Table of Contents

| | Page |
|--|------|
| List of Illustrations..... | ii |
| Abbreviations and Acronyms..... | iii |
| 1.0 Introduction | 1 |
| 1.1 Project Location | 1 |
| 1.2 Site Description | 1 |
| 2.0 Methodology..... | 1 |
| 2.1 Review of Existing Data..... | 1 |
| 2.2 Coordination with Permitting and Regulatory Agencies | 2 |
| 2.3 Field Observations and Studies..... | 2 |
| 3.0 Environmental Setting | 3 |
| 3.1 Geologic and Soil Composition | 3 |
| 3.2 Vegetation..... | 3 |
| 3.3 Wildlife Habitats and Movement Corridors..... | 3 |
| 3.4 Offsite Conditions | 4 |
| 4.0 Regulatory Setting..... | 4 |
| 4.1 Federal Laws | 4 |
| 4.1.1 Clean Water Act Sections 404 and 401..... | 4 |
| 4.1.2 Fish and Wildlife Coordination Act | 5 |
| 4.1.3 Federal Endangered Species Act..... | 5 |
| 4.1.4 Migratory Bird Treaty Act | 6 |
| 4.2 State Laws | 6 |
| 4.2.1 Porter-Cologne Water Quality Control Act..... | 6 |
| 4.2.2 California Endangered Species Act | 7 |
| 4.2.3 California Environmental Quality Act | 7 |
| 4.2.4 California Fish and Game Code Section 1600 | 8 |
| 4.2.5 California Fish and Game Code Sections 3503 and 3513 | 9 |
| 4.2.6 Fully Protected Species and Species of Special Concern | 9 |
| 4.2.7 Native Plant Protection Act of 1973 | 9 |
| 4.2.8 Natural Community Conservation Planning Act | 10 |
| 4.3 Other Statutes, Codes, and Policies Affording Limited Species Protection—Humboldt County Streamside Management Area and Wetlands Ordinance..... | 10 |
| 5.0 Results..... | 11 |
| 5.1 Special Status Plant Species..... | 12 |
| 5.2 Special Status Animal Species..... | 15 |
| 5.2.1 Amphibians | 15 |
| 5.2.2 Birds | 15 |
| 5.2.3 Crustaceans..... | 17 |
| 5.2.4 Fish..... | 17 |
| 5.2.5 Insects | 17 |
| 5.2.6 Mammals | 17 |
| 5.2.7 Mollusks..... | 18 |
| 5.3 Special Status Habitats and Natural Communities | 18 |

Table of Contents, Continued

| | Page |
|---|-------------|
| 5.3.1 Designated Critical Habitat | 18 |
| 5.3.2 Vegetation Alliances | 18 |
| 5.3.3 Wetland and Riparian Habitats..... | 18 |
| 5.3.4 Nesting Bird Habitat..... | 19 |
| 5.3.5 Wildlife Movement Corridors | 19 |
| 6.0 Conclusions | 19 |
| 6.1 Special Status Plant Species..... | 19 |
| 6.2 Special Status Animal Species..... | 19 |
| 6.3 Special Status Habitats and Natural Communities | 19 |
| 6.3.1 Designated Critical Habitat | 19 |
| 6.3.2 Vegetation Alliances | 20 |
| 6.3.3 Wetland and Riparian Habitats..... | 20 |
| 6.3.4 Nesting Bird Habitat..... | 20 |
| 6.3.5 Wildlife Movement Corridors | 20 |
| 7.0 Recommendations | 20 |
| 8.0 References | 21 |

Appendices

1. Site Plan
2. Regionally Occurring Special Status Plant Species Scoping List
3. Regionally Occurring Special Status Animal Species Scoping List
4. Observed Botanical Species List
5. Observed Animal Species List
6. Site Photographs

List of Illustrations

| Figures | Follows Page |
|--|---------------------|
| 1. Project Location Map..... | 1 |
| 2. Overview of Special Status Biological Resources Present | 1 |

Abbreviations and Acronyms

| | | | |
|----------|---|---------|---|
| cm | centimeters | | |
| m | meters | | |
| ACOE | Army Corps of Engineers | G5/S5 | secure species heritage rank |
| APN | Assessor's parcel number | GIS | Geographic Information System |
| BIOS | Biogeographical Information and Observation System | IPaC | Information for Planning and Conservation |
| BRA | biological resources assessment | MBTA | Migratory Bird Treaty Act |
| CAL FIRE | California Department of Forestry and Fire Protection | NCCP | Natural Community Conservation Planning Act |
| CCH | Consortium of California Herbaria | NEPA | National Environmental Policy Act |
| CCR | California Code of Regulations | NMFS | National Marine Fisheries Service |
| CDFW | California Department of Fish and Wildlife | NPPA | Native Plant Protection Act |
| CE | Candidate Endangered | NRA | natural resources assessment |
| CEQA | California Environmental Quality Act | OBL | obligate |
| CESA | California Endangered Species Act | OHWM | ordinary high water mark |
| CFGC | California Fish and Game Code | PT | proposed threatened species status |
| CFR | Code of Federal Regulations | Q | Questionable Taxonomy |
| CNDDDB | California Natural Diversity Database | R | Rare |
| CNPS | California Native Plant Society | RWQCB | Regional Water Quality Control Board |
| CRPR | California Rare Plant Rank | SMA | streamside management area |
| CT | candidate threatened species status | SMAWO | Streamside Management Area and Wetlands Ordinance |
| CWA | Clean Water Act | SAA | streambed alteration agreement |
| D | delisted species status | SSC | species of special concern |
| DPS | distinct population segment/species status | SWRCB | State Water Resources Control Board |
| E | endangered species status | T | threatened species status |
| EPA | U.S. Environmental Protection Agency | T# | intraspecific taxon |
| ESU | evolutionarily significant unit/species status | UCB | University of California at Berkeley |
| FESA | Federal Endangered Species Act | UPL | upland |
| FP | fully protected species status | U.S. | United States |
| FRAP | Fire and Resource Assessment Program | USACE | U.S. Army Corps of Engineers |
| G1/S1 | critically imperiled species heritage rank | USC | United States Code |
| G2/S2 | imperiled species heritage rank | USDA | U.S. Department of Agriculture |
| G3/S3 | vulnerable species heritage rank | USFWS | U.S. Fish and Wildlife Service |
| G4/S4 | apparently secure species heritage rank | USGS | United States Geological Survey |
| | | VegCAMP | Vegetation Classification and Mapping Program |
| | | WDR | waste discharge requirement |
| | | WL | watch list species status |

1.0 Introduction

SHN has conducted site investigations, literature reviews, and assessments to determine biological resources present in relation to the Organic Liberty, LLC project site in the vicinity of Willow Creek, California. The project is proposing site development for agriculture-related activities (Appendix 1). This biological resources assessment (BRA) will serve as a tool to identify potential sensitive natural resources that may occur within the study area.

1.1 Project Location

The project is located in the Salyer 7.5-minute United States Geological Survey (USGS) Quadrangle in an unincorporated area of Humboldt County, California (Figure 1). The project occurs in Sections 15 of Township 06 North, Range 05 East. The site is approximately 4 air miles south/southeast of the community of Willow Creek. The proposed project site is located on Assessor's parcel number (APN) 524-091-002.

1.2 Site Description

The study area (Figure 2) is a 4-acre grassland/woodland area that is approximately 730 feet above mean sea level and is situated on undeveloped land that (based on historical aerial imagery) may have been used for grazing (Photos 1 and 2). Access to the site is on an existing dirt road off Friday Ridge Road, which also serves a residence outside the project area to the east. Some brush clearing has been done for fire suppression (Photo 3).

2.0 Methodology

2.1 Review of Existing Data

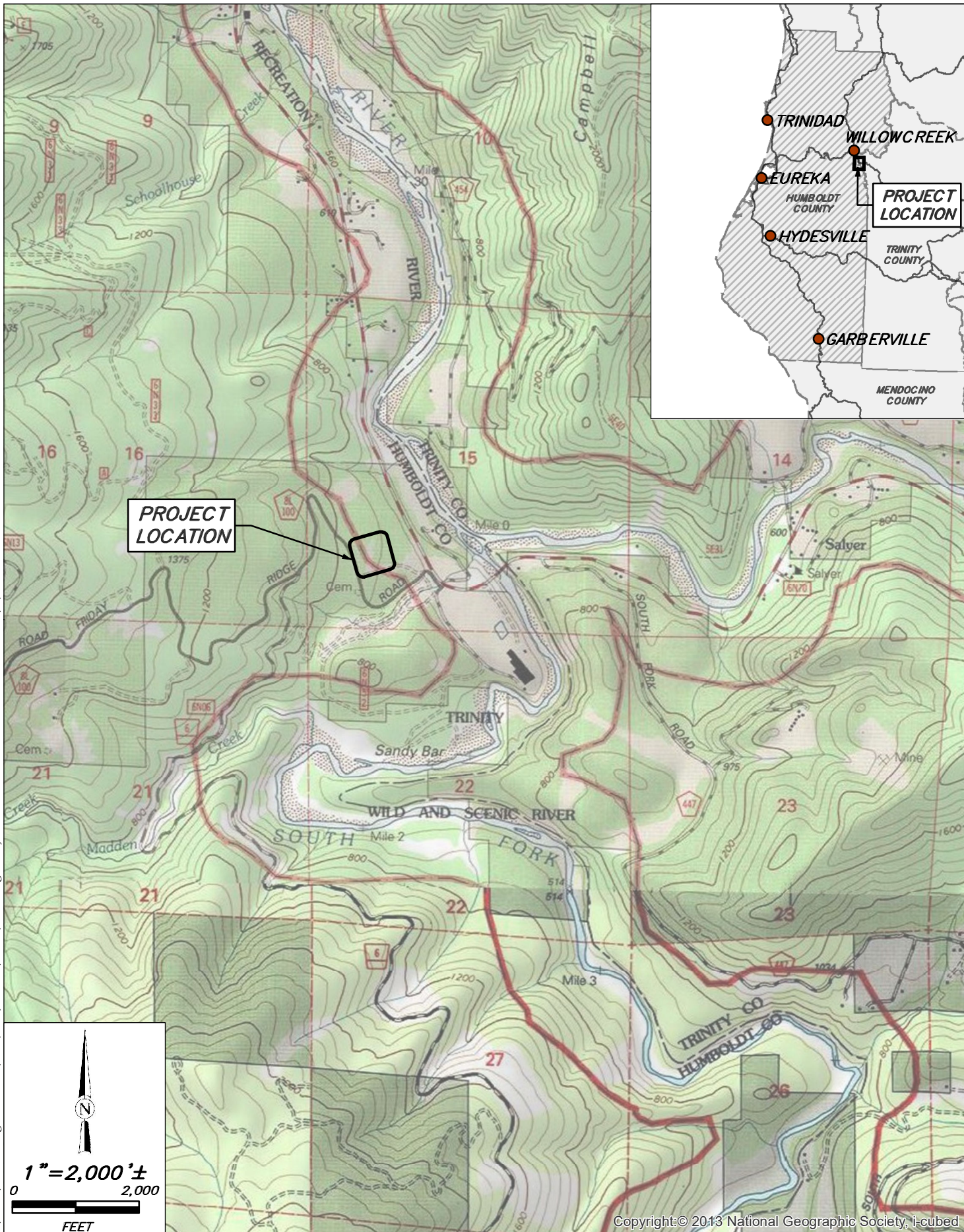
This natural resource assessment (NRA) includes a review of existing data and information related to special status species of plants, animals, and sensitive natural communities that may be present.


The findings of this report are the result of several sources, including a review of existing literature regarding sensitive resources that have the potential to occur within the study area. The study area (Figure 2) was defined by including a 100-foot extension from potential project components. Biological scoping included a review of the following sources:

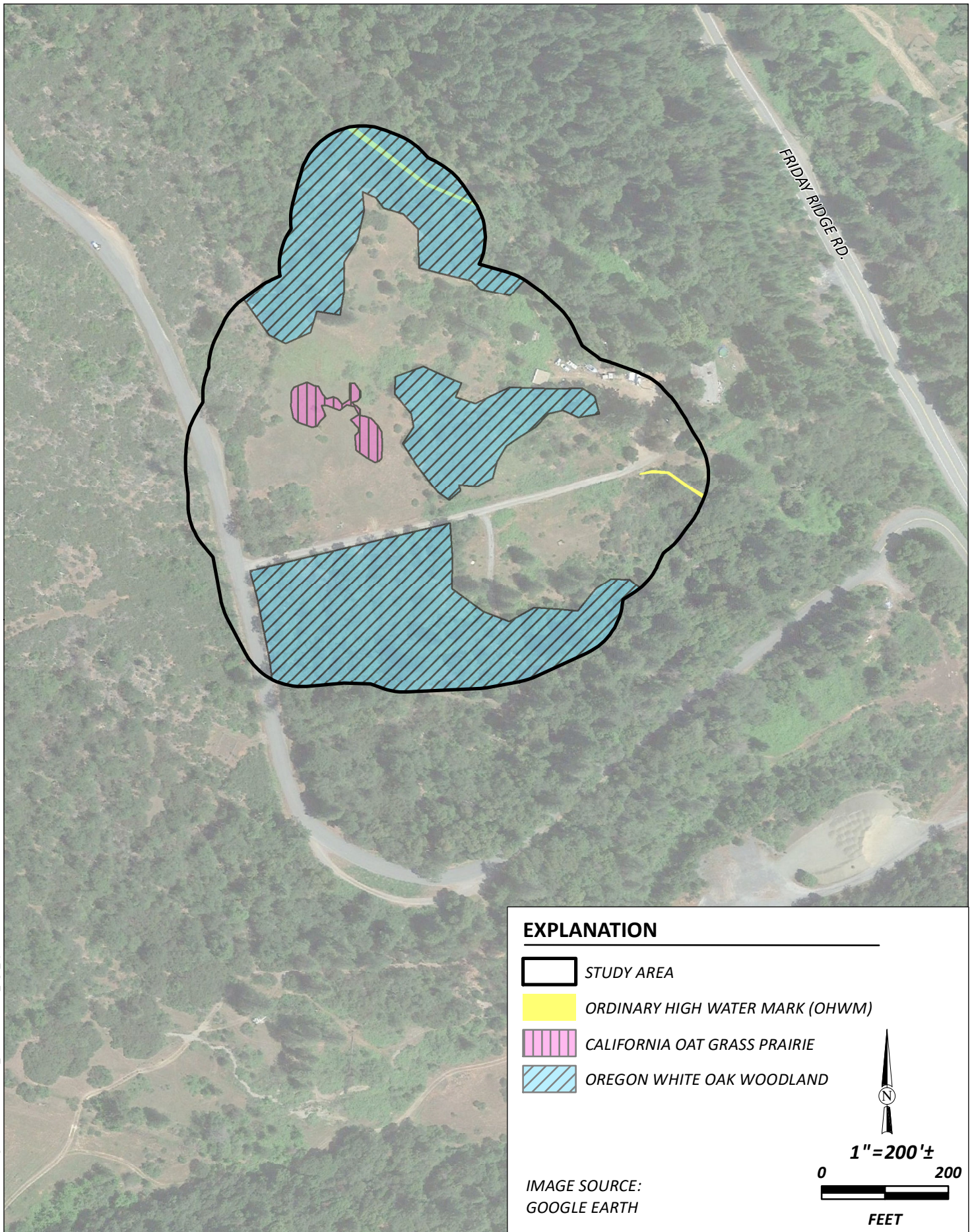
- California Natural Diversity Database (CNDDDB) query for the Salyer and surrounding USGS 7.5-minute topographic quadrangles (Denny, Grouse Mtn., Hennessy Peak, Hoopa, Ironside Mtn., Tish Tang Point, Trinity Mtn., and Willow Creek) (CDFW, 2020b)
- Biogeographical Information and Observation System's Rarefind¹ database (BIOS; CDFW, 2020c)
- Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2020b) query for a list of all plant species reported for project area, and surrounding USGS 7.5-minute topographic quadrangles
- Special Vascular Plants, Bryophytes, and Lichens of California List (CDFW, 2020d)
- Special Animals of California List (CDFW, 2019)

¹ Rarefind is a "positive detection" database. The absence of data does not imply absence of special status species.

\\eureka\projects\2017\017014-OrganicLiberty\GIS\PROJ_MXD\NRA_Fig1_ProjectLocation.mxd;User:hummel;Printed:4/2/2020



| | | |
|--|---|---|
|  <p>SHN Consulting Engineers & Geologists, Inc.</p> | <p>Organic Liberty Biological Resources Assessment Willow Creek, California</p> <p>April 2020</p> | <p>Project Location</p> <p>SHN 017014.100</p> <p>Figure 1</p> |
|--|---|---|



- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) was queried for threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of the proposed project and/or may be affected by the proposed project (USFWS, 2020a)
- USFWS Threatened and Endangered Species Active Critical Habitat Report Geographic Information System (GIS) database (USFWS, 2020b)
- Wetlands and other waters delineated report prepared by SHN (SHN, 2017)
- Natural resources assessment report prepared by SHN (SHN, 2018)
- California Flora Database (Calflora, 2020)
- Consortium of California Herbaria (CCH, 2020)

From the sources listed above, a list of potential target special status species for the study area was compiled. Appendix 2 and Appendix 3 include plant and animal species, respectively, reported by the CNDDDB and USFWS, and species listed in the California Native Plant Society (CNPS) inventory of rare plants.

Prior to the field investigation, a review of all plant species reported from the project area was performed by querying the “Consortium of California Herbaria” database records (CCH, 2020) and “Calflora” observations (Calflora, 2020).

2.2 Coordination with Permitting and Regulatory Agencies

An SHN biologist conducted a site visit on February 6, 2017, with Jennifer Olson of the California Department of Fish and Wildlife (CDFW) for an initial assessment of habitat conditions.

2.3 Field Observations and Studies

Field observations were made within the 4-acre study area (Figure 2) on the following dates:

- February 16, 2017
- April 10, 2017
- July 10, 2017
- August 3, 2017
- October 27, 2017
- March 13, 2020

The 2017 site visits included seasonally appropriate surveys for botanical species reported from the region that had a moderate or higher potential for occurrence (Appendix 2). These visits are included in this report as the survey data remains valid until spring of 2022 (SHN, 2018). A list of all botanical species encountered on the March 2020 site visit is presented in Appendix 4. Plants observed during site visits were identified to the lowest taxonomic level possible to distinguish special status species from others. Vegetation alliances conform to the Vegetation Classification and Mapping Program’s (VegCAMP) Natural Communities List (CDFW, 2020a) and *A Manual of California Vegetation* (CNPS, 2020a). Botanical nomenclature of species in this Assessment follows the *Jepson Manual* (Baldwin et al., 2012) and subsequent online revisions (UCB, 2016). In accordance with the botanical survey protocol recommended by CDFW, 2017 botanical surveys were floristic in nature, with an attempt to identify all species present, including possible special status species and natural communities (CDFW, 2009). Animal species reported from the region are presented in Appendix 3. Habitat assessments were conducted for animal species during site visits. Nomenclature for

special status animals conforms to the CDFW Animals List (CDFW, 2019). A list of all animal species observed while conducting the March 2020 habitat assessment is presented in Appendix 5.

Site photographs from the site visits are included in Appendix 6.

Additionally, a wetland delineation was previously performed within the study area (SHN, 2017).

3.0 Environmental Setting

The project is situated on a predominantly east-facing slope above the confluence of the main stem of the Trinity River and South Fork of the Trinity River. Historical land uses within the project site include possible animal grazing.

The region experiences a Mediterranean climate with warm, dry summers and cool, wet winters. The bulk of annual precipitation occurs in the fall, winter, and spring (December averages 11.8 inches). Summers are typically dry (July averages 0.24 inches). The total annual precipitation average is 55.56 inches. Snow rarely occurs at this elevation. The site is sloped toward the southeast, and stormwater runoff from the Friday Ridge Road surface flows from the northwest to the southeast through the site (Photo 4 in Appendix 6).

3.1 Geologic and Soil Composition

The site is set in a valley in the coastal mountains, approximately 28 miles east of the Pacific Ocean. It occurs within a Franciscan geologic complex, composed of variably deformed and metamorphosed slate, graywacke, siltstone, chert, and basalt (USGS, 2007). The closest area of mapped ultramafic parent material is approximately 5 miles northwest of the project area in the Brannan Mountain vicinity (USGS, 2007). Ultramafic rocks and/or soils were not encountered within the study area. The soils in the study area have a U.S. Department of Agriculture (USDA) classification of Holland-Goldridge with 5 to 35 percent slopes (NRCS, 2020).

3.2 Vegetation

In cooperation with CDFW's VegCamp program, the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program (FRAP) compiled the best available land cover data available for California into a single comprehensive statewide data set, commonly referred to as "Fveg15" (CAL FIRE, 2015). Previous research for the 2018 natural resources assessment (SHN, 2018) at this site reported that Fveg version 15_1 has mapped the study area as being composed of montane hardwood, annual grassland, and urban vegetation.

3.3 Wildlife Habitats and Movement Corridors

The study area is composed of mixed conifers, oak woodland, open grassland, manzanita and madrone (Photo 4). Surrounding landscapes to the north, west, and south are of similar composition, while the landscape to the east includes the Highway 299 corridor, the Trinity River, and dense coniferous mountain habitats. Common wildlife species expected within the study area are those typically associated with grasslands, oak woodlands, and mixed coniferous forests of northwestern California. Animals species observed during fieldwork are presented in Appendix 5. Other wildlife species are likely to inhabit the surrounding area, and it is expected that there are many other bird, mammal, and amphibian species that might use the study area, if only transitionally.

Wildlife movement includes migration (that is, usually one-way per season), inter-population movement (that is, long-term genetic flow), and small travel pathways (that is, daily movement corridors within an animal's territory). Although small travel pathways usually facilitate movement for daily home range activities, such as foraging or escape from predators, they also provide connection between outlying populations and the main corridor, permitting an increase in gene flow among populations. The drainages immediately adjacent to the project site are intermittent.

These linkages among habitat types can extend for miles from primary habitat areas and occur on a large scale throughout California. Habitat linkages facilitate movement between populations located in discrete areas and populations located within larger habitat areas. The mosaic of habitats found within a large-scale landscape results in wildlife populations that consist of discrete sub-populations constituting a large single population, which is often referred to as a meta-population. Even where patches of pristine habitat are fragmented, such as occurs with coastal scrub, the movement between wildlife populations is facilitated through habitat linkages, migration corridors, and movement corridors. Depending on the condition of the corridor, genetic flow between populations may be high in frequency, thus allowing high genetic diversity within the population, or may be low in frequency. Low-frequency genetic flow may potentially lead to complete isolation and, if pressures are strong, potential extinction (Whitaker, 1998). Most of the wildlife movement corridors are expected to be concentrated on nearby perennial drainages. There are two intermittent drainages just outside the project area boundary, to the northeast and to the southeast (Figure 2).

3.4 Offsite Conditions

The habitats adjacent to the project areas are a mixture of high quality mixed coniferous forests in timber management and open grasslands used for cattle grazing. The Trinity River riparian corridor is situated approximately 0.18 miles to the east and at a lower elevation than the study area.

4.0 Regulatory Setting

Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of legislative acts. The following section summarizes the federal, state, and local regulations for special-status species, jurisdictional waters of the U.S. and State of California, and other sensitive biological resources. This section provides a listing and overview of these federal and state laws.

4.1 Federal Laws

4.1.1 Clean Water Act Sections 404 and 401

Under Section 404 (33 United States Code (USC) 1344) of the Clean Water Act (CWA), as amended, the Army Corps of Engineers (USACE) retains primary responsibility for permits to discharge dredged or fill material into waters of the U.S. All discharges of dredged or fill material into jurisdictional waters of the U.S. that result in permanent or temporary losses of waters of the U.S. are regulated by the USACE. A permit from the USACE must be obtained before placing fill or grading in wetlands or other waters of the U.S., unless the activity is exempt from CWA Section 404 regulation (for example, certain farming and forestry activities).

The USACE defines wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Environmental Laboratory, 1987).

In other words, the USACE defines wetlands by the presence of all three wetland indicators: hydrophytic vegetation, hydric soils, and wetlands hydrology.

Waters of the U.S. are defined at 33 Code of Federal Regulations (CFR) Part 328. They include traditional navigable waters; relatively permanent, non-navigable tributaries of traditional navigable waters; and certain wetlands. Following recent court cases, the U.S. Environmental Protection Agency (EPA) and USACE published a memorandum entitled Clean Water Act Jurisdiction (USACE/EPA, 2008) to guide the determination of jurisdiction over waters of the U.S., especially for wetlands. The applicability of Section 404 permitting over discharges to wetlands is, therefore, a two-step process: 1) determining the areas that are wetlands, and 2) where a wetland is present, assessing the wetland's connection to traditional navigable waters and non-navigable tributaries to determine whether the wetland is jurisdictional under the CWA. A wetland is considered jurisdictional if it meets certain specified criteria.

The USACE is required to consult with the USFWS and/or National Marine Fisheries Service (NMFS) under Section 7 of the Federal Endangered Species Act (FESA) if the action subject to CWA permitting could result in "Take" of federally listed species or an adverse effect to designated critical habitat. The project is within the jurisdiction of the Sacramento District of the USACE.

Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs). The project is within the jurisdiction of the North Coast RWQCB.

4.1.2 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 USC Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995) requires that whenever waters or channel of a stream or other body of water are proposed or authorized to be modified by a public or private agency under a federal license or permit, the federal agency must first consult with the USFWS and/or NMFS and with the head of the agency exercising administration over the wildlife resources of the state where construction will occur (in this case the CDFW), with a view to conservation of birds, fish, mammals, and all other classes of wild animals, and all types of aquatic and land vegetation upon which wildlife is dependent.

If direct permanent impacts occur to waters of the U.S. from a proposed project, then a permit from USACE under CWA Section 404 is required for the construction of the proposed project. USACE is required to consult with USFWS and/or NMFS as appropriate regarding potential impacts to federally listed species under FESA. Such action may prompt consultation with CDFW, which would review the project pursuant to California Endangered Species Act (CESA) and issue a consistency letter with USFWS and/or NMFS, if required.

4.1.3 Federal Endangered Species Act

The United States Congress passed the FESA in 1973 to protect species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend and within

which they live. The USFWS and the NMFS are the designated federal agencies responsible for administering the FESA.

The FESA prohibits the “Take” of endangered or threatened wildlife species. A “Take” is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 USC 1531, 50 CFR 17.3). An activity can be defined as a “Take” even if it is unintentional or accidental. Taking can result in civil or criminal penalties. Activities that could result in “Take” of a federally listed species require an incidental “Take” authorization resulting from FESA Section 7 consultation or FESA Section 10 consultation. Plants are legally protected under the FESA only if “Take” occurs on federal land or from federal actions, such as issuing a wetland fill permit.

A federal endangered species is one that is considered in danger of becoming extinct throughout all, or a significant portion, of its range. A federal threatened species is one that is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species proposed for listing as threatened or endangered. Proposed species are those for which a proposed rule to list as endangered or threatened has been published in the Federal Register. In addition to endangered, threatened, and proposed species, the USFWS maintains a list of candidate species. Candidate species are those for which the USFWS has on file sufficient information to support issuance of a proposed listing rule.

Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such a species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the FESA or result in the destruction or adverse modification of critical habitat designated or proposed to be designated for such species (16 USC 1536[3], [4]). Project-related impacts to species on the FESA endangered or threatened list would be considered significant and would require mitigation.

4.1.4 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1918 makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in CFR Part 10, including feather or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The MBTA also prohibits disturbance and harassment of nesting migratory birds at any time during their breeding season. The USFWS is responsible for enforcing the MBTA (16 USC 703). The migratory bird nesting season is generally considered to be between March 15 and August 1 within the study region.

4.2 State Laws

4.2.1 Porter-Cologne Water Quality Control Act

The state and RWQCB also maintain independent regulatory authority over the placement of waste, including fill, into waters of the state under the Porter-Cologne Water Quality Control Act. Waters of the state are defined by the Porter-Cologne Water Quality Control Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The SWRCB protects all waters in its regulatory scope but has special responsibility for isolated wetlands and headwaters. These water bodies might not be regulated by other programs, such as Section 404 of the CWA. Waters of the state are regulated by the RWQCBs under the State Water Quality Certification Program, which regulates discharges of dredged and fill

material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require an USACE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the state are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the state, the RWQCBs have the option to regulate such activities under their state authority in the form of waste discharge requirements (WDRs) or certification of WDRs.

4.2.2 California Endangered Species Act

The State of California enacted the CESA in 1984. The CESA is similar to the FESA but pertains to state-listed endangered and threatened species. Under the CESA, the CDFW has the responsibility for maintaining a list of threatened and endangered species designated under state law (California Fish and Game Code [CFGF] 2070). Section 2080 of the CFGF prohibits “Take” of any species that the commission determines to be an endangered or threatened species. “Take” is defined in Section 86 of the CFGF as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.”

The state and federal lists of threatened and endangered species are generally similar; however, a species present on one list may be absent from the other. CESA regulations are also somewhat different from the FESA in that the state regulations included threatened, endangered, and candidate plants on non-federal lands within the definition of “Take.” CESA allows for “Take” incidental to otherwise lawful development projects.

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. Project-related impacts to species on the CESA endangered or threatened list (or, in addition, designated by the CDFW as a “Species of Special Concern,” which is a level below threatened or endangered status) would be considered significant and would require mitigation.

4.2.3 California Environmental Quality Act

California Environmental Quality Act (CEQA) Guidelines Sections 15125(c) and 15380(d) provide that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. Thus, CEQA provides the ability to protect a species from potential project impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

The CNPS maintains a list of plant species native to California whose populations that are significantly reduced from historical levels, occur in limited distribution, or are otherwise rare or threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS, 2020b). Taxa with a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, and 3 in the CNPS inventory consist of plants that meet the definitions of the CESA of the CFGF, are eligible for State listing, and meet the definition of Rare or Endangered under CEQA Guidelines Sections 15125(c) and 15380(d). Some taxa with a CRPR 4 may meet the definitions of the CESA of the CFGF. CRPR 4 populations may qualify for consideration under CEQA if they are peripheral or disjunct populations, represent the type locality of the species, or exhibit unusual morphology and/or occur on unusual substrates.

Additionally, CDFW maintains lists of special animals and plants. These lists include a species conservation ranking status from multiple sources, including FESA, CESA, federal departments with unique jurisdictions,

CNPS, and other non-governmental organizations. Based on these sources, CDFW assigns a heritage rank to each species according to their degree of imperilment (as measured by rarity, trends, and threats). These ranks follow NatureServe's Heritage Methodology, in which all species are listed with a G (global) and S (state) rank. Species with state ranks of S1-S3 are also considered highly imperiled.

CEQA Guidelines checklist IV(b) calls for the consideration of riparian habitats and sensitive natural communities. Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. However, these communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies, or regulations, or by the CDFW (that is, the CNDDB program and VegCAMP; CDFW, 2020a) or the USFWS. Impacts to sensitive natural communities and habitats must be considered and evaluated under the CEQA (California Code of Regulations [CCR]: Title 14, Div. 6, Chap. 3, Appendix G).

Although sensitive natural communities do not (at present) have legal protection, CEQA calls for an assessment of whether any such resources would be affected and requires a finding of significance if there will be substantial losses. High-quality occurrences of natural communities with heritage ranks of 3 or lower are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents (such as, general plans) often identify these resources as well. Avoidance, minimizations, or mitigation measures should be implemented if project-affected stands of rare vegetation types or natural communities are considered high-quality occurrences of the given community.

As a trustee agency under CEQA, CDFW reviews potential project impacts to biological resources, including wetlands. In accordance with the CEQA thresholds of significance for biological resources, areas that meet the state criteria of wetlands and could be impacted by a project must be analyzed. Pursuant to CFGC Section 2785, CDFW defines wet areas as "lands which may be covered periodically or permanently with shallow water and which include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, fens, and vernal pools."

4.2.4 California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFW under Sections 1600-1616 of the CFGC. Any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake will generally require a streambed alteration agreement (SAA).

The term "stream," which includes creeks and rivers, is defined in the CCR as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life." This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation (14 CCR 1.72).

In addition, the term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFW, 2020d). Removal of riparian vegetation also requires an SAA from the CDFW.

4.2.5 California Fish and Game Code Sections 3503 and 3513

According to Section 3503 of the CFGC, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrows [*Passer domesticus*] and European starlings [*Sturnus vulgaris*]). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the “Take” or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “Take” by the CDFW.

4.2.6 Fully Protected Species and Species of Special Concern

The classification of “fully protected” was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced with possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The CFGC sections (fish at Section 5515, amphibian and reptiles at Section 5050, birds at Section 3511, and mammals at Section 4700) dealing with “fully protected” species states that these species “...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species” (CDFW, 1998), although “Take” may be authorized for necessary scientific research. This language makes the “fully protected” designation the strongest and most restrictive regarding the “Take” of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFW to authorize “Take” resulting from recovery activities for state-listed species.

Species of special concern (SSC) are broadly defined as animals not listed under the CESA, but that are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although the SSC designation provides no special legal status, they are given special consideration under CEQA during project review.

Appendix 3 includes potentially occurring federal- and state-listed species and SSC animals that may occur in the project area.

4.2.7 Native Plant Protection Act of 1973

The Native Plant Protection Act (NPPA) of 1973 (Section 1900-1913 of the CFGC) includes provisions that prohibit the taking of endangered or rare native plants from the wild and a salvage requirement for landowners. The CDFW administers the NPPA and generally regards as “rare” many plant species included on Lists 1A, 1B, 2A, 2B, 3, and 4 of the CNPS Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2020b).

Appendix 2 includes potentially occurring endangered or rare native plants that may occur in the project area (including CNPS lists).

4.2.8 Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act (NCCP) of 1991 is an effort by the State of California, and numerous private and public partners that is broader in its orientation and objectives than the CESA and FESA (refer to discussions above). The primary objective of the NCCP is to conserve natural communities at the ecosystem scale while accommodating compatible land use. The NCCP seeks to anticipate and prevent the controversies and gridlock caused by species listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

No regionally occurring natural community or associated plan is listed by the state for the project area.

4.3 Other Statutes, Codes, and Policies Affording Limited Species Protection—Humboldt County Streamside Management Area and Wetlands Ordinance

Riparian and wetland habitats receive protection under Humboldt County's Streamside Management Area and Wetlands Ordinance (SMAWO); as defined in Title 3, Section 314-61.1 of the Humboldt County Code. Development and work within streamside management areas (SMAs) require a special permit from the County, if those activities are not exempt.

The purpose of the SMAWO is to provide oversight in the use and development of land located within wet areas such as rivers, creeks, springs, and other wetland types. This includes natural resource areas along both sides of streams containing the channel and adjacent land. For areas along streams, whether or not specifically mapped as SMA and wetland combining zones, the outer boundaries of the SMAs are defined as a 100-foot setback from the top of bank or edge of riparian drip-line, whichever is greater, on either side of perennial streams, and 50-foot setback for streams with seasonal intermittent flow.

SMAs do not include watercourses consisting entirely of a man-made drainage ditch, or other man-made drainage device, construction, or system.

Routine maintenance activities are permitted under the SMAWO if trees that are more than 12 inches in diameter are not cut, and that no more than 6,000 cumulative square feet of woody vegetation is removed. Additionally, activities are not considered routine maintenance if they could result in a significant environmental impact. Significance with regard to environmental impact can be difficult to qualify on a case-by-case level. However, the California Department of Fish and Wildlife generally considers the removal of riparian woody vegetation greater than 4 inches in diameter as an activity that requires compensatory mitigation. Mitigation measures for projects within SMAs can include retaining snags and trees that support nesting birds, replanting of disturbed areas equal to the development area, and other potential site-specific habitat improvements.

4.3.2 County of Humboldt Commercial Cannabis Cultivation Land Use Ordinance (inland)

On May 8, 2018, the Humboldt County Board of Supervisors adopted Ordinance Number 2599, amending provisions of Title III of the Humboldt County Code relating to the commercial cultivation, processing, manufacturing, distribution, testing, and sale of cannabis for medicinal or adult use for the areas outside the coastal zone. The ordinance established land use regulations concerning commercial cultivation, processing, manufacturing, and distribution of cannabis for medical use within the County of Humboldt in order to limit and control such cannabis activities in coordination with the State of California.

Section 55.4.12.1.10 establishes performance standards for biological resource protection for all cannabis cultivation and processing operations. Section 55.4.12.6 specifies performance standards for project-related noise produced by a generator used for commercial cannabis cultivation. The noise effects on wildlife are focused on avoiding impacts to marbled murrelet (*Brachyramphus marmoratus*) and northern spotted owl (*Strix occidentalis caurina*). Project-related noise impacts are assumed to be less than significant if noise levels are 50 decibels or less at 100 feet distance or the edge of the nearest habitat, whichever is closer.

5.0 Results

From the review of existing data (see Section 2.0 Methodology), lists of potentially occurring special status plant and animal species for the study area were compiled. Appendix 2 includes all plant species reported from the queries, their preferred habitat, and whether there is suitable habitat present within the study area for the species. Appendix 3 includes all animal species reported from the queries, their preferred habitat, and whether there is suitable habitat present within the study area for the species. The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed during the field surveys.

Each species was evaluated for its potential to occur in the study area according to the following criteria:

- **None.** Species listed as having “none” are those species for which:
 - there is no suitable habitat present in the study area (that is, habitats in the study area are unsuitable for the species requirements [for example, elevation, hydrology, plant community, disturbance regime, and so on]).
- **Low.** Species listed as having a “low” potential to occur in the study area are those species for which:
 - there is no known record of occurrence in the vicinity, and
 - there is marginal or very limited suitable habitat present within the study area.
- **Moderate.** Species listed as having a “moderate” potential to occur in the study area are those species for which:
 - there are known records of occurrence in the vicinity, and
 - there is suitable habitat present in the study area.
- **High.** Species listed as having a “high” potential to occur on the study area are those species for which:
 - there are known records of occurrence in the vicinity (there are many records and/or records in close proximity), and

- there is highly suitable habitat present in the study area.
- **Present.** Species listed as “present” in the study area are those species for which:
 - the species was observed in the study area.

5.1 Special Status Plant Species

Based on a review for special status plant species, 70 special status plant species have been reported from the region consisting of the study area’s quadrangle and surrounding quadrangles. Of the special status plant species reported in the region, 47 plant species are considered to have a low potential to occur within the study area and 23 species have a moderate or higher potential to occur within the study area (Appendix 2). Species that have a moderate or higher potential to occur within the study area are described below. Species observed during the 2020 site visit are presented in Appendix 4.

Slender silver moss (*Anomobryum julaceum*) is a moss in the Bryaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.2 and heritage ranks of G5/S2. Reported habitats include broadleaved upland forest, lower montane coniferous forest, and north coast coniferous forest. Grows on damp rocks and soil, acidic substrates, and are usually seen on roadcuts. Elevation range is 100 to 1,000 meters above sea level. Within the 9-quad search, there are no Rarefind Occurrences.

Bald Mountain milk-vetch (*Astragalus umbraticus*) is a perennial herb in the Fabaceae family. It is not listed under either FESA or CESA but has a CRPR of 2B.3 and heritage ranks of G4/S2. Reported habitats include cismontane woodland and lower montane coniferous forest. Occurs in dry openings in oak and pine woodlands, and sometimes on roadsides. Elevation range is 210 to 1,220 meters above sea level. Blooms May through August. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being approximately 5 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1983.

Northern meadow sedge (*Carex praticola*) is a perennial herb in the Cyperaceae family. It is not listed under either FESA or CESA but has a CRPR of 2B.2 and heritage ranks of G5/S2. Reported habitats include meadows and seeps ranging in elevation from 15 to 3,200 meters above sea level. Blooms May through July. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being approximately 6.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1982.

Serpentine collomia (*Collomia diversifolia*) is an annual herb in the Polemoniaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.3 and heritage ranks of G4/S4. Reported habitats include chaparral and cismontane woodlands, often on ultramafic soils or, rock/gravelly sites. It ranges in elevation from 300 to 600 meters above sea level. Blooms May through June. Within the 9-quad search, there are no Rarefind Occurrences.

Mountain lady's-slipper (*Cypripedium montanum*) is a perennial rhizomatous herb in the Orchidaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.2 and heritage ranks of G4/S4. Reported habitats include lower montane coniferous forest, broadleaved upland forest, cismontane woodland, and north coast coniferous forest. It is associated with dry, undisturbed slopes ranging in elevation from 185 to 2,225 meters above sea level. Blooms March through August. Within the 9-quad search, there are no Rarefind Occurrences.

Pacific gilia (*Gilia capitata* ssp. *pacifica*) is an annual herb in the Polemoniaceae family. It is not listed under either FESA or CESA but has a CRPR of 1B.2 and heritage ranks of G5T3/S2. Reported habitats include

coastal bluff scrub, chaparral, coastal prairie, and valley and foothill grassland. Elevation range is 5 to 1,345 meters above sea level. Blooms April through August. Within the 9-quad search, there are no Rarefind Occurrences.

Tracy's tarplant (*Hemizonia congesta* ssp. *tracyi*) is an annual herb in the Asteraceae family. It is not listed under either FESA or CESA but has a CRPR of 4.3 and heritage ranks of G5T4/S4. Reported habitats include coastal prairie, north coast coniferous forest, and lower montane coniferous forest. It is associated with openings and sometimes occurs on serpentine. It ranges in elevation from 120 to 1,200 meters above sea level. Blooms May through October. Within the 9-quad search, there are no Rarefind Occurrences.

California globe mallow (*Iliamna latibracteata*) is a perennial herb in the Malvaceae family. It is not listed under either FESA or CESA but has a CRPR of 1B.2 and heritage ranks of G2G3/S2. Reported habitats include north coast coniferous forest, chaparral, lower montane coniferous forest, and riparian scrub (streambanks). It is associated with Seepage areas in silty/clay/loam soils. It ranges in elevation from 60 to 1,655 meters above sea level. Blooms June through August. Within the 9-quad search, there are 13 Rarefind Occurrences, with the closest being approximately 4.1 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2013.

Orleans iris (*Iris tenax* ssp. *klamathensis*) is a perennial rhizomatous herb in the Iridaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.3 and heritage ranks of G4G5T4/S4. Reported habitats include lower montane coniferous forests in grassy areas along roadsides and on steep rocky hillsides. It is often associated with disturbed areas. It ranges in elevation from 100 to 1,400 meters above sea level. Blooms April through May. Within the 9-quad search, there are no Rarefind Occurrences.

Small groundcone (*Kopsiopsis hookeri*) is a parasitic perennial rhizomatous herb in the Orobanchaceae family. It is not listed under either FESA or CESA but has a CRPR of 2B.3 and heritage ranks of G4/S1S2. Reported habitats include north coast coniferous forests in open woods and shrubby places. It is generally parasitic on salal (*Gaultheria shallon*). It ranges in elevation from 120 to 1,435 meters above sea level. Blooms April through August. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being approximately 6.1 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1978.

Bristly leptosiphon (*Leptosiphon acicularis*) is an annual herb in the Polemoniaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.2 and heritage ranks of G3/S3. Reported habitats include chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland. It is associated with grassy areas and woodlands. It ranges in elevation from 55 to 1,500 meters above sea level. Blooms April through July. Within the 9-quad search, there are no Rarefind Occurrences.

Vollmer's lily (*Lilium pardalinum* ssp. *vollmeri*) is a perennial bulbiferous herb in the Liliaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.3 and heritage ranks of G5T4/S3. Reported habitats include meadows, seeps, bogs, and fens. It ranges in elevation from 30 to 1,680 meters above sea level. Blooms June through August. Within the 9-quad search, there are no Rarefind Occurrences.

Purple-flowered Washington lily (*Lilium washingtonianum* ssp. *purpurascens*) is a perennial bulbiferous herb in the Liliaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.3 and heritage ranks of G4T4/S4. Reported habitats include chaparral, lower montane coniferous forest, and upper montane coniferous forest. Often found on serpentine dry hillsides. It ranges in elevation from 70 to 2,750 meters

above sea level. Blooms June through August. Within the 9-quad search, there are no Rarefind Occurrences.

Heart-leaved twayblade (*Listera cordata*) is a perennial herb in the Orchidaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.2 and heritage ranks of G5/S4. Reported habitats include wetland, bogs, and fens in lower montane coniferous forest and north coast coniferous forest. It ranges in elevation from 5 to 1,370 meters above sea level. Blooms February through July. Within the 9-quad search, there are no Rarefind Occurrences.

Elongate copper moss (*Mielichhoferia elongata*) is a moss in the Mielichhoferiaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.3 and heritage ranks of G5/S4. Reported habitats include cismontane woodlands, often growing on acidic, metamorphic rock or substrates. It ranges in elevation from 500 to 1,300 meters above sea level. Within the 9-quad search, there are no Rarefind Occurrences.

Howell's montia (*Montia howellii*) is an annual herb in the Montiaceae family. It is not listed under either FESA or CESA but has a CRPR of 2B.2 and heritage ranks of G3G4/S2. Reported habitats include meadows and seeps in north coast coniferous forests. It ranges in elevation from 10 to 1,185 meters above sea level. Blooms February through May. Within the 9-quad search, there are five Rarefind Occurrences, with the closest being approximately 1 mile from the study area, and the most recent observation date within the 9 quads for this taxon was 2017.

White-flowered rein orchid (*Piperia candida*) is a perennial herb in the Orchidaceae family. It is not listed under either FESA or CESA but has a CRPR of 1B.2 and heritage ranks of G3/S3. Reported habitats include north coast coniferous forest, lower montane coniferous forest, and broadleaved upland forest. It ranges in elevation from 45 to 1,615 meters above sea level. Blooms March through September. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being approximately 0.3 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2005.

California pinefoot (*Pityopus californicus*) is an achlorophyllous perennial herb in the Ericaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.2 and heritage ranks of G4G5/S4. Reported habitats include broadleaved upland forest, upper montane coniferous forest, north coast coniferous forest, and lower montane coniferous forest. It ranges in elevation from 15 to 2,225 meters above sea level. Blooms March through August. Within the 9-quad search, there are no Rarefind Occurrences.

Nodding semaphore grass (*Pleuropogon refractus*) is a perennial rhizomatous herb in the Poaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.2 and heritage ranks of G4/S4. Reported habitats include meadows and seeps, lower montane coniferous forest, north coast coniferous forest, and riparian forest. It ranges in elevation from 0 to 1,600 meters above sea level. Blooms March through August. Within the 9-quad search, there are no Rarefind Occurrences.

Siskiyou checkerbloom (*Sidalcea malviflora* ssp. *patula*) is a perennial rhizomatous herb in the Malvaceae family. It is not listed under either FESA or CESA but has a CRPR of 1B.2 and heritage ranks of G5T2/S2. Reported habitats include coastal bluff scrub, coastal prairie, and north coast coniferous forest. It ranges in elevation from 5 to 1,255 meters above sea level. Blooms May through August. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being approximately 6.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1979.

Coast checkerbloom (*Sidalcea oregana* ssp. *eximia*) is a perennial herb in the Malvaceae family. It is not listed under either FESA or CESA but has a CRPR of 1B.2 and heritage ranks of G5T1/S1. Reported habitats include meadows and seeps, north coast coniferous forest, and lower montane coniferous forest. It ranges in elevation from 5 to 1,805 meters above sea level. Blooms June through August. Within the 9-quad search, there are four Rarefind Occurrences, with the closest being approximately 7.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2010.

Obtuse starwort (*Stellaria obtusa*) is a perennial rhizomatous herb in the Caryophyllaceae family. It is not listed under either FESA or CESA but has a CRPR of 4.3 and heritage ranks of G5/S4. Reported habitats include upper montane coniferous forest, lower montane coniferous forest, and riparian woodland. It is also associated with streams or seeps in conifer forests. It ranges in elevation from 150 to 2,135 meters above sea level. Blooms May through October. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being approximately 13.8 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1935.

Trinity River jewelflower (*Streptanthus oblaceolatus*) is a perennial herb in the Brassicaceae family. It is not listed under either FESA or CESA but has a CRPR of 1B.2 and heritage ranks of G1/S1. Reported habitats include cismontane woodlands. It ranges in elevation from 20 to 420 meters above sea level. Blooms April through June. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being approximately 6.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2009.

No special status plant species was observed within the study area.

5.2 Special Status Animal Species

Based on a review of special status animal species, 57 special status animal species have been reported with the potential to occur in the project region. Of the special status animal species potentially occurring in the region, 42 animal species are considered to have a no or low potential to occur at the project site and 15 species have a moderate or higher potential (Appendix 3). Species with a moderate or high potential for occurrence within the study area are described below. Species observed during the 2020 site visit are presented in Appendix 5.

5.2.1 Amphibians

No special-status amphibian species have a moderate or high potential to occur within the study area based on the lack of suitable habitat available.

5.2.2 Birds

The Cooper's hawk (*Accipiter cooperii*) is a bird in the Accipitridae family. It is not listed under either FESA or CESA but is on a CDFW "watch list" and has heritage ranks of G5/S4. Reported habitats include cismontane woodland, riparian forest, riparian woodland, and upper montane coniferous forest. Nest sites are mainly in riparian growths of deciduous trees in canyon bottoms on river flood-plains. Foraging habitat does exist for this species within the study area, though it was not detected during the 2020 site visit.

The northern goshawk (*Accipiter gentilis*) is a bird in the Accipitridae family. It is not listed under either FESA or CESA but is considered a species of special concern and has heritage ranks of G5/S3. Reported habitats include north coast coniferous forest, subalpine coniferous forest, and upper montane coniferous forest.

It usually nests on north slopes, near water. Foraging habitat does exist for this species within the study area, though it was not detected during the 2020 site visit.

The golden eagle (*Aquila chrysaetos*) is a bird in the Accipitridae family. It is not listed under either FESA or CESA but is fully protected federally. It has heritage ranks of G1/S1. Reported habitats include lower and upper montane coniferous forest, rolling foothills, grasslands, and mountain areas. Some marginal foraging habitat exists within the study area for this species, though it was not detected during the 2020 site visit.

The American peregrine falcon (*Falco peregrinus anatum*) is a bird in the Falconidae family. It is Delisted under both FESA and CESA, though it remains fully protected federally. It has heritage ranks of G4T4/S3S4. Reported habitats include wetlands, lakes, rivers, and dunes. Nests are most often on cliffs or other rock faces, and sometimes on buildings. Foraging habitat exists for this species within the study area for this species, though it was not detected during the 2020 site visit.

The bald eagle (*Haliaeetus leucocephalus*) is a bird in the Accipitridae family. It is state endangered and a fully protected species, but it is not listed under FESA. It has heritage ranks of G5/S3. Reported habitats include lower montane coniferous forest, old growth, ocean shore, lake margins, and rivers (for both nesting and wintering). Most nests are within 1 mile of water. The study area may provide temporary roosting habitat for this species, though it was not detected during the 2020 site visit.

The osprey (*Pandion haliaetus*) is a bird in the Pandionidae family. It is not listed under either FESA or CESA but is on the Watch List. It has heritage ranks of G5/S4. Reported habitats include riparian forest, ocean shores, bays, lakes, and rivers. Large stick nests are built on top of broken trees and snags within 15 miles of fish-bearing waters. Potential nesting habitat exists within or adjacent to the study area for this species, though it was not detected during the 2020 site visit.

The white-headed woodpecker (*Picoides albolarvatus*) is a bird in the Picidae family. It is not listed under either FESA or CESA, although it is listed on the California Special Animals list. It has heritage ranks of G1/S1. Reported habitats include upper and lower montane coniferous forest and prefers semi-open areas. This species nests in cavities of large trees or snags. Habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.

The flammulated owl (*Psiloscoptes flammeolus*) is a bird in the Strigidae family. It is not listed under either FESA or CESA, although it is listed on the California Special Animals list. It has heritage ranks of G3/S3. Reported habitats include lower montane and subalpine coniferous forest, with the breeding range closely related to ponderosa and Jeffery pines. Habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.

The red-breasted sapsucker (*Sphyrapicus ruber*) is a bird in the Picidae family. It is not listed under either FESA or CESA and has heritage ranks of G5/S4. It breeds in mixed coniferous and mixed deciduous-coniferous forests and woodlands. It requires standing snags or hollow trees for a nesting cavity. Foraging habitat and potential nesting habitat exists within the study area for this species, though it was not detected during the 2020 site visit.

The northern spotted owl (*Strix occidentalis caurina*) is a bird in the Strigidae family. It is listed as threatened under both FESA and CESA, is considered a species of special concern by CDFW, and has heritage ranks of G3T3/S2S3. Reported habitats include north coast coniferous forests and old-growth forests or mixed stands of old-growth and mature trees. It is occasionally found in younger forests with patches of big

trees. It prefers high, multistory canopy dominated by big trees and/or many trees with cavities or broken tops, woody debris, and space under the canopy. Within the 9-quad search, there are many reported occurrences, with the closest being approximately 0.67 miles from the study area (known Activity Center HUM0542). The study area contains marginal foraging habitat within woodland and forested areas or may provide a movement corridor between suitable habitats. Although suitable habitat may exist within the project area for this species, it was not detected by incidental observations.

5.2.3 Crustaceans

There are no special-status crustaceans that have a moderate or high potential to occur within the study area due to the lack of stream connectivity to permanent flowing waters.

5.2.4 Fish

There are no special-status fish that have a moderate or high potential to occur within the study area due to the lack of stream connectivity to permanent flowing waters.

5.2.5 Insects

The western bumble bee (*Bombus occidentalis*) is an insect in the Apidae family. It is not listed under either FESA or CESA and has heritage ranks of G2G3/S1. This species was once common and widespread but has declined precipitously from central California to southern British Columbia, perhaps from disease. Range-wide, example food plants of *Bombus occidentalis* include *Ceanothus*, *Centaurea*, *Chrysothamnus*, *Cirsium*, *Geranium*, *Grindellia*, *Lupinus*, *Melilotus*, *Monardella*, *Rubus*, *Solidago*, and *Trifolium*. Suitable habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.

5.2.6 Mammals

The long-eared myotis (*Myotis evotis*) is a mammal in the Vespertilionidae family. It is not listed under either FESA or CESA and has heritage ranks of G5/S3. Reported habitats include brush, woodlands, and forest habitats from sea level to about 9,000 feet. It prefers coniferous woodlands and forests. Nursery colonies occur in buildings, crevices, spaces under bark, and snags. Caves are used primarily as night roosts. Suitable habitat does exist within the study area for this species, though it was not detected during the 2020 site visit. A focused bat survey was not conducted.

Yuma myotis (*Myotis yumanensis*) is a mammal in the Vespertilionidae family. It is not listed under either FESA or CESA and has heritage ranks of G5/S4. Reported habitats include lower montane coniferous forest, riparian forest, riparian woodland, and upper montane coniferous forests. Optimal habitats are open forests and woodlands with sources of water over which to feed. Its distribution is closely tied to bodies of water. Maternity colonies occur in caves, mines, buildings, or crevices. Suitable habitat does exist within the study area for this species, though it was not detected during the 2020 site visit. A focused bat survey was not conducted.

The fisher (*Pekania pennanti*) is a mammal in the Mustelidae family. It is proposed as threatened under the FESA, candidate threatened under CESA, and is considered a species of special concern by CDFW. It has heritage ranks of G5T2T3Q/S2S3. Reported habitats include north coast coniferous forest, old growth, and riparian forest. It occurs in intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. It uses cavities, snags, logs, and rocky areas for cover and denning and needs large areas of mature, dense forest. Suitable movement corridor habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.

The North American porcupine (*Erethizon dorsatum*) is a mammal in the Erethizontidae family. It is not listed under either FESA or CESA and has heritage ranks of G5/S3. Reported habitats include broadleaved upland forest, cismontane woodland, closed-cone coniferous forest, lower montane coniferous forest, north coast coniferous forest, and upper montane coniferous forest. Suitable habitat does exist within the study area for this species, though it was not detected during the 2020 site visit.

5.2.7 Mollusks

There are no special-status mollusk species that have a moderate or high potential to occur within the study area due to the lack of suitable habitat available.

5.3 Special Status Habitats and Natural Communities

5.3.1 Designated Critical Habitat

USFWS's Critical Habitat database for habitat designated as critical for species listed under the FESA (USFWS, 2020b) reported that the closest designated critical habitat is for the northern spotted owl (*Strix occidentalis caurina*), approximately 1 mile to the south, 1.1 miles to the northwest, and 1.2 miles to the northeast. Additionally, critical habitat for marbled murrelet (*Brachyramphus marmoratus*) is mapped over 2.3 miles southwest of the study area.

5.3.2 Vegetation Alliances

Sensitive natural communities are habitats that are generally defined by vegetation type and geographical location and are increasingly restricted in abundance and distribution. Recognition of natural communities is an ecosystem-based approach to maintaining biodiversity in California. Holland-type CNDDDB natural communities are habitat for numerous special status plant and animal species. CDFW no longer updates their tracking of Holland-type CNDDDB natural communities and has since standardized alliance and association-level vegetation nomenclature for California to comply with the National Vegetation Classification System. High quality occurrences of natural communities with heritage ranks of three (3) or lower are considered by CDFW to be significant resources and fall under the CEQA guidelines for addressing impacts. The following vegetation alliances were observed within the study area (Figure 2):

Quercus garryana (Oregon white oak woodland) Alliance (G4/S3) occurs within the study area in locations containing *Quercus garryana* at greater than 25 percent absolute cover and/or 30 percent relative cover in the tree canopy (Figure 2). Oregon white oak woodlands within the study area are co-dominant with an understory of young Douglas fir (*Pseudotsuga menziesii*) trees (Photo 5 in Appendix 6).

Danthonia californica (California oat grass prairie) Provisional Alliance (G4/S3) occurs within the study area in grasslands that contain *Danthonia californica* at greater than 25 percent absolute cover and/or 50 percent relative cover in the herbaceous canopy (Figure 2; Photo 1 in Appendix 6).

5.3.3 Wetland and Riparian Habitats

The wetland delineation did not identify any three-parameter wetlands within the study area (Figure 2; SHN, 2017). Two drainages containing ordinary high water mark (OHWM) indicators were mapped within the study area polygon. The OHWM areas are tributaries to the main stem of the Trinity River. These tributaries are seasonally flowing watercourses and do not contain water during the summer months (Photo 6 in Appendix 6).

5.3.4 Nesting Bird Habitat

All locations with a shrub or tree canopy layer within the study area may provide suitable nesting habitat for a diverse assemblage of migratory birds. See recommendations Section 7.0 to reduce impacts to nesting birds.

5.3.5 Wildlife Movement Corridors

Water courses and their associated riparian zones are likely the primary wildlife movement corridors due to their complex structure, providing cover and hiding places from predators. There are two seasonal drainages along the eastern and southeastern boundaries of the study area that may provide habitat for wildlife movement through or past the project site (Photo 7 in Appendix 6).

6.0 Conclusions

The purpose of this report was to assess the biological resources and habitats available within the study area and analyze the potential project related impacts. The habitat availability was assessed for special status species that could occur within the study area. Recommendations and mitigations to reduce potential impacts associated with the designed project are included in Section 7.0 of this report.

6.1 Special Status Plant Species

Of the 70 special status plant species reported within the region, 47 are considered to have a low potential to occur within the study area, and 23 are considered moderate. Site investigations were conducted during appropriate seasons for detecting plant species with moderate or higher potential for occurrence. No special status plant species were observed within the study area.

6.2 Special Status Animal Species

Of the 57 special status animal species reported within the region, 42 animal species are considered to have no or a low potential to occur within the study area and 15 species have a moderate or high potential to occur. Habitat does exist within the study area for some special status species, although no special status animal species were observed within the study area. Implementing the recommendations in Section 7.0 of this report will minimize project-related impacts to these species and their habitats.

6.3 Special Status Habitats and Natural Communities

6.3.1 Designated Critical Habitat

The study area does not contain designated critical habitat for species listed under the FESA.

The nearest designated critical habitat is for the northern spotted owl (*Strix occidentalis caurina*); approximately 0.9 miles to the south, 1.1 miles to the northwest, and 1.2 miles to the northeast of the study area. Additionally, critical habitat for the marbled murrelet (*Brachyramphus marmoratus*) is mapped 2.3 miles southwest of the study area. Project-related activities are not expected to impact these habitats due to the distance from the project site.

6.3.2 Vegetation Alliances

The following special status vegetation alliances were observed within the study area (Figure 2):

Quercus garryana (Oregon white oak woodland) Alliance (G4/S3) and *Danthonia californica* (California oat grass prairie) Provisional Alliance (G4/S3). See Section 7.0 for recommendations associated with potential impacts.

6.3.3 Wetland and Riparian Habitats

The wetland delineation did not identify any three-parameter wetlands within the study area (Figure 2; SHN, 2017). Two drainages containing OHWM indicators were mapped within the study area polygon. The OHWM areas are tributaries to the main stem of the Trinity River. These tributaries are seasonally flowing watercourses and do not contain water during the summer months. No water diversion is planned nor any other use of these drainages for project-related activities and, therefore, are not expected to be impacted by the project.

6.3.4 Nesting Bird Habitat

All locations with a shrub or tree canopy layer within the study area may provide suitable nesting habitat for a diverse assemblage of migratory birds. Additionally, some species, such as western meadowlark (*Sturnella neglecta*), may nest in tall grasses or wetland areas. There are a few scattered large conifers, dense brushy areas around the boundaries of the study area, and a few potential tree cavities within the study area. Implementing the recommendations in Section 7.0 of this report will minimize project related impacts to nesting birds.

6.3.5 Wildlife Movement Corridors

Watercourses and their associated riparian zones are likely the primary wildlife movement corridors due to their complex structure, providing cover and hiding places from predators. With the incorporation of recommendations in Section 7.0 of this report, project-related impacts to wildlife movement can be minimized.

7.0 Recommendations

- Plan the implementation of project activities between June 15 and October 15 (or first rains) to avoid impacts on seasonal drainages.
- Plan all project-related components to remain at least 50 feet away from the top of bank of seasonal drainages (OHWM delineated on Figure 2).
- Project-related development and land use activities should occur outside of the perimeter of the California oat grass prairie (Figure 2).
- The California oat grass prairie should be flagged and delineated prior to any project-related activity by a qualified botanist.
- If project-related components occur adjacent to the California oat grass prairie, a physical barrier or signage should be installed to limit any potential impacts.
- If project-related impacts are expected to occur within the California oat grass prairie, a mitigation and monitoring plan should be prepared by a qualified biologist.

- Project-related vegetation management should follow best management practices in order to limit the spread of invasive species onsite.
- Avoid any impacts to the Oregon white oak woodland (Figure 2).
- If project-related impacts are expected to occur within the Oregon white oak woodland, a mitigation and monitoring plan should be prepared by a qualified biologist.
- Project-related vegetation management should occur outside the bird nesting season, which is generally considered to be February 15 through September 1. If project-related brush clearing or infrastructural work must occur during the breeding season, nesting bird surveys should be performed by a qualified biologist to ensure that active nests are not destroyed.
- Fencing around the perimeter of the project site should not cross the two identified seasonal drainages so that wildlife movement through these riparian corridors are not restricted. No vegetation removal should occur along these seasonal drainages.

8.0 References

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (eds). (2012). *The Jepson Manual: Vascular Plants of California, Second Edition*. Berkeley, CA: University of California Press, Berkeley.
- California Department of Forestry and Fire Protection (CAL FIRE). (2015). Fire and Resource Assessment Program's Statewide Vegetation GIS Raster Dataset. Accessed April 12, 2017 at: http://frap.fire.ca.gov/data/fraggisdata-sw-fveg_download.
- Calflora Database. (2020). "Information on California plants for education, research and conservation. [web application]." Berkeley, CA: Calflora. Accessed March 2020 at: <http://www.calflora.org>.
- California Code of Regulations. (NR). 14 CCR 1.72. Sacramento, CA:CCR.
- California Department of Fish and Wildlife. (1984). California Endangered Species Act. CFGC Sections 2070, 2080. Sacramento, CA:CDFW.
- . (1991). Natural Community Conservation Planning Act. Fish and Game Code Section 2800. Sacramento, CA:CDFW.
- . (1998). Fish and Game Code. Sacramento, CA:CDFW.
- . (November 2009). "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities." Accessed at: https://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf.
- . (2019). "Special Animals List." Accessed March 2020 at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406andinline>.
- . (2020a). Vegetation Classification and Mapping Program (VegCAMP), "Natural Communities List." Sacramento, CA:CDFW. Accessed March 2020 at: http://www.dfg.ca.gov/biogeodata/vegcamp/natural_communities.asp.
- . (2020b). "California Natural Diversity Database (CNDDB)." Accessed March 2020 at: <http://www.dfg.ca.gov/biogeodata/cnddb/>.

- . (2020c). RareFind 5 Database and the Biogeographic Information and Observation System (BIOS). Sacramento, CA:CDFW. Accessed March 2020 at: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data#43018407-rarefind-5>.
- . (2020d). "Special Vascular Plants, Bryophytes, and Lichens List." Accessed March 2020 at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383andinline>.
- California Native Plant Society. (2020a). "A Manual of California Vegetation; Online Vegetation Manual." Accessed March 2020 at: <http://www.cnps.org/cnps/vegetation/manual.php>.
- . (2020b). "Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39)." Accessed March 2020 at: <http://www.rareplants.cnps.org/>.
- California Natural Resources Agency. (1970). California Environmental Quality Act. CCR: Title 14, Div. 6, Chap. 3, Appendix G; Sections 15125 (c) and 15380(d).
- Consortium of California Herbaria. (2020). "Consortium of California Herbaria" database. Berkeley, CA:CCH. Accessed March 2020 at: <http://ucjeps.berkeley.edu/consortium/>.
- Humboldt County Planning and Building Department. (March 19, 2012). *Humboldt County General Plan*. Eureka, CA:Humboldt County. Accessed at: <http://www.humboldt.gov/547/General-Plan-Documents>.
- . (2016). Department Policy Statement N. 16-005. Approved August 2, 2016.
- Natural Resources Conservation Service, U.S. Department of Agriculture. (2020). Web Soil Survey. Accessed March 2020 at: <https://websoilsurvey.sc.egov.usda.gov/>.
- SHN. (2017). "Wetland and Other Waters Delineation Report: Alternate Site 2, Organic Liberty, LLC, Willow Creek, California." Eureka, CA:SHN.
- . (2018). "Natural Resources Assessment, Organic Liberty, LLC, Willow Creek, California." Eureka, CA:SHN.
- State Water Resources Control Board. (1969). Porter-Cologne Water Quality Control Act. California Water Code Section 7. Sacramento, CA:SWRCB.
- . (October 17, 2017). Cannabis Cultivation Policy Principles and Guidelines for Cannabis Cultivation. Sacramento, CA:SWRCB.
- University of California, Berkeley. (2020). "Jepson eFlora." Accessed March 2020 at: <http://ucjeps.berkeley.edu/eflora/>.
- U.S. Army Corps of Engineers Environmental Laboratory. (January 1987). *Corps of Engineers Wetlands Delineation Manual: Wetlands Research Program Technical Report Y-87-1*. Vicksburg, MS:ACOE.
- U.S. Environmental Protection Agency. (2002). Clean Water Act of 1972, 33 USC § 1251 et seq. Washington, D.C.
- . Section 401 of the Clean Water Act, 33 USC § 1341. Washington, D.C.
- U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. (2008). Clean Water Act Jurisdiction. Washington, D.C.:EPA.
- U.S. Fish and Wildlife Service. (1918). Migratory Bird Treaty Act. 50 CFR 21, 16 USC 703. Washington, D.C.:USFWS.
- . (1934). Fish and Wildlife Coordination Act (16 USC Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995). Washington, D.C.:USFWS.

- . (1973). Endangered Species Act. 16 USC 1532, 16 USC 1536, 50 CFR 17.3. Washington, D.C.:USFWS.
- . (2020a). Information, Planning and Conservation System (IPAC). "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project." Accessed March 2020 at <https://ecos.fws.gov/ipac/location/index>.
- . (2020b). "Critical Habitat Report—Environmental Conservation Online System." Accessed November 2017 at: <https://ecos.fws.gov/ecp/report/table/critical-habitat.html>.
- United States Geological Survey. (2007). Preliminary Integrated Geologic Map Databases for the United States: Western States. Accessed March 2020 at:
<http://mrdata.usgs.gov/geology/state/state.php?state=CA>.
- Whitaker, Doug and Richard L Knight (eds). (Summer 1998). *Understanding Wildlife Responses to Humans*. *Wildlife Society Bulletin*, Vol. 26, No. 2. pp. 312-317. Bethesda, MD:Wildlife Society.

Site Plan 1

D:\Engineering\Wayne\Friday Ridge\Friday_Ridge_4acre.dwg

GENERAL NOTES:

1. ACCORDING TO FEMA MAPPING THERE IS NO FLOOD MAP FOR THIS AREA.
2. PROPERTY LINES, ROAD, AND BUILDING LOCATIONS SHOWN ON THIS PLOT PLAN ARE PER AERIAL MAPPING AND ARE APPROXIMATE.
3. NO TREES TO BE REMOVED IN CULTIVATION AREA. WHERE TREES ARE LOCATED WITHIN THE CULTIVATION BOUNDARY, THEY WILL BE AVOIDED.
4. NO GRADING OR FILL REQUIRED.
5. CULTIVATION AREAS IS SET BACK AT LEAST 30 FEET FROM PROPERTY LINES.
6. THERE ARE NO OFF-SITE RESIDENCES WITHIN 300 FEET OF CULTIVATION SITE.
7. THERE ARE NO SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, OR PUBLIC PARKS WITHIN 600 FEET OF THE CULTIVATION SITE.
8. NO DRYING OR PROCESSING FACILITIES ARE PROPOSED. PROCESSING TO OCCUR AT A PERMITTED, OFFSITE LOCATION.
9. TOTAL CULTIVATION AREA IS APPROXIMATELY 3.7 ACRES.
10. TOTAL PARCEL AREA (FOLLOWING LOT LINE ADJUSTMENT) IS 400.0 ACRES
11. EXISTING APN BOUNDARIES TAKEN FROM HUMBOLDT COUNTY GIS. PROPOSED PARCEL BOUNDARIES TAKEN FROM LOT LINE ADJUSTMENT AND MERGER MAP PREPARED BY KELLY O'HERN ASSOCIATES DATED MAY 2018.

PROJECT DATA

OWNER/DEVELOPER: ORGANIC LIBERTY, LLC
501 W. BROADWAY #1750
SAN DIEGO, CA 92101

1. PARCEL LINES INDICATED HEREON ARE PER THE HUMBOLDT COUNTY GEOGRAPHIC INFORMATION SYSTEM. THESE PARCEL LINES ARE NOT BASED UPON A FIELD SURVEY AND SHOULD BE CONSIDERED APPROXIMATE ONLY.
2. PARCEL LINES WILL BE ADJUSTED PER LOT LINE ADJUSTMENTS. APNs WILL BE ASSIGNED BY HUMBOLDT COUNTY.

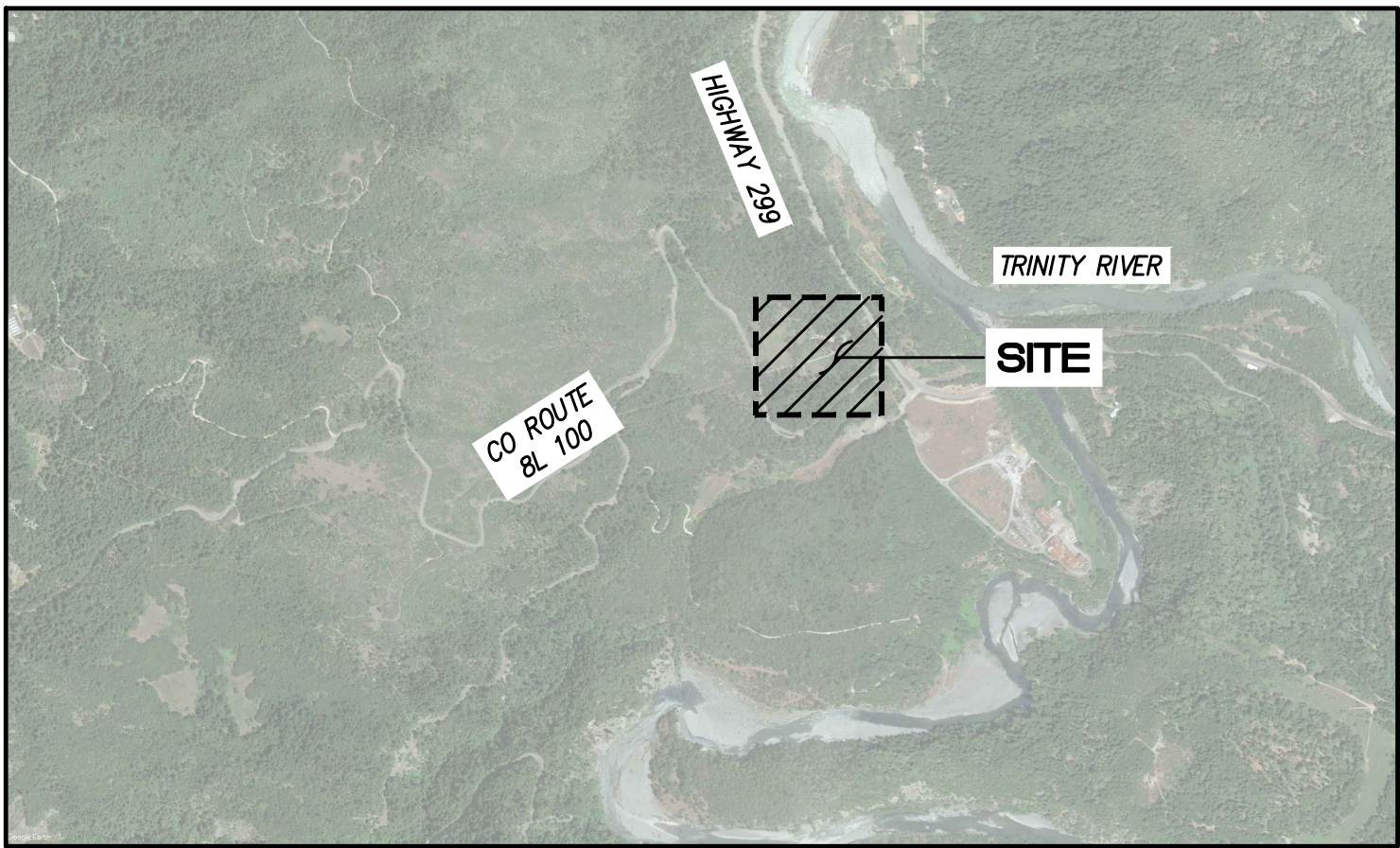
4-ACRE OUTDOOR GROW PROJECT

| Parcel | Before LLA & Merger Acreage ¹ | After LLA & Merger Acreage ² |
|-------------|---|--|
| 524-073-003 | 160.00 | |
| 524-074-001 | 135.50 | |
| 524-091-002 | 69.00 | |
| 524-091-005 | 1.683 | |
| 524-091-006 | 32.00 | |
| 524-101-008 | 1.00 | |
| 524-101-015 | 68.30 | |
| Parcel 1 | | 400.01 |

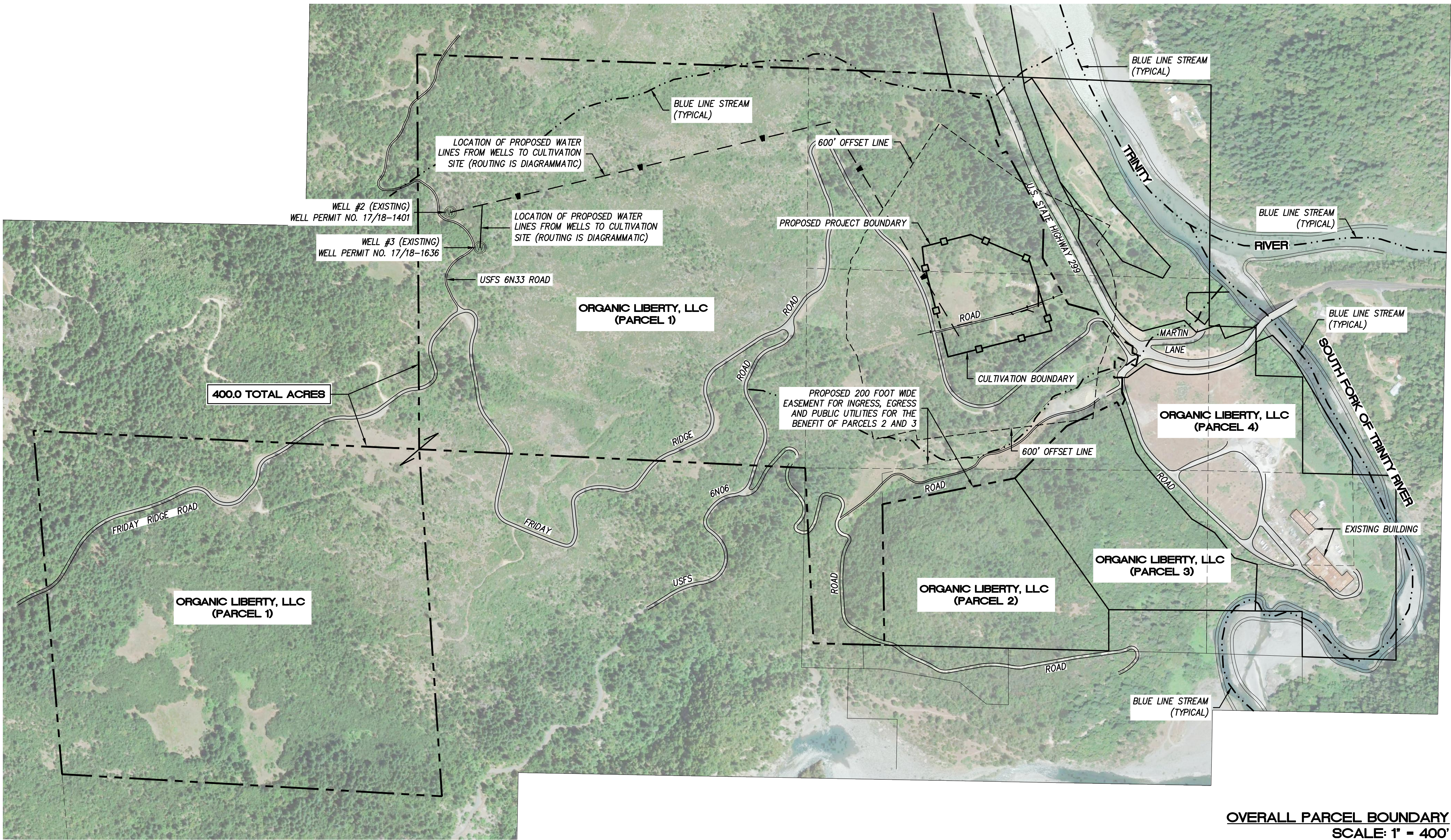
1 - Acreage from Parcel Quest assessor data.

2 - Acreage from Lot Line Adjustment & Merger Map prepared by Kelly O'Hern Associates, May 2018.

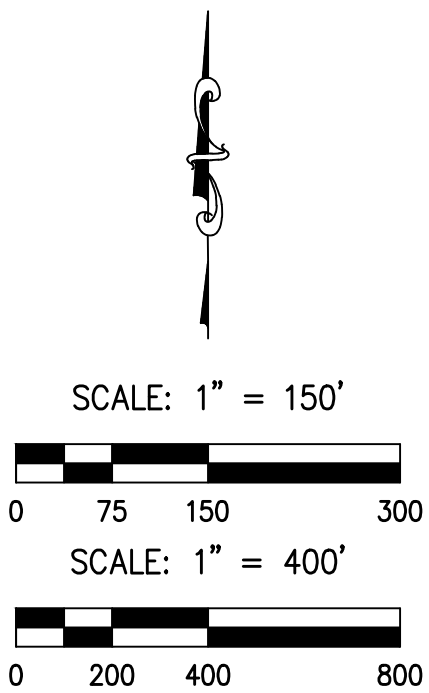
Note: Parcel 1 is comprised of only a portion of 524-091-006, resulting in the acreage discrepancy between the pre and post merger totals.



VICINITY MAP
NOT TO SCALE



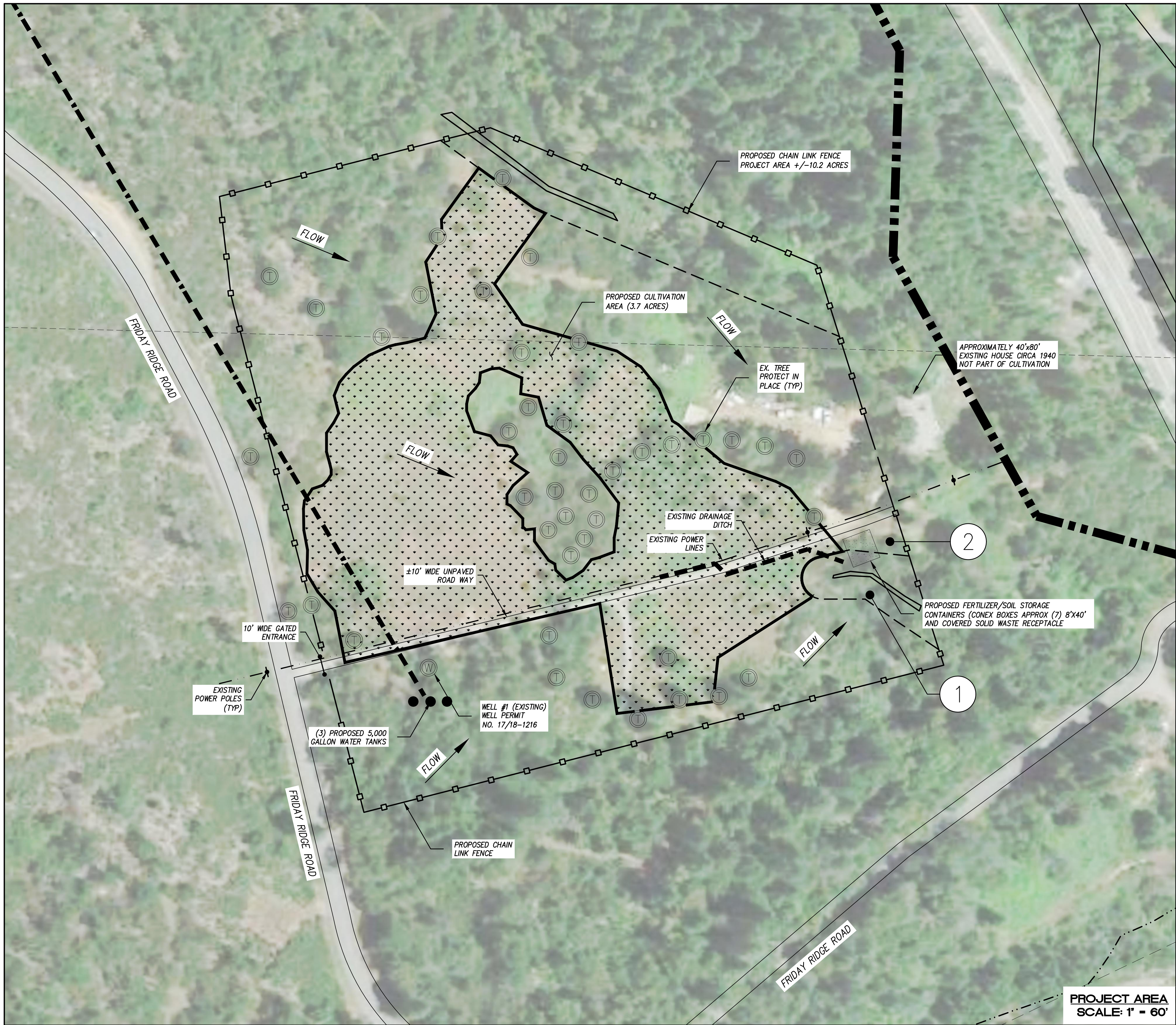
OVERALL PARCEL BOUNDARY
SCALE: 1" = 400'



PRELIMINARY

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|------------|--|----------|--|----------------|--|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| SITE PLAN - OVERALL PARCEL BOUNDARY 4-ACRE OUTDOOR CULTIVATION PROJECT ORGANIC LIBERTY, LLC HUMBOLDT COUNTY, CALIFORNIA | | SHEET 1 | | SEQ 1 | | DATE 6/2/19 | | PROJ. NO. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|------------|--|----------|--|----------------|--|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

D:\Engineering\Wayne\Friday Ridge Friday_ridge_4acre.dwg

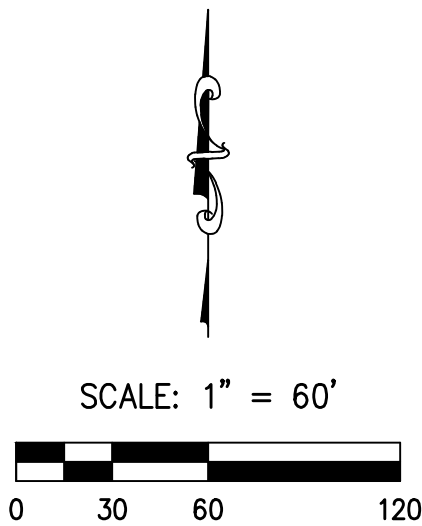


GENERAL NOTES:

1. ACCORDING TO FEMA MAPPING THERE IS NO FLOOD MAP FOR THIS AREA.
2. PROPERTY LINES, ROAD, AND BUILDING LOCATIONS SHOWN ON THIS PLOT PLAN ARE PER AERIAL MAPPING AND ARE APPROXIMATE.
3. NO TREES TO BE REMOVED IN CULTIVATION AREA. WHERE TREES ARE LOCATED WITHIN THE CULTIVATION BOUNDARY, THEY WILL BE AVOIDED.
4. NO GRADING OR FILL REQUIRED.
5. CULTIVATION AREAS IS SET BACK AT LEAST 30 FEET FROM PROPERTY LINES.
6. THERE ARE NO OFF-SITE RESIDENCES WITHIN 300 FEET OF CULTIVATION SITE.
7. THERE ARE NO SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, OR PUBLIC PARKS WITHIN 600 FEET OF THE CULTIVATION SITE.
8. NO DRYING OR PROCESSING FACILITIES ARE PROPOSED. PROCESSING TO OCCUR AT A PERMITTED, OFFSITE LOCATION.
9. TOTAL CULTIVATION AREA IS APPROXIMATELY 3.7 ACRES.
10. TOTAL PARCEL AREA (FOLLOWING LOT LINE ADJUSTMENT) IS 400.0 ACRES
11. EXISTING APN BOUNDARIES TAKEN FROM HUMBOLDT COUNTY GIS. PROPOSED PARCEL BOUNDARIES TAKEN FROM LOT LINE ADJUSTMENT AND MERGER MAP PREPARED BY KELLY OTHERN ASSOCIATES DATED MAY 2018.

CONSTRUCTION NOTES:

1. PROPOSED LOCATION OF TEMPORARY SANITATION FACILITIES
2. LOCATION OF ON-SITE PARKING SPACES



PRELIMINARY

| VERIFY SCALES | | | |
|--|--|----------|----|
| BAR IS ONE INCH ON ORIGINAL DRAWING | | | |
| IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY | | | |
| 0 1" | | | |
| Chang Consultants | | | |
| Civil Engineering-Hydrology-Hydraulics-Sedimentation | | | |
| P.O. Box 9486 | | | |
| Folsom, CA 95620 | | | |
| T: 916.952.0700 | | | |
| F: 916.952.0701 | | | |
| W: www.changconsultants.com | | | |
| Wayne@changconsultants.com | | | |
| SITE PLAN - PROJECT AREA | | DATE | BY |
| 4-ACRE OUTDOOR CULTIVATION PROJECT | | REVISION | |
| ORGANIC LIBERTY, LLC | | NO. | |
| HUMBOLDT COUNTY, CALIFORNIA | | DATE | |
| SHEET | | NO. | |
| 2 | | DATE | |
| SEQ | | DATE | |
| 1 | | DATE | |
| DATE | | DATE | |
| 6/2/19 | | DATE | |
| PROJ. NO. | | DATE | |

**Regionally Occurring
Special Status Species
Plant Scoping List**

2

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|---------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Allium siskiyouense</i> | Siskiyou onion | -- / -- / 4.3 | G4 / S4 | Monocot. Lower montane coniferous forest, upper montane coniferous forest. Ultramafic. Rocky sites, sometimes on serpentine. 855-2,500 meters above sea level. Blooms (Apr) May-Jul. Within the 9-quad search, there are no Rarefind Occurrences. | Low |
| <i>Anomobryum julaceum</i> | slender silver moss | -- / -- / 4.2 | G5? / S2 | Bryophyte. Broadleaved upland forest, lower montane coniferous forest, north coast coniferous forest. Moss which grows on damp rocks and soil; acidic substrates. Usually seen on roadcuts. 100-1,000 meters above sea level. Within the 9-quad search, there are no Rarefind Occurrences. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-----------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Antennaria suffrutescens</i> | evergreen everlasting | -- / -- / 4.3 | G4 / S4? | Dicot. Lower montane coniferous forest. Ultramafic. Serpentine substrates. 500-1600 meters above sea level. Blooms Jan-Jul. Within the 9-quadrant search, there are no Rarefind Occurrences. | Low |
| <i>Arabis modesta</i> | modest rockcress | -- / -- / 4.3 | G3 / S3 | Dicot. Chaparral, lower montane coniferous forest. Intergrades with <i>A. oregana</i> in Siskiyou County; may be a variety of that plant. 120-800 meters above sea level. Blooms Mar-Jul. Within the 9-quadrant search, there are no Rarefind Occurrences. | Low |
| <i>Arnica cernua</i> | serpentine arnica | -- / -- / 4.3 | G5 / S4 | Dicot. Lower montane coniferous forest. Ultramafic. Serpentine sites. 500-1,920 meters above sea level. Blooms Apr-Jul. Within the 9-quadrant search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|------------------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Astragalus umbraticus</i> | Bald Mountain milk- vetch | -- / -- / 2B.3 | G4 / S2 | Dicot. Cismontane woodland, lower montane coniferous forest. Dry open oak and pine woodlands, sometimes on roadsides. 210-1,220 meters above sea level. Blooms May-Aug. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 5 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1983. | Moderate |
| <i>Bensoniella oregona</i> | bensoniella | -- / R / 1B.1 | G3 / S2 | Dicot. Wetlands, bogs and fens, lower montane coniferous forest, meadows and seeps. Wet meadows and openings in forest. 900-1,390 meters above sea level. Blooms May-Jul. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 6.6 miles from the study area. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Botrypus virginianus</i> | rattlesnake fern | -- / -- / 2B.2 | G5 / S2 | Fern. Upper montane coniferous forest, lower montane coniferous forest. Wetlands, bogs and fens, meadows and seeps, riparian forest. 710-1,405 meters above sea level. Blooms Jun, Aug, Sep. Within the 9-quadrant search, there is one Rarefind Occurrence, with the closest being 9 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1992. | Low |
| <i>Carex geyeri</i> | Geyer's sedge | -- / -- / 4.2 | G5 / S4 | Monocot. Lower montane coniferous forest, Great Basin scrub. Volcanic substrate; open forests and slopes. 1,155-2,100 meters above sea level. Blooms May-Aug. Within the 9-quadrant search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|--------------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Carex praticola</i> | northern meadow sedge | -- / -- / 2B.2 | G5 / S2 | Monocot. Wetland. Moist to wet meadows and seeps. 15-3,200 meters above sea level. Blooms May-Jul. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 6.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1982. | Moderate |
| <i>Claytonia palustris</i> | marsh claytonia | -- / -- / 4.3 | G4 / S4 | Dicot. Wetland. Meadows and seeps, marshes and swamps, upper montane coniferous forest. Sunny areas in meadows, marshy slopes, and streamside veg. Known from two disjunct regions. 1,000-2,500 meters above sea level. Blooms May-Oct. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|---------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Collomia diversifolia</i> | serpentine collomia | -- / -- / 4.3 | G4 / S4 | Dicot. Ultramafic. Chaparral, cismontane woodland. On ultramafic soils, rocky or gravelly sites. 300-600 meters above sea level. Blooms May-Jun. Within the 9-quad search, there are no Rarefind Occurrences. | Moderate |
| <i>Collomia tracyi</i> | Tracy's collomia | -- / -- / 4.3 | G4 / S4 | Dicot. Lower montane coniferous forest. Ultramafic. On rock outcrops. On serpentine at least sometimes. 300-2,100 meters above sea level. Blooms Jun-Jul. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Coptis laciniata</i> | Oregon goldthread | -- / -- / 4.2 | G4 / S3 | Dicot. North coast coniferous forest; meadow and seep; wetland. Mesic sites such as moist streambanks. 1,000 meters above sea level. Blooms (Feb) Mar-May (Sep-Nov). Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 7.3 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2012. | Low |
| <i>Cornus canadensis</i> | bunchberry | -- / -- / 2B.2 | G5 / S2 | Dicot. North coast coniferous forest, bogs and fens, meadows and seeps. 90-1,920 meters above sea level. Blooms May-Jul. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 10.8 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1992. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|---------------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Cypripedium californicum</i> | California lady's-slipper | -- / -- / 4.2 | G4 / S4 | Monocot. Ultramafic; wetland. Lower montane coniferous forest, bogs and fens. In perennial seepages on serpentine substrate and in gravel along creek margins. 30-2,750 meters above sea level. Blooms Apr-Aug (Sep). Within the 9-quadrant search, there are no Rarefind Occurrences. | Low |
| <i>Cypripedium fasciculatum</i> | clustered lady's-slipper | -- / -- / 4.2 | G4 / S4 | Monocot. Lower montane coniferous forest; meadow and seeps; north coast coniferous forest; ultramafic; wetland. In serpentine seeps and moist streambanks. 100-2,435 meters above sea level. Blooms Mar-Aug. Within the 9-quadrant search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Cypripedium montanum</i> | mountain lady's-slipper | -- / -- / 4.2 | G4 / S4 | Monocot. Lower montane coniferous forest, broadleaved upland forest, cismontane woodland, north coast coniferous forest. On dry, undisturbed slopes. 185-2,225 meters above sea level. Blooms Mar-Aug. Within the 9-quad search, there are no Rarefind Occurrences. | Moderate |
| <i>Draba howellii</i> | Howell's draba | -- / -- / 4.3 | G4 / S4 | Dicot. Subalpine coniferous forest. Rocky habitats. 1,370-3,000 meters above sea level. Blooms Jun-Jul. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------------------|--|--|--|-------------------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Epilobium oreganum</i> | Oregon fireweed | -- / -- / 1B.2 | G2 / S2 | Dicot. Ultramafic; wetland. Bogs and fens, meadows and seeps, lower montane coniferous forest, upper montane coniferous forest. In and near springs and bogs; at least sometimes on serpentine. 575-2,075 meters above sea level. Blooms Jun-Sep. Within the 9-quad search, there are eight Rarefind Occurrences, with the closest being 6 miles from the study area, and the most recent observation date within the 9-quad search for this taxon was 1979. | Low |
| <i>Epilobium rigidum</i> | Siskiyou Mountains willowherb | -- / -- / 4.3 | G3G4 / S3 | Dicot. Ultramafic. Lower montane coniferous forest. On hillsides and in rock crevices, in cobbly serpentine soils. 150-1,200 meters above sea level. Blooms Jul-Aug. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|----------------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Epilobium septentrionale</i> | Humboldt County fuchsia | -- / -- / 4.3 | G4 / S4 | Dicot. Broadleaved upland forest; north coast coniferous forest. Dry, sandy or rocky ledges. 45-1,800 meters above sea level. Blooms Jul-Sep. Within the 9-quad search, there are no Rarefind Occurrences. | Low |
| <i>Eriogonum congdonii</i> | Congdon's buckwheat | -- / -- / 4.3 | G4 / S4 | Dicot. Ultramafic. Lower montane coniferous forest. Serpentine; exposed rocky slopes. 1,000-2,345 meters above sea level. Blooms (May) Jun-Aug (Sep). Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|----------------------------|---------------------------------|-----------------------------|--|--------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Erythranthe trinitensis</i> | pink-margined monkeyflower | -- / -- / 1B.3 | G3 / S3 | Dicot. Ultramafic; lower montane coniferous forest, upper montane coniferous forest, cismontane woodland, meadows and seeps. Often on serpentine and roadsides. 1,370-1,950 meters above sea level. Blooms Jun-Jul (Aug). Within the 9-quad search, there are seven Rarefind Occurrences, with the closest being 6.1 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2015. | Low |
| <i>Erythronium citrinum</i> var. <i>citrinum</i> | lemon-colored fawn lily | -- / -- / 4.3 | G4T4 / S3 | Monocot. Ultramafic. Chaparral, lower montane coniferous forest. Dry woodlands, shrubby slopes; usually on serpentine. 150-1,130 meters above sea level. Blooms Mar-May. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-----------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Erythronium oregonum</i> | giant fawn lily | -- / -- / 2B.2 | G4G5 / S2 | Monocot. Ultramafic. Cismontane woodland, meadows and seeps. Openings. Sometimes on serpentine; rocky sites. 300-1,435 meters above sea level. Blooms Mar-Jun (Jul). Within the 9-quad search, there are eight Rarefind Occurrences, with the closest being 6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2010. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-----------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Erythronium revolutum</i> | coast fawn lily | -- / -- / 2B.2 | G4G5 / S3 | Monocot. Wetlands, bogs and fens, broadleaved upland forest, north coast coniferous forest. Mesic sites; streambanks. 60-1,405 meters above sea level. Blooms Mar-Jul (Aug). Within the 9-quad search, there are four Rarefind Occurrences, with the closest being 0.7 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2015. | Low |

| <p style="text-align: center;">Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California</p> | | | | | |
|--|--------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Eucephalus vialis</i> | wayside aster | -- / -- / 1B.2 | G3 / S1 | Dicot. Lower montane coniferous forest, upper montane coniferous forest. Gravelly substrates. 595-1,505 meters above sea level. Blooms Jun-Sep. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 3.8 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1919. | Low |
| <i>Fritillaria purdyi</i> | Purdy's fritillary | -- / -- / 4.3 | G4 / S4 | Monocot. Ultramafic. Chaparral, cismontane woodland, lower montane coniferous forest. Usually on serpentine. 175-2,255 meters above sea level. Blooms Mar-Jun. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Gentiana plurisetosa</i> | Klamath gentian | -- / -- / 1B.3 | G2G3 / S2 | Dicot. Wetland. Meadows and seeps, upper montane coniferous forest, lower montane coniferous forest. Meadows in red fir and yellow pine forests; mesic sites. 1,215-1,950 meters above sea level. Blooms Jul-Sep. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 14.7 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2006. | Low |
| <i>Gentiana setigera</i> | Mendocino gentian | -- / -- / 1B.2 | G2 / S1 | Dicot. Ultramafic; Wetland. Lower montane coniferous forest, meadows, seeps and bogs. Serpentine substrates. 120-1,070 meters above sea level. Blooms (Apr-Jul) Aug-Sep. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|------------------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Gilia capitata ssp. pacifica</i> | Pacific gilia | -- / -- / 1B.2 | G5T3 / S2 | Dicot. Coastal bluff scrub, chaparral, coastal prairie, valley, and foothill grassland. 5-1,345 meters above sea level. Blooms Apr-Aug. Within the 9-quad search, there are no Rarefind Occurrences. | Moderate |
| <i>Hemieva ranunculifolia</i> | buttercup-leaf suksdorfia | -- / -- / 2B.2 | G5 / S2 | Dicot. Wetland. Upper montane coniferous forest, meadows and seeps. Mesic sites; rocky. 1,500-2,500 meters above sea level. Blooms Jun-Aug. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 14.3 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1935. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------------|--|--|--|-------------------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Hemizonia congesta ssp. tracyi</i> | Tracy's tarplant | -- / -- / 4.3 | G5T4 / S4 | Dicot. Ultramafic; valley and foothill grassland. Coastal prairie, north coast coniferous forest, lower montane coniferous forest. Openings, sometimes on serpentine. 120-1,200 meters above sea level. Blooms May-Oct. Within the 9-quad search, there are no Rarefind Occurrences. | Moderate |
| <i>Iliamna latibracteata</i> | California globe mallow | -- / -- / 1B.2 | G2G3 / S2 | Dicot. North coast coniferous forest, chaparral, lower montane coniferous forest, riparian scrub (streambanks). Seepage areas in silty clay loam. 60-1,655 meters above sea level. Blooms Jun-Aug. Within the 9-quad search, there are 13 Rarefind Occurrences, with the closest being 4.1 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2013. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|--------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Iris tenax</i> ssp. <i>klamathensis</i> | Orleans iris | -- / -- / 4.3 | G4G5T4 / S4 | Monocot. Lower montane coniferous forest. Grassy areas along roadsides and on steep rocky hillsides, often in disturbed areas. 100-1,400 meters above sea level. Blooms Apr-May. Within the 9-quadrant search, there are no Rarefind Occurrences. | Moderate |
| <i>Juncus regelii</i> | Regel's rush | -- / -- / 2B.3 | G4 / S1 | Monocot. Wetland. Upper montane coniferous forest, meadows and seeps. Mesic sites. 1,520-2,045 meters above sea level. Blooms Aug. Within the 9-quadrant search, there is one Rarefind Occurrence, with the closest being 8.9 miles from the study area, and the most recent observation date within the 9 quadrants for this taxon was 1992. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|---------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Kopsiopsis hookeri</i> | small groundcone | -- / -- / 2B.3 | G4? / S1S2 | Dicot. North coast coniferous forest. Open woods, shrubby places, generally on Gaultheria shallon. 120-1,435 meters above sea level. Blooms Apr-Aug. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 6.1 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1978. | Moderate |
| <i>Leptosiphon acicularis</i> | bristly leptosiphon | -- / -- / 4.2 | G3 / S3 | Dicot. Cismontane woodland, coastal prairie, chaparral, valley and foothill grassland. 55-1,500 meters above sea level. Blooms Apr-Jul. Within the 9-quad search, there are no Rarefind Occurrences. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Leptosiphon grandiflorus</i> | large-flowered leptosiphon | -- / -- / 4.3 | G3 / S3 | Dicot. Coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland. Open, grassy flats, generally sandy soil. 5-1,200 meters above sea level. Blooms Apr-Aug. Within the 9- quad search, there are no Rarefind Occurrences. | Low |
| <i>Lewisia cotyledon</i> var. <i>heckneri</i> | Heckner's lewisia | -- / -- / 1B.2 | G4T3 / S3 | Dicot. Lower montane coniferous forest. Rocky places. 225-2,100 meters above sea level. Blooms May- Jul. Within the 9-quad search, there are four Rarefind Occurrences, with the closest being 6.7 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2010. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Lewisia cotyledon</i> var. <i>howellii</i> | Howell's lewisia | -- / -- / 3.2 | G4T4Q / S2 | Dicot. Chaparral, cismontane woodland, lower montane coniferous forest, broadleaved upland forest. Rocky sites; bare shale outcrops in shallow soils. 150-2,010 meters above sea level. Blooms Apr-Jul. Within the 9-quadrant search, there are no Rarefind Occurrences. | Low |
| <i>Lilium pardalinum</i> ssp. <i>vollmeri</i> | Vollmer's lily | -- / -- / 4.3 | G5T4 / S3 | Monocot. Wetland. Meadows and seeps, bogs and fens. Wet ground, usually with moving water nearby, including mountain creeks, cliff-side springs. 30-1,680 meters above sea level. Blooms (Jun)Jul-Aug. Within the 9-quadrant search, there are no Rarefind Occurrences. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|------------------------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Lilium washingtonianum</i> ssp. <i>purpurascens</i> | purple-flowered Washington lily | -- / -- / 4.3 | G4T4 / S4? | Monocot. Ultramafic. Chaparral, lower montane coniferous forest, upper montane coniferous forest. Often collected on dry hillsides, on serpentine. 70- 2,750 meters above sea level. Blooms Jun-Aug. Within the 9- quad search, there are no Rarefind Occurrences. | Moderate |
| <i>Listera cordata</i> | heart-leaved twayblade | -- / -- / 4.2 | G5 / S4 | Monocot. Wetland. Bogs and fens, lower montane coniferous forest, north coast coniferous forest. 5-1,370 meters above sea level. Blooms Feb-Jul. Within the 9- quad search, there are no Rarefind Occurrences. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|----------------------|--|------------------------------------|--|---------------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Lupinus tracyi</i> | Tracy's lupine | -- / -- / 4.3 | G4 / S3 | Dicot. Upper montane coniferous forest. Dry soil, open to partial shade, on ridgetops, slopes, hillsides, and in meadows. 1,060-2,000 meters above sea level. Blooms (May) Jun-Jul. Within the 9-quad search, there are no Rarefind Occurrences. | Low |
| <i>Micranthes marshallii</i> | Marshall's saxifrage | -- / -- / 4.3 | G5 / S3 | Dicot. Riparian forest. Rocky streambanks. 90-2,130 meters above sea level. Blooms Mar-Aug. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|----------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Mielichhoferia elongata</i> | elongate copper moss | -- / -- / 4.3 | G5 / S4 | Bryophyte. Cismontane woodland. Moss growing on very acidic, metamorphic rock or substrate; usually in higher portions in fens. Often on substrates naturally enriched with heavy metals (for example, copper). 500-1,300 meters above sea level. Within the 9-quadrant search, there are no Rarefind Occurrences. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|----------------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Mitellastra caulescens</i> | leafy-stemmed mitrewort | -- / -- / 4.2 | G5 / S4 | Dicot. Broadleaved upland forest, lower montane coniferous forest, meadows and seeps, north coast coniferous forest. Mesic sites. 5-1,700 meters above sea level. Blooms (Mar) Apr-Oct. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 14.3 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2001. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|--------------------|--|--|--|-------------------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Montia howellii</i> | Howell's montia | -- / -- / 2B.2 | G3G4 / S2 | Dicot. Wetland. Meadows and seeps, north coast coniferous forest, vernal pools. Vernal wet sites, often on compacted soil. 10-1,185 meters above sea level. Blooms (Feb) Mar-May. Within the 9-quadrant search, there are five Rarefind Occurrences, with the closest being within 1.0 miles from the study area, and the most recent observation date within the 9 quadrants for this taxon was 2017. | Moderate |

| <p style="text-align: center;">Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California</p> | | | | | |
|--|-------------------------|---------------------------------|-----------------------------|--|--------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Oenothera wolfii</i> | Wolf's evening-primrose | -- / -- / 1B.1 | G2 / S1 | Dicot. Coastal bluff scrub, coastal dunes, coastal prairie, lower montane coniferous forest. Sandy substrates; usually mesic sites. 125 meters above sea level. Blooms May-Oct. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 2.2 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1949. | Low |
| <i>Phacelia leonis</i> | Siskiyou phacelia | -- / -- / 1B.3 | G3 / S2? | Dicot. Ultramafic; upper montane coniferous forest, meadows and seeps. Sandy, moist soil, sometimes on serpentine. 1,085-2,195 meters above sea level. Blooms Jun-Aug. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Piperia candida</i> | white-flowered rein orchid | -- / -- / 1B.2 | G3 / S3 | Monocot. Ultramafic. North coast coniferous forest, lower montane coniferous forest, broadleaved upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 45-1,615 meters above sea level. Blooms (Mar) May-Sep. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 0.3 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2005. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|---------------------|--|------------------------------------|--|---------------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Pityopus californicus</i> | California pinefoot | -- / -- / 4.2 | G4G5 / S4 | Dicot. Old-growth; broadleaved upland forest, upper montane coniferous forest, north coast coniferous forest, lower montane coniferous forest. Deep shade with few other understory species, often under a layer of duff, in rocky to clay loam soils. 15-2,225 meters above sea level. Blooms (Mar-Apr) May-Aug. Within the 9-quad search, there are no Rarefind Occurrences. | Moderate |
| <i>Platanthera stricta</i> | slender bog-orchid | -- / -- / 4.2 | G5 / S3 | Monocot. Wetland. Lower montane coniferous forest, meadows and seeps. Mesic sites. 1,000-2,300 meters above sea level. Blooms May-Aug. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|----------------------------|--|--|--|-------------------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Pleuropogon refractus</i> | nodding semaphore grass | -- / -- / 4.2 | G4 / S4 | Monocot. Wetland. Meadows and seeps, lower montane coniferous forest, north coast coniferous forest, riparian forest. Mesic sites along streams, grassy flats in shaded redwood groves, often on granite. 1,600 meters above sea level. Blooms (Mar) Apr-Aug. Within the 9-quad search, there are no Rarefind Occurrences. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Ptilidium californicum</i> | Pacific fuzzwort | -- / -- / 4.3 | G4G5 / S3S4 | Bryophyte. Lower montane coniferous forest, upper montane coniferous forest. Epiphytic on fallen and decaying logs and stumps. Rarely on boulders over humus. 340-1,860 meters above sea level. Blooms May-Aug. Within the 9-quad search, there are 12 Rarefind Occurrences, with the closest being 5.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2001. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|---------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Ramalina thrausta</i> | angel's hair lichen | -- / -- / 2B.1 | G5 / S2? | Lichen. North coast coniferous forest. On dead twigs and other lichens. 75-430 meters above sea level. Within the 9-quadrant search, there is one Rarefind Occurrence, with the closest being 6.4 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1972. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|--------------|---------------------------------|-----------------------------|---|--------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Rosa gymnocarpa</i> var. <i>serpentina</i> | Gasquet rose | -- / -- / 1B.3 | G5T3T4 / S2 | Dicot. Ultramafic. Chaparral, cismontane woodland. Serpentine. Often on roadsides, sometime on ridges, streambanks, and in openings. 365-2,230 meters above sea level. Blooms Apr-Jun (Aug). Within the 9-quadrant search, there are three Rarefind Occurrences, with the closest being 5.2 miles from the study area, and the most recent observation date within the 9 quadrants for this taxon was 2008. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Sedum divergens</i> | Cascade stonecrop | -- / -- / 2B.3 | G5? / S2 | Dicot. Alpine boulder and rock field. Rocky alpine slopes and cool cliffs. 1,525-2,335 meters above sea level. Blooms Jul-Sep. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 14.3 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1979. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-----------------------|--|--|--|-------------------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Sedum laxum</i> ssp. <i>flavidum</i> | pale yellow stonecrop | -- / -- / 4.3 | G5T4Q / S4 | Dicot. Ultramafic; Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, upper montane coniferous forest. Serpentine or basalt outcrops. 455-2,000 meters above sea level. Blooms May-Jul. Within the 9-quad search, there are nine Rarefind Occurrences, with the closest being 4.5 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1991. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-----------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Sidalcea malviflora</i> ssp. <i>patula</i> | Siskiyou checkerbloom | -- / -- / 1B.2 | G5T2 / S2 | Dicot. Coastal bluff scrub, coastal prairie, north coast coniferous forest. Open coastal forest; roadcuts. 5-1,255 meters above sea level. Blooms May-Aug. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 6.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1979. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|--------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Sidalcea oregana ssp. eximia</i> | coast checkerbloom | -- / -- / 1B.2 | G5T1 / S1 | Dicot. Wetland. Meadows and seeps, north coast coniferous forest, lower montane coniferous forest. Near meadows, in gravelly soil. 5-1,805 meters above sea level. Blooms Jun-Aug. Within the 9-quad search, there are four Rarefind Occurrences, with the closest being 7.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2010. | Moderate |

| <p style="text-align: center;">Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California</p> | | | | | |
|--|---------------------------|------------------------------------|--------------------------------|--|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Stellaria obtusa</i> | obtuse starwort | -- / -- / 4.3 | G5 / S4 | Dicot. Wetland. Upper montane coniferous forest, lower montane coniferous forest, riparian woodland. Streams or seeps in conifer forest. 150-2,135 meters above sea level. Blooms May-Sep (Oct). Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 13.8 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1935. | Moderate |
| <i>Streptanthus ob lanceolatus</i> | Trinity River jewelflower | -- / -- / 1B.2 | G1 / S1 | Dicot. Cismontane woodland. 20-420 meters above sea level. Blooms Apr-Jun. Within the 9-quad search, there are two Rarefind Occurrences, with the closest being 6.6 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 2009. | Moderate |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Tauschia glauca</i> | glaucous tauschia | -- / -- / 4.3 | G4 / S4 | Dicot. Ultramafic. Lower montane coniferous forest. Dry gravelly serpentine slopes and outcrops, usually with Douglas fir and ponderosa pine. 80-1,700 meters above sea level. Blooms Apr-Jun. Within the 9-quad search, there are no Rarefind Occurrences. | Low |
| <i>Trifolium howellii</i> | Howell's clover | -- / -- / 4.3 | G4 / S4 | Dicot. Wetland. Meadows and seeps, lower montane coniferous forest, upper montane coniferous forest. Moist seeps. 800-1,800 meters above sea level. Blooms Jun-Aug. Within the 9-quad search, there are no Rarefind Occurrences. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------------------|------------------------------------|--------------------------------|---|-----------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Trillium ovatum</i> ssp. <i>oettingeri</i> | Salmon Mountains wakerobin | -- / -- / 4.2 | G5T3 / S3 | Monocot. Lower montane coniferous forest, upper montane coniferous forest, riparian scrub. Moist shady spots along streams and near seeps, often in heavily forested areas. 855-2,025 meters above sea level. Blooms Feb-Jul. Within the 9- quad search, there are no Rarefind Occurrences. | Low |
| <i>Vaccinium scoparium</i> | little-leaved huckleberry | -- / -- / 2B.2 | G5 / S3 | Dicot. Subalpine coniferous forest. Rocky, subalpine woods. Sometimes serpentine. 1,035-2,200 meters above sea level. Blooms Jun-Aug. Within the 9-quad search, there is one Rarefind Occurrence, with the closest being 6.4 miles from the study area, and the most recent observation date within the 9 quads for this taxon was 1965. | Low |

| Appendix 2 Regionally Occurring Special Status Plant Species Scoping List Organic Liberty, LLC, Willow Creek, California | | | | | |
|---|-------------------------|---------------------------------|-----------------------------|--|--------------------------|
| Latin Name | Common Name | FESA / CESA / CRPR ¹ | Heritage Ranks ² | Notes | Potential for Occurrence |
| <i>Wyethia longicaulis</i> | Humboldt County wyethia | -- / -- / 4.3 | G4 / S4 | Dicot. Ultramafic. Broadleaved upland forest, coastal prairie, lower montane coniferous forest. Along streams, seepage areas, sometimes on serpentine. 750-1525 meters above sea level. Blooms May-Jul. Within the 9-quad search, there are no Rarefind Occurrences. | Low |
| 1. Species indicator status as assigned by Federal Endangered Species Act (FESA), California Endangered Species Act (CESA), California Native Plant Society (CNPS) 1A: Presumed extirpated in California and either rare or extinct elsewhere 1B: Rare or Endangered in California and elsewhere 2A: Presumed extirpated in California, but more common elsewhere 2B: Rare or Endangered in California, but more common elsewhere 3: Plants for which we need more information - Review list 4: Plants of limited distribution - Watch list 0.1: Seriously threatened in California 0.2: Moderately threatened in California 0.3: Not very threatened in California R: Rare 2. Species heritage rank as assigned by California Department of Fish and Wildlife (CDFW) G1/S1: critically imperiled G2/S2: imperiled G3/S3: vulnerable G4/S4: apparently secure G5/S5: secure G#G#: range rank ?: inexact numeric rank Q: questionable taxonomy T#: infraspecific taxon | | | | | |

**Regionally Occurring
Special Status Species
Animal Scoping List**

3

| Appendix 3 Regionally Occurring Special Status Animal Species Scoping List Organic Liberty, LLC. Salyer, California | | | | | |
|---|---|---------------------------------|-----------------------------|--|--------------------------|
| Scientific Name | Common Name | FESA / CESA / CDFW ¹ | Heritage Ranks ² | Habitat | Potential for Occurrence |
| AMPHIBIANS | | | | | |
| <i>Ascaphus truei</i> | Pacific tailed frog | -- / -- / SSC | G4, S3S4 | Aquatic. Klamath/North coast flowing waters. Lower montane coniferous forest. North coast coniferous forest. Redwood. Riparian forest. Occurs in montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats. Restricted to perennial montane streams. Tadpoles require water below 15 degrees C. | None |
| <i>Plethodon elongatus</i> | Del Norte salamander | -- / -- / WL | G4, S3 | Oldgrowth. Old-growth associated species with optimum conditions in the mixed conifer/hardwood ancient forest ecosystem. Cool, moist, stable microclimate, a deep litter layer, closed multi-storied canopy, dominated by large, old trees. | None |
| <i>Rana aurora</i> | northern red-legged frog | -- / -- / SSC | G4, S3 | Klamath/North coast flowing waters. Riparian forest. Riparian woodland. Humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover. Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season. | Low |
| <i>Rana boylei</i> | foothill yellow-legged frog | -- / -- / SSC | G3, S3 | Aquatic. Chaparral. Cismontane woodland. Coastal scrub. Klamath/North coast flowing waters. Lower montane coniferous forest. Meadow and seep. Riparian forest. Riparian woodland. Sacramento/San Joaquin flowing waters. Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis. | None |
| <i>Rhyacotriton variegatus</i> | southern torrent salamander | -- / -- / SSC | G3G4, S2S3 | Lower montane coniferous forest. Oldgrowth. Redwood. Riparian forest. Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old growth forest. Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rock within trickling water. | None |
| BIRDS | | | | | |
| <i>Accipiter cooperii</i> | Cooper's hawk | -- / -- / WL | G4, S3 | Cismontane woodland. Riparian forest. Riparian woodland. Upper montane coniferous forest. Woodland, chiefly of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks. | Moderate |
| <i>Accipiter gentilis</i> | northern goshawk | -- / -- / SSC | G5, S3 | North coast coniferous forest. Subalpine coniferous forest. Upper montane coniferous forest. Within, and in vicinity of, coniferous forest. Uses old nests and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees. | Moderate |
| <i>Aquila chrysaetos</i> | golden eagle | -- / -- / FP ; WL | G1, S1 | Broadleaved upland forest. Cismontane woodland. Coastal prairie. Great Basin grassland. Great Basin scrub. Lower montane coniferous forest. Pinon and juniper woodlands. Upper montane coniferous forest. Valley and foothill grassland. Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas. | Moderate |
| <i>Ardea herodias</i> | great blue heron | -- / -- / -- | G5, S4 | Brackish marsh. Estuary. Freshwater marsh. Marsh and swamp. Riparian forest. Wetland. Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows. | None |
| <i>Brachyramphus marmoratus</i> | marbled murrelet | T / E / -- | G4G5T3, S3 | Lower montane coniferous forest. Old growth. Redwood. Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to 6 miles inland, often in Douglas-fir. | None |
| <i>Charadrius nivosus nivosus</i> | western snowy plover | T / -- / SSC | G3T3, S2S3 | Great Basin standing waters. Sand shore. Wetland. Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting. | None |
| <i>Coccyzus americanus</i> | yellow-billed cuckoo (Western U.S. DPS) | T / E / - | G5T2T3, S1 | Riparian forest. Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape. | None |
| <i>Falco peregrinus anatum</i> | American peregrine falcon | D / D / FP | G4T4, S3S4 | Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site. | Moderate |
| <i>Haliaeetus leucocephalus</i> | bald eagle | D / E / FP | G4, S3 | Lower montane coniferous forest. Old growth. Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter. | High |

| Appendix 3 Regionally Occurring Special Status Animal Species Scoping List Organic Liberty, LLC. Salyer, California | | | | | |
|---|---|---------------------------------|-----------------------------|---|--------------------------|
| Scientific Name | Common Name | FESA / CESA / CDFW ¹ | Heritage Ranks ² | Habitat | Potential for Occurrence |
| <i>Icteria virens</i> | yellow-breasted chat | -- / -- / SSC | G5, S3 | Riparian forest. Riparian scrub. Riparian woodland. Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground. | Low |
| <i>Pandion haliaetus</i> | osprey | -- / -- / WL | G5, S4 | Riparian forest. Ocean shore, bays, fresh-water lakes, and larger streams. Large nests built in treetops within 15 miles of a good fish-producing body of water. | High |
| <i>Picoides albolarvatus</i> | White-headed woodpecker | -- / -- / - | G1, S1 | Lower montane coniferous forest. Upper montane coniferous forest. Nests in open mountain conifer forests with large trees and snags and tree/shrub and tree/herbaceous ecotones. Prefers semi-open areas. Excavates cavity in large snag or stump at least 2 feet in diameter at nest height. | Moderate |
| <i>Psiloscops flammeolus</i> | flamulated owl | -- / -- / - | G3, S3 | Lower montane coniferous forest. Subalpine coniferous forest. Need montane forests with some understory brush for breeding. In California the breeding range is closely associated with the presence of ponderosa pine and Jeffery pine. | Moderate |
| <i>Sphyrapicus ruber</i> | red-breasted sapsucker | -- / -- / - | G5, S3 | Breeds in mixed coniferous and mixed deciduous-coniferous forests and woodlands. Requires standing snags or hollow trees for nesting cavity. | High |
| <i>Strix occidentalis caurina</i> | northern spotted owl | T / T / SSC | G3T3, S2S3 | North coast coniferous forest. Oldgrowth. Redwood. Old-growth forests or mixed stands of old-growth and mature trees. Occasionally in younger forests w/patches of big trees. High, multistory canopy dominated by big trees, many trees w/cavities or broken tops, woody debris and space under canopy. | Moderate |
| CRUSTACEANS | | | | | |
| <i>Pacifastacus leniusculus klamathensis</i> | Klamath crayfish | -- / -- / - | G5T5, S3 | Freshwater aquatic. Found in fast, cold streams. Mostly active at night. | None |
| FISH | | | | | |
| <i>Acipenser medirostris</i> | green sturgeon | T / -- / SSC | G4, S4 | Aquatic. Klamath/North coast flowing waters. Sacramento/San Joaquin flowing waters. These are the most marine species of sturgeon. Abundance increases northward of Point Conception. Spawns in the Sacramento, Klamath, and Trinity Rivers. Spawns at temps between 8-14 °C. Preferred spawning substrate is large cobble but can range from clean sand to bedrock. | None |
| <i>Oncorhynchus kisutch</i> | coho salmon - southern Oregon / northern California ESU | T / T / - | G4, S3 | Aquatic. Federal listing refers to pops between Punta Gorda and San Lorenzo River. State listing refers to pops south of Punta Gorda—Requires beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water, and sufficient dissolved oxygen. | None |
| <i>Oncorhynchus mykiss irideus</i> | steelhead - Klamath Mountains Province DPS | -- / -- / SSC | G5T2T3, S1S2 | Aquatic. Sacramento/San Joaquin flowing waters. From Russian River, south to Soquel Cr and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins. | None |
| <i>Oncorhynchus mykiss irideus</i> | steelhead - northern California DPS | T / -- / - | G5T2T3, S1S2 | Aquatic. Sacramento/San Joaquin flowing waters. From Russian River, south to Soquel Cr and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins. | None |
| <i>Oncorhynchus mykiss irideus</i> | summer-run steelhead trout | -- / -- / SSC | G5T2T3, S1S2 | Aquatic. Sacramento/San Joaquin flowing waters. From Russian River, south to Soquel Cr and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins. | None |
| <i>Oncorhynchus tshawytscha</i> | chinook salmon - Sacramento River winter-run ESU | E / E / - | G4, S3 | Aquatic. Sacramento/San Joaquin flowing waters. Federal listing refers to wild spawned, coastal, spring and fall runs between Redwood Cr, Humboldt Co and Russian River, Sonoma Co. | None |
| <i>Oncorhynchus tshawytscha</i> | chinook salmon - upper Klamath and Trinity Rivers ESU. | -- / -- / SSC | G4, S3 | Aquatic. Sacramento/San Joaquin flowing waters. Federal listing refers to wild spawned, coastal, spring and fall runs between Redwood Cr, Humboldt Co and Russian River, Sonoma Co. | None |
| Insects | | | | | |
| <i>Bombus occidentalis</i> | western bumble bee | -- / -- / - | G2G3, S1 | Once common and widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease. | Moderate |
| Mammals | | | | | |
| <i>Antrozous pallidus</i> | pallid bat | -- / -- / SSC | G4?T3Q, S3 | Chaparral. Coastal scrub. Desert wash. Great Basin grassland. Great Basin scrub. Mojavean desert scrub. Riparian woodland. Sonoran desert scrub. Upper montane coniferous forest. Valley and foothill grassland. Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from | Low |

| Appendix 3 Regionally Occurring Special Status Animal Species Scoping List Organic Liberty, LLC. Salyer, California | | | | | |
|---|--------------------------|---------------------------------|-----------------------------|---|--------------------------|
| Scientific Name | Common Name | FESA / CESA / CDFW ¹ | Heritage Ranks ² | Habitat | Potential for Occurrence |
| | | | | high temperatures. Very sensitive to disturbance of roosting sites. | |
| <i>Arborimus pomo</i> | Sonoma tree vole | -- / -- / SSC | G5T2T3, S1S2 | North coast coniferous forest. Oldgrowth. Redwood. North coast fog belt from Oregon border to Sonoma County, California In Douglas-fir, redwood and montane hardwood-conifer forests. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce. | None |
| <i>Corynorhinus townsendii</i> | Townsend's big-eared bat | -- / -- / SSC | G5T2T3, S1S2 | Broadleaved upland forest. Chaparral. Chenopod scrub. Great Basin grassland. Great Basin scrub. Joshua tree woodland. Lower montane coniferous forest. Meadow and seep. Mojavean desert scrub. Riparian forest. Riparian woodland. Sonoran desert scrub. Sonoran thorn woodland. Upper montane coniferous forest. Valley and foothill grassland. Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance. | Low |
| <i>Gulo gulo</i> | California wolverine | PT/ T / FP | G4, S3 | Alpine. Alpine dwarf scrub. Meadow and seep. Montane dwarf scrub. North coast coniferous forest. Riparian forest. Subalpine coniferous forest. Upper montane coniferous forest. Wetland. Found in the north coast mountains and the Sierra Nevada. Found in a wide variety of high elevation habitats. Needs water source. Uses caves, logs, burrows for cover and den area. Hunts in more open areas. Can travel long distances. | Low |
| <i>Lasionycteris noctivagans</i> | silver-haired bat | -- / -- / - | G5T2T3, S1S2 | Lower montane coniferous forest. Oldgrowth. Riparian forest. Primarily a coastal and montane forest dweller feeding over streams, ponds and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks. Needs drinking water. | Low |
| <i>Lasiurus cinereus</i> | hoary bat | -- / -- / - | G4, S4 | Broadleaved upland forest. Cismontane woodland. Lower montane coniferous forest. North coast coniferous forest. Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water. | Low |
| <i>Martes caurina humboldtensis</i> | Humboldt marten | -- / CE / SSC | G4, S4 | North coast coniferous forest. Oldgrowth. Redwood. Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County. Associated with late-successional coniferous forests, prefer forests with low, overhead cover. | Low |
| <i>Myotis evotis</i> | long-eared myotis | -- / -- / - | G4, S4 | Found in all brush, woodland and forest habitats from sea level to about 9,000 feet prefers coniferous woodlands and forests. Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts. | Moderate |
| <i>Myotis thysanodes</i> | fringed myotis | -- / -- / - | G3, S3 | In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts. | Low |
| <i>Myotis volans</i> | long-legged myotis | -- / -- / - | G4, S4 | Upper montane coniferous forest. Most common in woodland and forest habitats above 4,000 feet. Trees are important day roosts; caves and mines are night roosts. Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings. | Low |
| <i>Myotis yumanensis</i> | Yuma myotis | -- / -- / - | G5, S4 | Lower montane coniferous forest. Riparian forest. Riparian woodland. Upper montane coniferous forest. Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices. | Moderate |
| <i>Pekania pennanti</i> | fisher - West Coast DPS | PT/ CT / SSC | G5T2T3Q, S2S3 | North coast coniferous forest. Oldgrowth. Riparian forest. Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest. | Moderate |
| <i>Erethizon dorsatum</i> | North American porcupine | -- / -- / - | G5, S3 | Broadleaved upland forest, cismontane woodland, closed-cone coniferous forest, lower montane coniferous forest, north coast coniferous forest, and upper montane coniferous forest. | Moderate |
| MOLLUSKS | | | | | |
| <i>Ancotrema voyanum</i> | hooded lancetooth | -- / -- / - | G4, S4 | Oldgrowth. Riparian forest. Talus slope. Occurs mostly in the Shasta-Trinity National forests in the northern half of Trinity County. Associated with limestone substrates, mostly in an elevation range of 168-960 meters. All known occurrences are near streams or in draws (intermittent stream channel). Needs permanent dampness. Late successional conditions provide suitable habitat conditions. | Low |

| Appendix 3 Regionally Occurring Special Status Animal Species Scoping List Organic Liberty, LLC. Salyer, California | | | | | |
|---|----------------------------|---------------------------------|-----------------------------|--|--------------------------|
| Scientific Name | Common Name | FESA / CESA / CDFW ¹ | Heritage Ranks ² | Habitat | Potential for Occurrence |
| <i>Gonidea angulata</i> | western ridged mussel | -- / -- / - | G4, S1.1 | Aquatic. Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from Central and Southern California. | Low |
| <i>Helminthoglypta talmadgei</i> | Trinity shoulderband | -- / -- / - | G5T2T3, S1S2 | Limestone. Lower montane coniferous forest. Riparian forest. Limestone rockslides, litter in coniferous forests, old mine tailings, and along shaded streams in the Klamath Mountains. | Low |
| <i>Juga orickensis</i> | redwood juga | -- / -- / - | G2, S1S2 | In coastal streams in southern Curry County, Oregon and in Del Norte, Humboldt, and western Trinity counties, California | None |
| <i>Lanx alta</i> | highcap lanx | -- / -- / - | G2, S1S2 | Spring-influenced areas of larger rivers and tributaries. | None |
| <i>Margaritifera falcata</i> | western pearlshell | -- / -- / - | G4, S1.1 | Aquatic. Prefers lower velocity waters. | Low |
| <i>Megomphix californicus</i> | Natural Bridge megomphix | -- / -- / - | G4?T3Q, S3 | Oldgrowth. Riparian forest. Forested areas. In moist leaf litter and under rotting logs on streambanks. Associated with perennial seeps and springs. | Low |
| <i>Monadenia callipeplus</i> | downy sideband | -- / -- / - | G1G2, S1S2 | This species is restricted to Siskiyou County, California, USA. Limited range extent and few occurrences, but known occurrences are located primarily on national forest land. | None |
| <i>Monadenia churchi</i> | Klamath sideband | -- / -- / - | G4, S4 | Talus slope. Lives mostly in limestone outcrops, caves, talus slides, and lava rockslides, but also occurs under forest debris in heavy shade on wooded hillsides. | Low |
| <i>Monadenia infumata ochromphalus</i> | yellow-based sideband | -- / -- / - | G5T1T3Q, S1S3 | Oldgrowth. Riparian forest. Old growth and riparian associate. Not collected since the early 1960s. Found on leaves, sticks, concrete wall of irrigation ditch and mossy boulders and stones. | Low |
| <i>Monadenia infumata setosa</i> | Trinity bristle snail | -- / T / - | G5T2T3, S1S2 | Riparian forest. Known only from along a few streams in the Trinity River drainage. Juveniles are found under bark of standing dead broadleaf trees, and the species may require this habitat. | Low |
| <i>Pristinicola hemphilli</i> | Pristine Pyрге | -- / -- / - | G3, S1 | Springs or seeps usually in semiarid sagebrush-dominated habitat with basalt substrates, but some sites are in dense Douglas fir forests. Habitat is characterized by cobble substrates, slow to moderate flows, and shallow, cold, clear water and are relatively undisturbed | None |
| <i>Prophysaon coeruleum</i> | Blue-gray taildropper slug | -- / -- / - | G4, S3 | Unknown | Low |
| <i>Vespericola pressleyi</i> | Big Bar hesperian | -- / -- / - | G4, S3 | Oldgrowth. Riparian forest. Only found in Trinity County, within the boundaries of Shasta-Trinity National Forest. Found in conifer or hardwood forests in permanently damp areas within 200 meters of stable streams, seeps, and springs. | Low |
| REPTILES | | | | | |
| <i>Emys marmorata</i> | western pond turtle | -- / -- / SSC | G4, S1.1 | Aquatic. Artificial flowing waters. Klamath/north coast flowing waters. Klamath/north coast standing waters. Marsh and swamp. Sacramento/San Joaquin flowing waters. Sacramento/San Joaquin standing waters. South coast flowing waters. South coast standing waters. Wetland. A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometer from water for egg-laying. | Low |
| 1. Species indicator status as assigned by Federal Endangered Species Act (FESA), California Endangered Species Act (CESA), and California Department of Fish and Wildlife (CDFW) C: candidate CT: candidate threatened D: delisted DPS: distinct population segment E: endangered ESU: evolutionarily significant unit FP: fully protected PT: proposed threatened SSC: species of special concern S: sensitive T: threatened VU: vulnerable WL: watch list | | | | | |
| 2. Species Heritage rank as assigned by California Department of Fish and Wildlife (CDFW) G1/S1: critically imperiled G2/S2: imperiled G3/S3: vulnerable G4/S4: apparently secure G5/S5: secure SNR: State No Ranking TNR: Subspecies No Ranking T: referring to a subspecies Q: Taxonomic questions associated with species | | | | | |

Observed Botanical Species List

4

Appendix 4
Observed Plants Species List
Organic Liberty, Willow Creek, California

| Scientific Name | Common Name |
|--|------------------------|
| <i>Acmispon parviflorus</i> | hill lotus |
| <i>Agrostis stolonifera</i> | creeping bentgrass |
| <i>Anisocarpus madioides</i> | woodland madia |
| <i>Arbutus menziesii</i> | madrono |
| <i>Arctostaphylos manzanita</i> ssp. <i>manzanita</i> | common manzanita |
| <i>Athyrium filix-femina</i> var. <i>cyclosorum</i> | common lady fern |
| <i>Avena barbata</i> | slim oat |
| <i>Baccharis pilularis</i> sso, <i>consanguinea</i> | coyote brush |
| <i>Berberis nervosa</i> | Oregon grape |
| <i>Briza maxima</i> | rattlesnake grass |
| <i>Bromus hordeaceus</i> | soft chess |
| <i>Cardamine oligosperma</i> | Idaho bittercress |
| <i>Carduus pycnocephalus</i> | Italian thistle |
| <i>Ceanothus integerrimus</i> var. <i>macrothyrsus</i> | deerbrush |
| <i>Centaurea solstitialis</i> | yellow starthistle |
| <i>Chlorogalum pomeridianum</i> | wavy leaf soaproot |
| <i>Claytonia sibirica</i> | candy flower |
| <i>Cynoglossum grande</i> | western hound's tongue |
| <i>Cynosurus echinatus</i> | dogtail grass |
| <i>Cytisus scoparius</i> | Scotch broom |
| <i>Cyperus eragrostis</i> | tall flat nut sedge |
| <i>Dactylis glomerata</i> | orchardgrass |
| <i>Danthonia californica</i> | California oatgrass |
| <i>Dryopteris arguta</i> | wood fern |
| <i>Elymus glaucus</i> | blue wildrye |
| <i>Festuca arundinacea</i> | Tall fescue |
| <i>Festuca bromoides</i> | brome fescue |
| <i>Festuca californica</i> | California fescue |
| <i>Festuca microstachys</i> | small fescue |
| <i>Festuca perennis</i> | Italian rye grass |
| <i>Festuca subuliflora</i> | coast range fescue |
| <i>Fragaria vesca</i> | woodland strawberry |
| <i>Galium aparine</i> | bed straw |
| <i>Holcus lanatus</i> | common velvetgrass |
| <i>Hordium murinum</i> | farmer's foxtail |
| <i>Hypericum perforatum</i> | Klamathweed |
| <i>Hypochaeris radicata</i> | hairy cat's ear |
| <i>Juncus ensifolius</i> | Sword-leaved rush |

Appendix 4
Observed Plants Species List
Organic Liberty, Willow Creek, California

| Scientific Name | Common Name |
|--|--------------------------|
| <i>Juncus patens</i> | spreading rush |
| <i>Linum bienne</i> | narrow-leaved flax |
| <i>Lonicera hispidula</i> | pink honeysuckle |
| <i>Lotus corniculatus</i> | birds foot trefoil |
| <i>Luzula comosa</i> | hairy wood rush |
| <i>Lysimachia latifolia</i> | pacific starflower |
| <i>Madia elegans</i> | common madia |
| <i>Madia gracilis</i> | grassy tarweed |
| <i>Mentha pulegium</i> | pennyroyal |
| <i>Micranthes californica</i> | Greene's saxifrage |
| <i>Narcissus pseudonarcissus</i> | daffodil |
| <i>Navarretia intertexta</i> | interwoven navarretia |
| <i>Notholithocarpus densiflorus</i> | tanoak |
| <i>Pedicularis densiflora</i> | warriors plume |
| <i>Plantago lanceolata</i> | ribwort |
| <i>Poa annua</i> | annual blue grass |
| <i>Polystichum munitum</i> | western sword fern |
| <i>Primula hendersonii</i> | Mosquito bill |
| <i>Pseudotsuga menziesii</i> var. <i>menziesii</i> | Douglas fir |
| <i>Pteridium aquilinum</i> var. <i>pubescens</i> | western brackenfern |
| <i>Quercus garryana</i> var. <i>garryana</i> | Oregon oak |
| <i>Quercus kelloggii</i> | California black oak |
| <i>Ranunculus occidentalis</i> | western buttercup |
| <i>Rubus armeniacus</i> | Himalayan blackberry |
| <i>Rubus ursinus</i> | California blackberry |
| <i>Rumex crispus</i> | curly dock |
| <i>Sanicula crassicaulis</i> | Pacific black snake root |
| <i>Salix lasiolepis</i> | arroyo willow |
| <i>Sonchus asper</i> | spiny sowthistle |
| <i>Stipa lemmonii</i> | lemmon's needle grass |
| <i>Taraxacum officinale</i> | Red-seeded dandelion |
| <i>Toxicodendron diversilobum</i> | poison oak |
| <i>Trifolium dubium</i> | shamrock |
| <i>Umbellularia californica</i> | California bay |
| <i>Vitis californica</i> | California wild grape |

Observed Animal Species List

5

Appendix 5
Observed Animal Species List 3/13/20
Organic Liberty, LLC, Willow Creek, California

| Latin Name | Common Name | Taxonomic Group |
|--------------------------------|---------------------------|------------------------|
| <i>Poecile rufescens</i> | chestnut-backed chickadee | Bird |
| <i>Leiothlypis celata</i> | Orange-crowned warbler | Bird |
| <i>Chamaea fasciata</i> | Wrentit | Bird |
| <i>Corvus corax</i> | Common raven | Bird |
| <i>Vireo cassinii</i> | Cassin's vireo | Bird |
| <i>Aphelocoma californica</i> | California scrub-jay | Bird |
| <i>Buteo lineatus</i> | Red-shouldered hawk | Bird |
| <i>Geothlypis tolmiei</i> | MacGillivray's warbler | Bird |
| <i>Spinus psaltria</i> | lesser goldfinch | Bird |
| <i>Setophaga petechia</i> | Yellow warbler | Bird |
| <i>Pipilo maculatus</i> | Spotted towhee | Bird |
| <i>Cyanocitta stelleri</i> | Steller's jay | Bird |
| <i>Junco hyemalis</i> | Dark-eyed junco | Bird |
| <i>Melanerpes formicivorus</i> | Acorn woodpecker | Bird |
| <i>Turdus migratorius</i> | American robin | Bird |
| <i>Tachycineta bicolor</i> | Tree swallow | Bird |
| <i>Calypte anna</i> | Anna's hummingbird | Bird |
| <i>Odocoileus hemionus</i> | Mule deer sign (scat) | Mammal |



Photo 1. Primary cultivation site and location of oatgrass prairie natural community.



Photo 2. Looking west from the southeast corner of the study area.



Photo 3. Brush clearing in the northeastern portion of the study area.



Photo 4. Pooling stormwater runoff from Friday Ridge Road in the northwest portion of the study area.



Photo 5. White oak woodland in the center of the study area.



Photo 6. Seasonal drainage at the northeast boundary of the study area.



Eureka, CA | Arcata, CA | Redding, CA | Willits, CA | Coos Bay, OR | Klamath Falls, OR

APPENDIX G – WETLAND DELINEATION REPORT

Wetland and Other Waters Delineation Report: Alternate Site 2

Assessor's Parcel Number
524-091-002
Willow Creek, California



Prepared for:

Organic Liberty, LLC



December 2017

017014.100

Reference: 017014.100

Wetland and Other Waters Delineation Report: Alternate Site 2

**Assessor's Parcel Number
524-091-002**

Prepared for:
Organic Liberty, LLC

Prepared by:



Engineers & Geologists
812 W. Wabash Ave.
Eureka, CA 95501
707-441-8855

December 2017

QA/QC:SEC___

Table of Contents

| | Page |
|--|------|
| Abbreviations and Acronyms | iii |
| 1.0 Introduction | 1 |
| 1.1 Purpose | 1 |
| 1.2 Project Location | 1 |
| 2.0 Project Description | 1 |
| 3.0 Environmental Setting | 1 |
| 3.1 Site Uses..... | 1 |
| 3.2 Historic Site Hydrology..... | 1 |
| 4.0 Vegetation..... | 2 |
| 5.0 Geologic and Soil Composition | 3 |
| 6.0 Regulatory Setting..... | 4 |
| 6.1 Federal Laws | 4 |
| 6.1.1 Section 401 and 404 of the Clean Water Act..... | 4 |
| 6.1.2 Rivers and Harbors Appropriation Act of 1899..... | 5 |
| 6.2 State Laws – Porter-Cologne Water Quality Control Act..... | 5 |
| 7.0 Methodology..... | 5 |
| 7.1 Vegetation Methodology..... | 6 |
| 7.2 Soils Methodology | 7 |
| 7.3 Hydrology Methodology | 7 |
| 7.4 Ordinary High Water Mark Methodology..... | 8 |
| 8.0 Discussion and Results | 8 |
| 8.1 TP20U..... | 9 |
| 8.2 TP21U..... | 9 |
| 8.3 TP22U..... | 9 |
| 8.4 TP23U..... | 10 |
| 8.5 TP28U..... | 10 |
| 8.6 Ordinary High Water Mark (OHWM) | 11 |
| 8.7 National Wetlands Inventory (NWI) | 11 |
| 9.0 Conclusions | 11 |
| 10.0 Limitations | 11 |
| 11.0 References Cited | 12 |

Appendices

1. National Wetlands Inventory
2. Site Photographs
3. Plant List
4. Wetland and OHWM Delineation Data Forms

List of Illustrations

Figures

Follows Page

1. Project Location Map.....1
2. Wetland and OHWM Delineation Alternate Site 2 Map.....1

Tables

On Page

1. WETS Rainfall Data.....2
2. Wetland Delineation and OHWM Results 11

Abbreviations and Acronyms

| | |
|------------|--|
| AS2 | Alternate Site 2 |
| APN | Assessor's parcel number |
| CDEC | California Data Exchange Center |
| CFR | Code of Federal Regulations |
| CT | control point |
| CWA | Clean Water Act |
| EM | emergent |
| EPA | United States Environmental Protection Agency |
| ERDC/CRREL | United States Army Engineer Research and Development Center/Cold Regions Research and Engineering Laboratory |
| FAC | facultative wetland plant species |
| FACU | facultative-upland wetland plant species |
| FACW | facultative-wet wetland plant species |
| GIS | geographic information system |
| GPS | global positioning system |
| NCDC | National Climatic Data Center |
| NGTOC | National Geospatial Technical Operations Center |
| NL | not listed wetland plant species |
| NOAA | National Oceanic & Atmospheric Administration |
| NRCS | Natural Resources Conservation Service |
| NWI | National Wetlands Inventory |
| OBL | obligate wetland plant species |
| OHWM | ordinary high water mark |
| Redox | redoximorphic |
| RWQCB | California Regional Water Quality Control Board |
| SHN | SHN Engineers & Geologists |
| SWRCB | State Water Resources Control Board |
| TP | test pit |
| UAV | unmanned aerial vehicle |
| UPL | upland wetland plant species |
| USACE | United States Army Corps of Engineers |
| USC | United States Code |
| USDA | United States Department of Agriculture |
| USFWS | United States Fish & Wildlife Service |
| USGS | United States Geological Survey |
| WDRs | waste discharge requirements |
| WETS | Climate Analysis for Wetlands Tables |
| WoS | waters of the State |
| WoUS | waters of the United States |

1.0 Introduction

SHN Engineers & Geologists (SHN) has prepared this wetland and other waters delineation for Organic Liberty, LLC, on a site at the confluence of the Trinity River and the South Fork of the Trinity River, between the towns of Willow Creek and Salyer on State Highway 299, California. Fieldwork was performed by staff soil scientist Cindy Wilcox and botanist Greg O'Connell.

1.1 Purpose

The purpose of this report is to identify potential wetlands and other waters of the United States and State at the project site, as defined by the United States Army Corps of Engineers (USACE) methodology. The delineation of these features will help guide the design and construction of future development within the study area and avoid impacts to potential jurisdictional wetlands and OHWM.

1.2 Project Location

The project is located approximately 3.8 miles southeast of the downtown Willow Creek community in California, near the junction of State Highway 299 and Friday Ridge Road. The project is set in the coastal mountains approximately 29 miles east of the Pacific Ocean coast at approximately 620 feet above sea level (Figure 1; United States Geological Survey [USGS] Salyer 7.5-minute Quadrangle; USGS, 2012), located in the Township 6 North, Range 5 east, Section 15 in the Humboldt Meridian. The project area is 11.3 acres. The Assessor's parcel number (APN) is 524-091-002 with a central location at latitude and longitude 40.889184° and -123.608814°.

2.0 Project Description

Environmental management constraints are being considered for the study area. This report will assist in considering site management options.

3.0 Environmental Setting

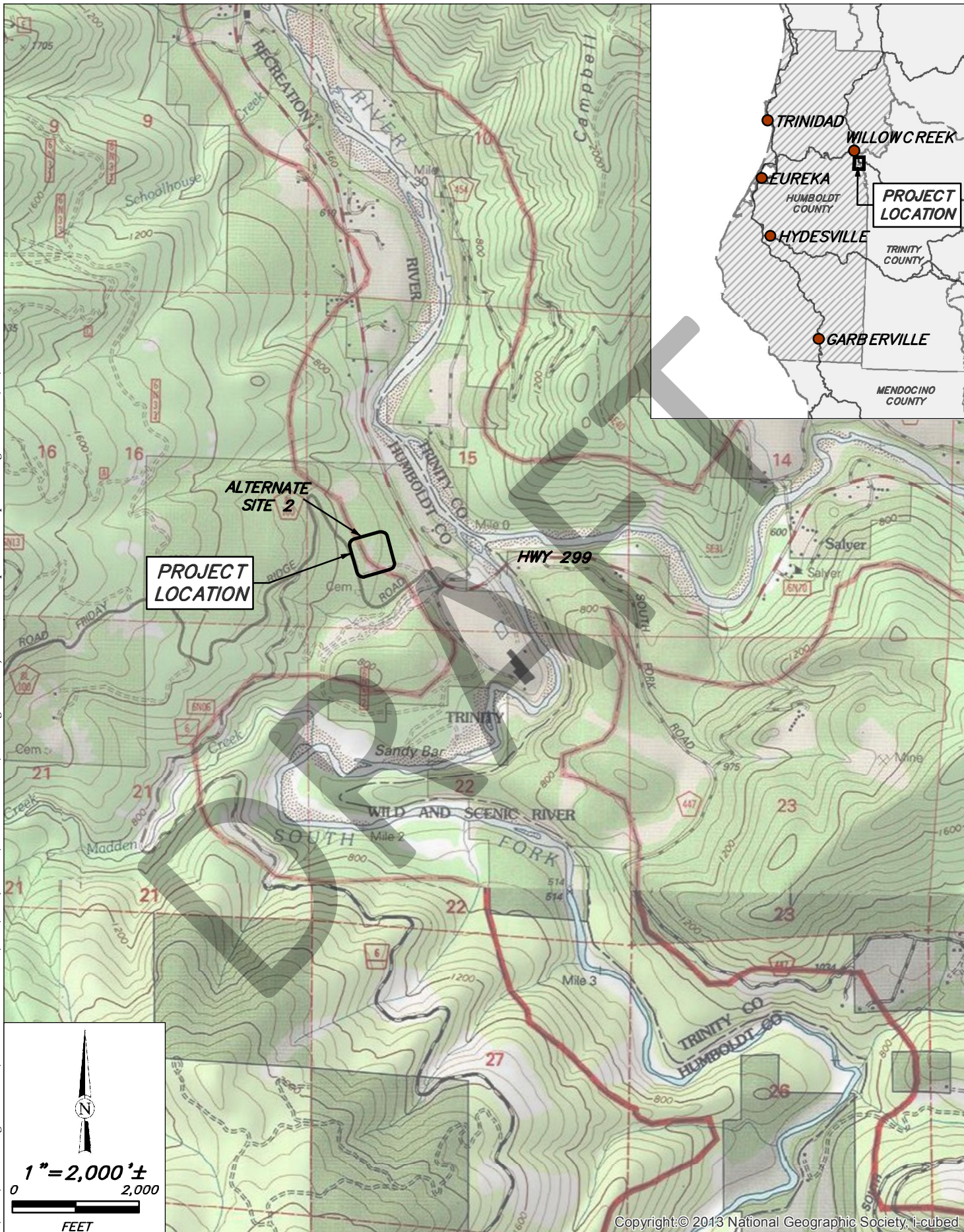
3.1 Site Uses

Alternate Site 2 (AS2) is an east-facing hillslope below Friday Ridge Road (County Route 8L 100). There is an abandoned road cut near the western boundary of the project area leading off of Friday Ridge Road. A portion of the Friday Ridge Road stormwater is conveyed through an in-board roadside ditch diverting water east under the road through a culvert onto this hillslope (Figure 2).

3.2 Historic Site Hydrology

Two preliminary hydrologic site investigations were conducted on February 16 and April 10, 2017. Wetland subsurface test pits were excavated on July 10, August 3, August 15, and October 27, 2017.

\\eureka\projects\2017\017014-OrganicLibert\100-WetlandNatRes\GIS\PROJ_MXD\November2017\WD_Figure1_ProjectLocationMap.mxd;User:psundberg;Printed:11/27/2017



Organic Liberty
Wetland & Other Waters Delineation Report
Willow Creek, California

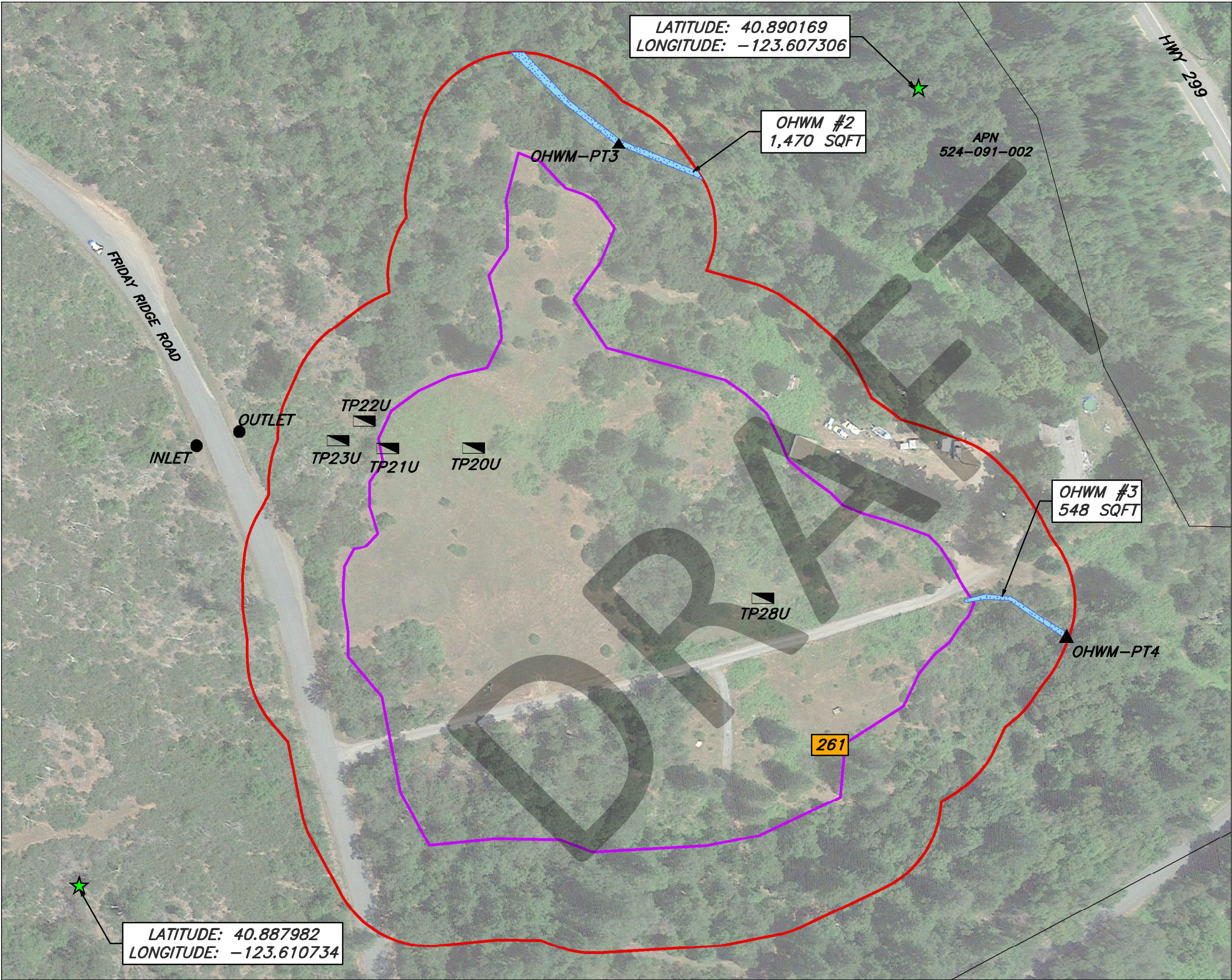
Project Location
Map
SHN 017014.100

November 2017

WD_Figure1_ProjectLocationMap

Figure 1

Path: \\eureka\projects\2017\017014-OrganicLiberty\100-WetlandNatRes\GIS\PROJ_MXD\November2017\WD_Figure2_AS2_WetlandDelinMap.mxd User Name: psundberg



EXPLANATION

- WETLAND TEST PIT
- CULVERTS
- OHWM TRANSECTS
- ORDINARY HIGH WATER MARK
- PROJECT BOUNDARY
- STUDY AREA
- PARCELS

SOIL CLASS (USDA/NRCS):
261 HOLLAND-GOLDRIDGE FAMILIES

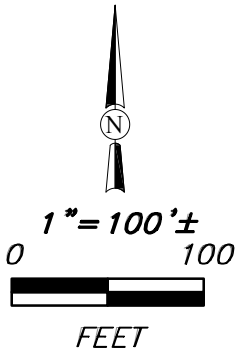


IMAGE SOURCE: GOOGLE EARTH (5/26/2016)

Both hydrologic site investigations in February and April were during an above-average wet season. The 1981-2010 rainfall average for Willow Creek from October 1 through January 31 is 32.24 inches (NOAA, 2017; CDEC, 2017). Compared to the October 1, 2016 through January 31, 2017 rainfall of 46.00 inches, this represents rainfall 43 percent above normal. The 1981-2010 average rainfall starting on October 1 through March 31 is 47.01 inches (NOAA, 2017; CDEC, 2017). Compared to October 1, 2016 through March 31, 2017, of 68.36 inches, this represents rainfall 45 percent above normal.

The United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Climate Analysis for Wetlands Table (WETS) method was used to review the previous three months before test pit investigations (or the same month and two prior if after the 15th). It indicates that the months prior to the excavation of test pit (TP) TP20 represented an above-normal rainfall period. The later TPs (21, 22, 23, and 28) were excavated in a normal rainfall season (Table 1; USDA-NRCS, 2017a).

Table 1. WETS Rainfall Data
Organic Liberty, Willow Creek, CA

| Month | WETS data | Rank | Weight | Value |
|---|--------------|------|--------|-----------|
| July 10, 2017 | | | | |
| June 2017 | Above Normal | 3 | 3 | 9 |
| May 2017 | Normal | 2 | 2 | 4 |
| April 2017 | Above Normal | 3 | 1 | 3 |
| Total¹ | | | | 16 |
| August 3 & 15, 2017 | | | | |
| July 2017 | Normal | 2 | 3 | 6 |
| June 2017 | Above Normal | 3 | 2 | 6 |
| May 2017 | Normal | 2 | 1 | 2 |
| Total¹ | | | | 14 |
| October 27, 2017 | | | | |
| October 2017 | Normal | 2 | 3 | 6 |
| September 2017 | Normal | 2 | 2 | 4 |
| August 2017 | Normal | 2 | 1 | 2 |
| Total¹ | | | | 12 |
| 1. A sum of 6-9 prior to site investigation is considered a drier than normal rainfall. 10-14 prior to site investigation is considered a normal rainfall. 15-18 prior to site investigation is considered a wetter than normal rainfall. Sources: CDEC, 2017; USDA-NRCS, 2017 | | | | |

4.0 Vegetation

AS2 is on a moderately sloped hillside, mostly grassy with some wooded areas (Figure 2; Appendix 2, Photos 1 and 2). Dominant species at this site are California oatgrass (*Danthonia californica* [FAC]), rattlesnake grass (*Briza maxima* [NL]), yellow star thistle (*Centaurea solstitialis* [NL]), Pacific madrone (*Arbutus menziesii* [NL]), coyote brush (*Baccharis pilularis* [NL]), Himalayan blackberry (*Rubus armeniacus* [FAC]), common madia (*Madia elegans* [NL]), Oregon oak (*Quercus garryana* var. *garryana* [FACU]) California black oak (*Quercus kelloggii* [NL]), and California bay (*Umbellularia californica* [FAC]).

A complete list of plants observed within the study area is compiled in Table 1 in Appendix 3.

5.0 Geologic and Soil Composition

AS2 is on an older fluvial terrace above the main stem of the Trinity River. The terrace is composed of the Galice formation sediments, which consists of Jurassic-aged marine sediments. AS2 is 731 feet above sea level and 274 feet above the Trinity River, which is approximately 0.18 miles away (Figure 1).

The underlying soils in the study area have the USDA-NRCS classification of Holland-Goldridge families association, deep, 5 to 35 percent slopes (map unit 261). The actual soil description at each exploratory soil TP is described in the field data forms found in Appendix 4 with photos in Appendix 2.

261—Holland-Goldridge families association, deep, 5 to 35 percent slopes

Map Unit Composition

Goldridge family, deep, and similar soils: 40 percent

Holland family, deep, and similar soils: 40 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the map unit.

Description of Goldridge Family, Deep

Typical profile

H1 - 0 to 4 inches: very gravelly loam

H2 - 4 to 30 inches: gravelly clay loam

H3 - 30 to 43 inches: gravelly clay

H4 - 43 to 47 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 35 percent

Depth to restrictive feature: 43 to 47 inches to lithic bedrock

Natural drainage class: Well-drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Description of Holland Family, Deep

Typical profile

H1 - 0 to 6 inches: loam

H2 - 6 to 46 inches: clay loam

H3 - 46 to 60 inches: very gravelly clay loam

H4 - 60 to 64 inches: weathered bedrock

Properties and qualities

Slope: 5 to 35 percent

Depth to restrictive feature: 60 to 64 inches to paralithic bedrock

Natural drainage class: Well-drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.5 inches)
(USDA, 2017b)

6.0 Regulatory Setting

6.1 Federal Laws

6.1.1 Section 401 and 404 of the Clean Water Act

Under Section 404 (33 U.S. Code [USC] 1344) of the Clean Water Act (CWA), as amended, the USACE and the Environmental Protection Agency (EPA) retain primary responsibility for permits to discharge dredged or fill material into “navigable waters of the United States.” All discharges of dredged or fill material into jurisdictional waters of the United States (WoUS) that result in permanent or temporary losses of WoUS are regulated by the USACE. A permit from the USACE must be obtained before placing fill or grading in wetlands or other WoUS, unless the activity is exempt from CWA Section 404 regulation (for example, certain farming and forestry activities).

In summary, the definition of WoUS as defined by 33 Code of Federal Regulations (CFR) Section 328.3 (U.S. Code of Federal Regulations) includes:

1. waters used for commerce,
2. interstate wetlands,
3. all other waters (including lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds),
4. impoundments of water,
5. tributaries to aforementioned waters,
6. territorial seas, and
7. wetlands adjacent to waters.

Under 33 CFR 328.3, WoUS do not include prior converted cropland or waste treatment systems.

In 2008, the EPA and USACE released a guidance memorandum implementing the Supreme Court’s decision in the cases of the *Rapanos v. U.S.* and *Carabell v. U.S.* Because of these cases, the agencies will apply a significant nexus standard to the following categories to determine if it meets the definition of a WoUS:

- Non-navigable tributaries that are not relatively permanent
- Wetland adjacent to non-navigable tributaries that are not relatively permanent
- Wetland adjacent to but that does not directly abut a relatively permanent tributary

Section 401 of the CWA (33 USC 1341) requires applicants for a federal license or permit to obtain a certification from the state in which the discharge originates or would originate, or if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and water quality standards. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs).

6.1.2 Rivers and Harbors Appropriation Act of 1899

The River and Harbors Appropriation Act of 1899 addresses activities that involve the construction of dams, bridges, dikes, and other structures across any navigable water. Placing obstructions to navigation outside established federal lines and excavating from or depositing material in such waters require permits from the USACE Section 10 (33 USC 403) of the Rivers and Harbors Appropriation Act and prohibits the unauthorized obstruction or alteration of any navigable WoUS.

6.2 State Laws – Porter-Cologne Water Quality Control Act

The State maintains independent regulatory authority over the placement of waste, including fill, into waters of the State (WoS) under the Porter-Cologne Water Quality Control Act. WoS are defined by the Porter-Cologne Water Quality Control Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The SWRCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. WoS are regulated by the RWQCBs under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act.

Projects that require an USACE permit, or fall under other federal jurisdiction, and have the potential to impact WoS are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge to WoS, then the local RWQCB has the option to regulate such activities under its state authority in the form of waste discharge requirements (WDRs) or certification of WDRs. Water Quality Order No. 2004-0004-DWQ specifies general WDRs for dredge or fill discharges to waters deemed by the USACE to be outside of federal jurisdiction under Section 404 of the CWA.

7.0 Methodology

Wetland delineation methods described in *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and *The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE, 2010) were used to identify potential wetlands and other waters. The routine method for wetland delineation described in the USACE 1987 manual was used to identify potential wetlands within the study area. The USACE method relies on a three-parameter approach, in which criteria for hydrophytic vegetation, hydric soils, and wetland hydrology must each be met (present at the point of field investigation) to conclude that an area qualifies as a wetland.

Hydrophytic vegetation refers to plant species known to be adapted to wetland sites. To classify the hydrophytic plants onsite, the most recent *Western Mountains, Valleys, and Coast 2016 Regional Wetland*

Plant List was used (USACE, 2016). Hydric soils are soils that are formed under saturated conditions, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile (USDA, 2017b). Wetland hydrology is demonstrated through direct evidence (primary indicators) or indirect evidence (secondary indicators) of flooding, ponding, or saturation for a significant portion of the growing season (USACE, 2010).

Prior to conducting the field investigation, SHN staff reviewed the USGS topographic quadrangle map (Figure 1); Google Earth (Google Earth, 2016); USDA-NRCS Web Soil Survey website (USDA, 2017a); and NWI map (USFWS, 2017; Appendix 1). Aerial photos were created by the SHN UAV (unmanned aerial vehicle) staff on February 27, 2017 (SHN, 2017). UAV imagery captured site hydrology during the wet season, and was used for viewing soil saturation at the site during above normal rainfall. During the test pit subsurface investigation, sample points were characterized at the site for the aforementioned botanical, hydrological, and soil parameters.

Wetland test pit locations were selected to:

- achieve appropriate coverage and characterization of wetland and upland habitats,
- document potential changes in the vegetative community (such as, a shift in the dominant species), and
- determine the approximate boundary line between wetlands and uplands by determining the extent of key wetland criteria (hydrology, hydric soils, and hydrophytic vegetation).

All field mapping was completed with a Trimble Pro 6t global positioning system (GPS) antenna connected to a Panasonic Toughbook CF-19 with geographic information system (GIS) software. SHN downloaded the appropriate aerial photos and digitized relevant site plan mapping (Google Earth, 2016). Several fixed locations (for example fence angles) were marked as control points (CT) with the Trimble Pro 6t to get an estimate of aerial imagery accuracy.

7.1 Vegetation Methodology

Prior to the field investigation, a review of plant species reported to be within the project area was performed by querying the “Consortium of California Herbaria” (Consortium of California Herbaria, 2017) database records and “Calflora” (Calflora, 2017) observations. It was determined that the site investigations were performed during normal and above normal rainfall periods by reviewing rainfall data (see Section 3.2, Table 1). Absolute percent cover of each plant species was visually estimated within the sample point and within each vegetation stratum. The tree stratum was inspected at a 30-foot radius centered on the sample point, and the herbaceous and sapling/shrub strata at a 5-foot radius. Botanical nomenclature follows *The Jepson Manual, Vascular Plants of California* (Baldwin et al., 2012) in addition to the online Jepson Interchange (University of California, Berkeley, 2017) for verification of species whose taxonomy may have changed since its publication.

The wetland indicator status of plant species for this investigation was based on the *Western Mountains, Valleys, and Coast 2016 Regional Wetland Plant List* (USACE, 2016). Synonyms were checked for species that did not appear on the USACE wetland plant list. Plant species were classified as:

- *Obligate (OBL)–almost always occurs in wetlands*
- *Facultative-wet (FACW)–usually occurs in wetlands, but may occur in non-wetlands*

- *Facultative (FAC)–occurs in wetlands and non-wetlands*
- *Facultative-upland (FACU)–usually occurs in non-wetlands, but may occur in wetlands*
- *Upland (UPL)–almost never occurs in wetlands*
- *Not listed (NL)–scored as an upland plant and calculated as such on wetland determination forms*

The 50/20 method¹ was applied to each stratum to determine the dominant plant species and to satisfy the hydrophytic vegetation criteria. If either hydric soils or wetland hydrology were present, the prevalence index² was applied. The occurrence and type of plant cover determine whether jurisdictional areas are identified as satisfying the vegetation criteria of a wetland or other waters. Those sites with little or no hydrophytic plant cover, or other sites not capable of supporting hydrophytic plant communities in normal circumstances, are identified as other waters, provided they have an ordinary high water mark (OHWM).

7.2 Soils Methodology

Soils were field-verified for the presence or absence of hydric conditions. All TPs were dug to a minimum depth of 16 inches, and the thickness of each soil horizon was measured. The Munsell Soil Color Chart (Kollmorgen Instruments Corporation, 1998) was referenced to determine the colors of the moist soil matrix and redoximorphic (redox) features (if present). Soils were closely inspected for hydric soil indicators, as defined by the NRCS “Field Indicators of Hydric Soils in the United States” (Version 8.1; USDA-NRCS, 2017c).

7.3 Hydrology Methodology

The presence (or lack) of wetland hydrology indicators was determined by direct observation of surface water during the initial field investigations in February and April. Hydrology was again examined during the July, August, and October test pit excavations for additional hydrology indicators (for example, additional indicators would include water marks, drift deposits, sediment deposits, alpha, alpha-dipyridyl reaction, drainage patterns, geomorphic placement, water-stained leaves, and similar features. Indicators of extended period saturation would include oxidized rhizospheres surrounding living roots or the presence of reduced iron or sulfur in the soil profile. A site location must contain at least one primary indicator or two secondary indicators to have the hydrology parameter.

¹ The 50/20 rule: for each stratum of the plant community, dominant species are the most abundant species that (when ranked in descending order of abundance and cumulatively totaled) immediately exceed 50% of total dominance measure for the stratum, plus any additional species that individually comprise 20% or more of the total dominance measure for the stratum (USACE, 2010).

² The prevalence index is a weighted-average wetland indicator status of all plant species in the sampling plot or other sampling unit, where each indicator status category is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5) and weighting is by abundance (absolute percent cover).

7.4 Ordinary High Water Mark Methodology

For purposes of Section 404 of the CWA, the lateral limits of jurisdiction over non-tidal water bodies in the absence of adjacent wetlands extend to the OHWM. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. For purposes of Sections 9 and 10 of the Rivers and Harbors Act of 1899, the lateral extent of federal jurisdiction, which is limited to the traditional navigable waters of the United States, extends to the OHWM, whether or not adjacent wetlands extend landward of the OHWM (USACE, 2014).

USACE regulations define the term OHWM for the purposes of the CWA lateral jurisdiction as follows:

The term “ordinary high water mark” means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas at 33 CFR 328.3(e).

The OHWM in non-perennial streams corresponds with the boundaries of the active channel, which are typically expressed by some combination of three primary indicators: a topographic break in slope, change in sediment characteristics, and change in vegetation characteristics (USACE, 2014). The following supporting features should be considered when making an OHWM determination, to the extent that they can be identified and are deemed reasonably reliable (USACE, 2014):

- Drift/wrack
- Erosion/scour
- Bank undercutting
- Root exposure
- Point bars
- Water staining
- Litter removal
- Silt deposits
- Shelving
- Headcut/knickpoint
- Macroinvertebrates

8.0 Discussion and Results

Five test pits (TP20 through TP23 and TP28) were excavated on July 10, August 3, August 15, and October 27, 2017 to investigate AS2 (Figure 2). Two preliminary site investigations were conducted on February 16 and April 10, 2017 when hydrology features were observed in the wet season, although the visits were performed after the area had experienced up to 45 percent above the normal rainfall (Section 3.2). SHN UAV staff captured images of these areas on February 27, 2017, which were used to assist test pit placement in the drier July, August, and October months.

This site’s hydrology has been altered by the stormwater drainage from Friday Ridge Road being diverted onto its hillslope. Other than the cut associated with Friday Ridge Road and the abandoned road below it, AS2’s geomorphology appears undisturbed. The average slope ranges from 4 to 15 percent. The photos of the study areas are shown in Appendix 2. See the Discussion section below for each TP that describes the physical features and considerations of the site, followed by a Data section that summarizes information from the completed Wetland Determination Forms located in Appendix 4.

8.1 TP20U

Discussion

TP20U was excavated on the hillslope, 233 feet east of the Friday Ridge Road culvert drainage that is diverted onto this property. This site was identified in April as a potential wetland due to its saturation. At this time, rainfall to date was 45 percent above normal. Excavation of the test pit on July 10, 2017 did not find any other wetland parameters, therefore is not considered a wetland site. Soils appeared to be undisturbed (Appendix 2, Photo 3).

Data

TP20U had only the herb stratum present. The dominant vegetation was 85-percent coast range fescue (*Festuca subuliflora* [NL]).

The hydrology parameter was present due groundwater observed on the April 10, 2017 site visit.

No hydric soil indicators were observed.

8.2 TP21U

Discussion

TP21U was excavated on the hillslope, 85 feet west of TP20 and approximately 148 feet east of the Friday Ridge Road stormwater culvert. This site was identified in April as a potential wetland due to its saturation. At this time, rainfall to date was 45-percent above normal. The soils appeared disturbed with mixed fill colors. Material may have been displaced and pushed down from the old abandoned road cut about 20 feet upslope. Excavation of the test pit on August 3, 2017 did not find any other wetland parameters; therefore, is not considered a wetland site (Appendix 2, Photo 4).

Data

TP21U vegetation contained only an herb stratum. The dominant species were composed of 30- percent dogtail grass (*Cynosurus echinatus* [NL]) and 20-percent rattlesnake grass [NL].

The hydrology parameter was present due groundwater observed on the April 10, 2017 site visit.

No hydric soil indicators were observed.

8.3 TP22U

Discussion

TP22U is on the abandoned road cut below Friday Ridge Road and its diverted stormwater culvert. Soils have been altered at this site; the original top soil has been removed, but at a time period long ago enough to be considered normal circumstances (greater than ten years). This site was identified by the inundation seen on the February 27, 2017 aerial photos (SHN, 2017), and from the ground surface water seen during the February 16, 2017 site visit. At the time of inundation observations, rainfall to date was substantially above normal. Excavation of the test pit on August 3, 2017 found only the hydrology parameter present; therefore, is not considered a wetland (Appendix 2, Photo 5).

Data

TP22U vegetation contained only an herbaceous stratum. The dominant species were 35-percent rattlesnake grass [NL] and 15-percent farmer's foxtail (*Hordium murinum* [FAC]).

The hydrology parameter was present due groundwater observed on the February 16, 2017 site visit. Other primary hydrology indicators observed were the B6 (Surface Soil Cracks), B7 (Inundation Visible on Aerial Imagery), and the secondary indicator D2 (Geomorphic Position).

No hydric soil indicators were observed.

8.4 TP23U

Discussion

TP23U is in the drainageway of the stormwater flowing through the culvert draining off of Friday Ridge Road and surrounding hillslopes. This site was identified by its geomorphic position below the culvert drainage and presence of hydrophytic vegetation. There were only two wetland parameters present (hydrology and vegetation); therefore, it is not considered a wetland (Appendix 2, Photo 6).

Data

TP23U vegetation contained both a sapling/shrub stratum and an herbaceous stratum. The dominant species for the sapling/shrub stratum was 15-percent coyote brush [NL], 5-percent arroyo willow (*Salix lasiolepis* [FACW]), and 5-percent Himalayan blackberry [FAC]. The dominant species for the herb stratum was 45-percent spreading rush (*Juncus patens* [FACW]).

The secondary hydrology indicators observed were the D2 (Geomorphic Position) and the D5 (FAC-Neutral Test).

No hydric soil indicators were observed.

8.5 TP28U

Discussion

TP28U is located in the southwest corner of the study site above the southwest OHWM, and was excavated on October 27, 2017. During the February 16, 2017 hydrology site visit, this site was wet due to the influx of stormwater drainage rerouted off of Friday Ridge Road (Figure 2). This site was also identified by the inundation seen on the February 27, 2017 aerial photos (SHN, 2017). There were fill soils found in this test pit, indicating that the TP site has been manipulated, possibly when the residence access road was constructed. Some of the vegetation species may not have been detected due to the late dry season when this pit was investigated. There was only the hydrology parameter for this TP observed from the wet season visit, and therefore not considered a wetland (Appendix 2, Photos 7 and 8).

Data

TP28U vegetation contained only an herbaceous stratum. The dominant species for the herb stratum was 70-percent coast range fescue [NL].

The hydrology parameter was observed during the February 16, 2017 site visit.

No hydric soil indicators were observed.

8.6 Ordinary High Water Mark (OHWM)

Two OHWM were observed at AS2: OHWM #2 (Appendix 2, Photo 9) and OHWM #3 (Appendix 2, Photos 10 and 11). OHWM #2 is a natural intermittent drainageway that drains through the northeast edge of the study area. A cross-section of OHWM #2 (OHWM-PT3) is presented in Appendix 4.

OHWM #3 originates at the southeast corner of the study area. Its origin is a drainage ditch paralleling the residential access road, and becomes an OHWM when the ditch encounters a slope break and drains southeast towards the Trinity River. A cross-section of OHWM #3 (OHWM-PT4) is presented in Appendix 4.

8.7 National Wetlands Inventory (NWI)

The USFWS NWI website shows a Riverine wetland system (R3USC) representing the Trinity River, approximately 800 feet east of the AS2 project site boundary (Appendix 1). There are no NWI wetlands or riparian areas mapped within AS2.

9.0 Conclusions

Initial site investigations occurred on February 16 and April 10, 2017 where wet season hydrology was observed. The 2016-2017 wet season in this area had experienced a 45-percent above normal rainfall. Test pit excavations were performed on July 10, August 3, August 15, and October 27, 2017 during above-normal and normal rainfall conditions. Following the USACE 3-parameter guidelines, there are no areas within AS2 that has all three wetland parameters, therefore there are no wetlands within the study area.

Two OHWMs were observed within the AS2 project site (OHWM #2, OHWM#3). Table 2 indicates the location, area, and type of OHWM documented. Descriptions of the cross-sections within these OHWMs are located in Appendix 4.

Table 2. Wetland Delineation and OHWM¹ Results
Organic Liberty, Willow Creek, CA

| Waterbodies | Cowardian Type | Latitude/Longitude | Area (square feet) |
|-----------------------------------|---|---------------------------|--------------------|
| OHWM#2 | Palustrine FO ² 3 ³ | 40.890154° / -123.608147° | 1,470 |
| OHWM#3 | Palustrine FO ² 3 ³ | 40.888704° / -123.607246° | 548 |
| Total | | | 2,018 |
| 1. OHWM: ordinary high water mark | | | |
| 2. Forested | | | |
| 3. Broad-Leaved Evergreen | | | |

10.0 Limitations

The conclusions in this report represent a “snapshot in time” and it is possible that some species were not present at the time of the fieldwork. This report documents the investigation by using the best professional judgment of SHN’s botanist and soil scientist. The conclusions should be verified by the USACE through receipt of a jurisdictional determination letter.

11.0 References Cited

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. (2012). *The Jepson Manual: Vascular Plants of California, second edition*. Berkeley, CA:University of California Press, Berkeley.
- Calflora. (NR). (January 2017). Calflora database. Accessed January 2017 at: <http://calflora.org/>.
- California Data Exchange Center. (CDEC) (2017). Hoopa, CA. Accessed March 2017 at: <http://cdec.water.ca.gov/cgi-progs/queryDaily?HPA&d=03-Jan-2017+11:42&span=30days>.
- Consortium of California Herbaria. (NR). (January 2017). Consortium of California Herbaria database. Accessed January 2017 at: <http://ucjeps.berkeley.edu/consortium/>.
- Environmental Laboratory. (1987). *Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1*. Vicksburg, MS:USACE Waterways Experiment Station.
- Google Earth. (2016). NAIP 5/28/2016 imagery 40.8871° and -123.6059° NR: Google Earth.
- Kollmorgen Instruments Corporation. (1998). *Munsell Soil Color Charts*. Baltimore, MD:Macbeth Division of Kollmorgen Instruments Corporation.
- National Oceanic & Atmospheric Administration (NOAA), National Climatic Data Center (NCDC). (March-August 2017). NOAA/NCDC Database, Willow Creek, CA US. Accessed March-August 2017 at: <https://www.ncdc.noaa.gov/cdo-web/datatools/normals>.
- SHN. (2017). Unpublished aerial photo data (February 27).
- University of California, Berkeley. (January 2017). "Jepson eFlora." Accessed January 2017 at <http://ucjeps.berkeley.edu/eflora/>.
- U.S. Army Corps of Engineers. (2010). *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountain, Valleys, and Coast Region*, J.S. Wakeley, R.W. Lichvar, and C.V. Noble (eds) ERDC/EL TR-08-03. Vicksburg, MS: USACE Research and Development Center.
- . (2014). *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*, M. K. Mersel and R. W. Lichvar (eds) ERDC/CRREL TR-14-13. Vicksburg, MS: USACE Research and Development Center.

- . (2016). *Western Mountains, Valleys, and Coast: 2016 Regional Wetland Plant List*, Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin (eds), ERDC/CRREL. Vicksburg, MS: USACE Research and Development Center.
- U.S. Code of Federal Regulations. (NR). "33 CFR 328. Title 33, Navigation and Navigable Waters; Chapter II; Army Corp of Engineers, Dept. of Defense, Part 328, Regulatory Program of the U.S. Army Corps of Engineers." NR: USACE.
- U.S. Department of Agriculture, Natural Resources Conservation Service. (2017a). WETS Database. Willow Creek 1 NW, Willow Creek, CA. Accessed April 2017 at: <http://agacis.rcc-acis.org/?fips=06023>.
- . (2017b). Web Soil Survey. Accessed April 2017 at: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.
- . (2017c). *Field Indicators of Hydric Soils in the United States, Version 8.1*. G.W. Hurt, L.M. Vasilas (eds.). NR: USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils.
- U.S. Fish and Wildlife Service. (USFWS) (March 2017). National Wetlands Inventory. Accessed March 2017 at: <http://www.fws.gov/wetlands/data/mapper.HTML/>.
- U.S. Geological Survey. (2012). 20120215, USGS US Topo 7.5-minute map for Salyer, CA 2012: USGS - National Geospatial Technical Operations Center (NGTOC).

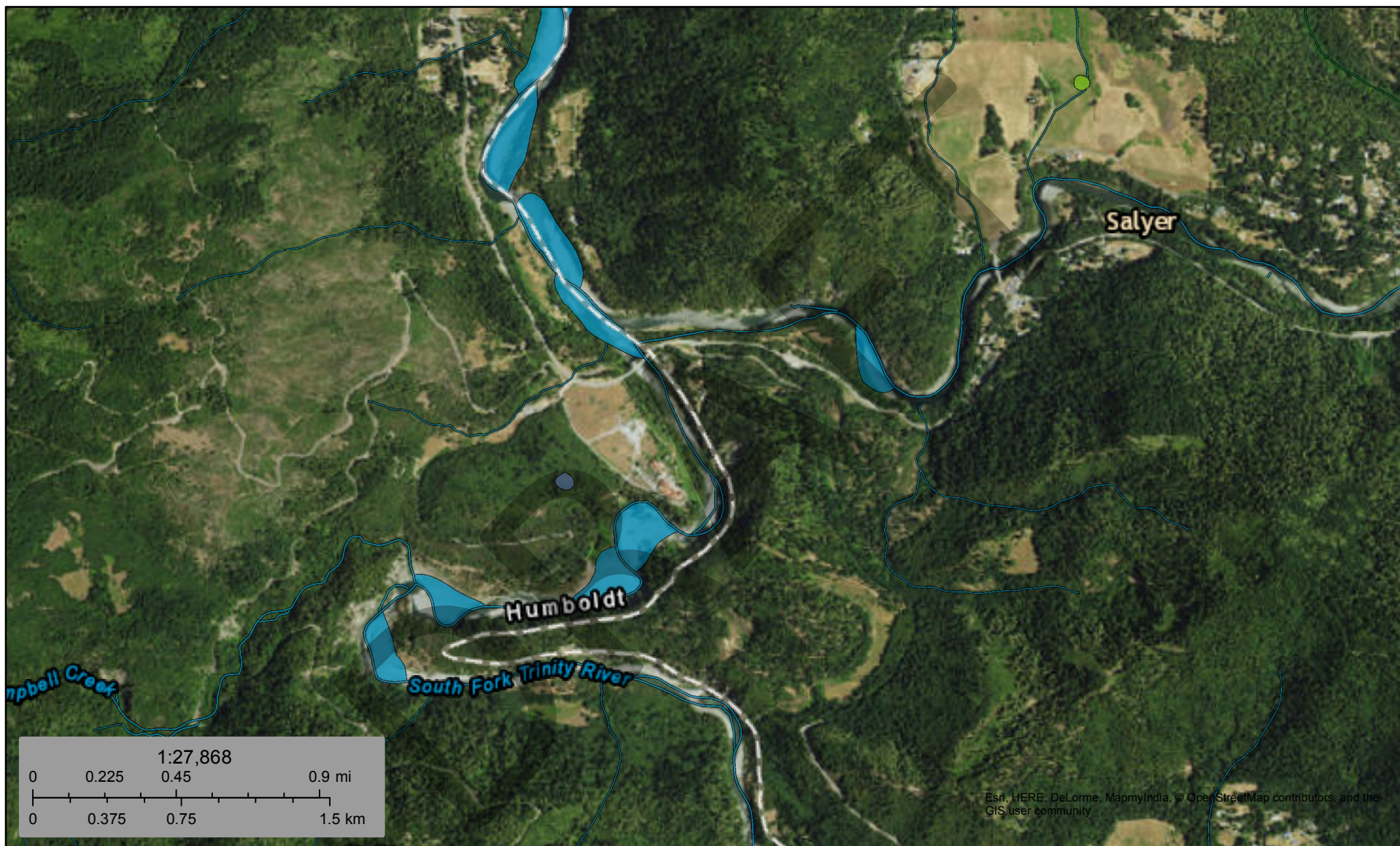
National Wetlands Inventory 1



U.S. Fish and Wildlife Service

National Wetlands Inventory

Organic Liberty



April 4, 2017

- | | | |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Forested/Shrub Wetland | Other |
| Estuarine and Marine Wetland | Freshwater Pond | Riverine |
| Freshwater Emergent Wetland | Lake | |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Site Photographs **2**

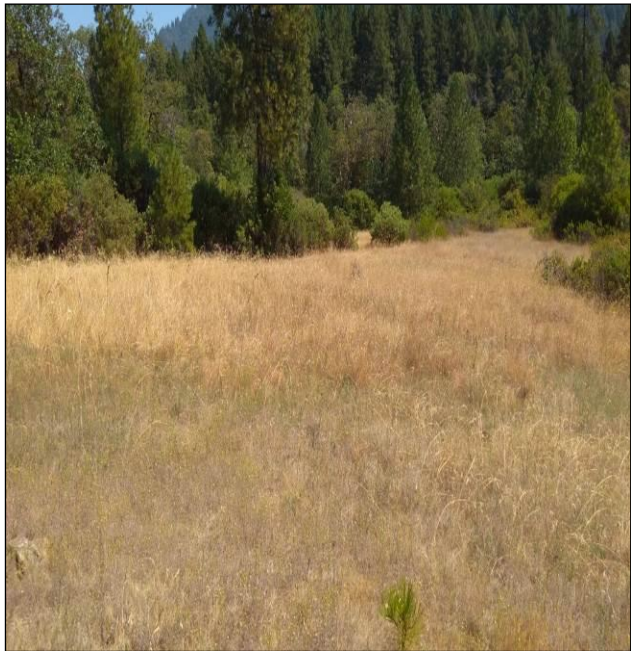


Photo 1: AS2 Site Location-Open Grassland Looking East.

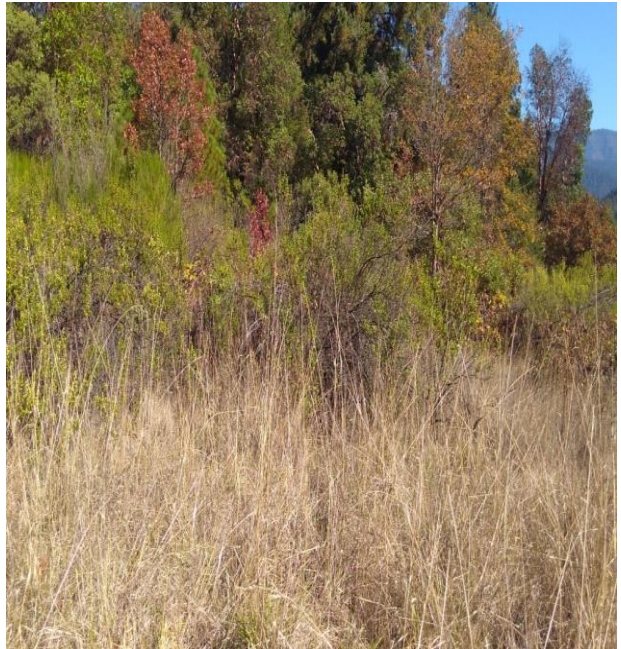


Photo 2: AS2 Site- SE Wooded Section.



Photo 3: TP20U Soil Pit.



Photo 4: TP21U Soil Pit.



Photo 5: TP22U Site Location.



Photo 6: TP23U Test Pit.



Photo 7: TP28U Test Pit Site.



Photo 8: TP28U Test Pit.



Photo 9: OWHM #2.



Photo 10: OWHM #3 Starts at Break in Slope.



Photo 11: OWHM #3 Pt-4 Cross Section Site.

Table 1
Plants Observed at AS2 Study Site
Organic Liberty, Willow Creek, California

| Scientific Name | Common Name | Indicator 2016 ¹ |
|--|-----------------------|-----------------------------|
| <i>Acmispon parviflorus</i> | hill lotus | NL |
| <i>Agrostis stolonifera</i> | creeping bentgrass | FAC |
| <i>Anisocarpus madioides</i> | woodland madia | NL |
| <i>Arbutus menziesii</i> | madrono | NL |
| <i>Arctostaphylos manzanita</i> ssp. <i>manzanita</i> | common manzanita | NL |
| <i>Athyrium filix-femina</i> var. <i>cyclosorum</i> | common lady fern | FAC |
| <i>Avena barbata</i> | slim oat | NL |
| <i>Baccharis pilularis</i> | coyote brush | NL |
| <i>Berberis nervosa</i> | Oregon grape | FACU |
| <i>Briza maxima</i> | rattlesnake grass | NL |
| <i>Bromus hordeaceus</i> | soft chess | FACU |
| <i>Cardamine oligosperma</i> | Idaho bittercress | FAC |
| <i>Carduus pycnocephalus</i> | Italian thistle | NL |
| <i>Ceanothus integerrimus</i> var. <i>macrothyrsus</i> | deerbrush | NL |
| <i>Centaurea solstitialis</i> | yellow starthistle | NL |
| <i>Claytonia sibirica</i> | candy flower | FAC |
| <i>Cynosurus echinatus</i> | dogtail grass | NL |
| <i>Dactylis glomerata</i> | orchardgrass | FACU |
| <i>Danthonia californica</i> | California oatgrass | FAC |
| <i>Dryopteris arguta</i> | wood fern | NL |
| <i>Elymus glaucus</i> | blue wildrye | FACU |
| <i>Festuca bromoides</i> | brome fescue | FAC |
| <i>Festuca californica</i> | California fescue | FACU |
| <i>Festuca microstachys</i> | small fescue | NL |
| <i>Festuca perennis</i> | Italian rye grass | FAC |
| <i>Festuca subuliflora</i> | coast range fescue | NL |
| <i>Holcus lanatus</i> | common velvetgrass | FAC |
| <i>Hordium murinum</i> | farmer's foxtail | FAC |
| <i>Hypericum perforatum</i> | Klamathweed | FACU |
| <i>Hypochaeris radicata</i> | hairy cats ear | FACU |
| <i>Juncus ensifolius</i> | sword leaved rush | FACW |
| <i>Juncus patens</i> | spreading rush | FACW |
| <i>Linum bienne</i> | narrow leaved flax | NL |
| <i>Lonicera hispidula</i> | pink honeysuckle | FACU |
| <i>Luzula comosa</i> | hairy wood rush | FAC |
| <i>Lysimachia latifolia</i> | pacific starflower | FACW |
| <i>Madia elegans</i> | common madia | NL |
| <i>Madia gracilis</i> | grassy tarweed | NL |
| <i>Mentha pulegium</i> | pennyroyal | OBL |
| <i>Navarretia intertexta</i> | interwoven navarretia | FACW |
| <i>Notholithocarpus densiflorus</i> | tanoak | NL |
| <i>Plantago lanceolata</i> | ribwort | FACU |

| Table 1 Plants Observed at AS2 Study Site Organic Liberty, Willow Creek, California | | |
|--|-----------------------|-----------------------------------|
| Scientific Name | Common Name | Indicator 2016¹ |
| <i>Poa annua</i> | annual blue grass | FAC |
| <i>Polystichum munitum</i> | western sword fern | FACU |
| <i>Pseudotsuga menziesii</i> var. <i>menziesii</i> | Douglas fir | FACU |
| <i>Pteridium aquilinum</i> var. <i>pubescens</i> | western brackenfern | FACU |
| <i>Quercus garryana</i> var. <i>garryana</i> | Oregon oak | FACU |
| <i>Quercus kelloggii</i> | California black oak | NL |
| <i>Rubus armeniacus</i> | Himalayan blackberry | FAC |
| <i>Rubus ursinus</i> | California blackberry | FACU |
| <i>Rumex crispus</i> | curly dock | FAC |
| <i>Salix lasiolepis</i> | arroyo willow | FACW |
| <i>Salix lasiolepis</i> | arroyo willow | FACW |
| <i>Sonchus asper</i> | spiny sowthistle | FACU |
| <i>Stipa lemmonii</i> | lemmon's needle grass | NL |
| <i>Taraxacum officinale</i> | red seeded dandelion | FACU |
| <i>Toxicodendron diversilobum</i> | poison oak | FAC |
| <i>Trifolium dubium</i> | shamrock | FACU |
| <i>Umbellularia californica</i> | California bay | FAC |
| <i>Vitis californica</i> | California wild grape | FACU |
| 1. Indicators are abbreviated as follows: OBL: Obligate FACW: Facultative wet FAC: Facultative FACU: Facultative upland UPL: Upland NL: Not listed | | |

**Wetland and OHWM
Delineation Data Forms**

4

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

Project/Site: Willow Creek City/County: Humboldt Sampling Date: 7/16/17
 Applicant/Owner: Organic Liberty State: CA Sampling Point: TP 204
 Investigator(s): Greg O'Connell/Cindy Wilcox Section, Township, Range: Section T 6 north, R 5 east
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10
 Subregion (LRR): LRR A Lat: 40.8871° Long: -123.6059° Datum: _____
 Soil Map Unit Name: Holland - Goldridge families association NWI classification: None

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 <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes _____ No <input checked="" type="checkbox"/> | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> No _____ | |
| Remarks: <u>At alternate site 2. Above-normal rainfall, becoming normal rainfall after 15th road ditch drains by culvert through hillslope.</u> | | |

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B) |
|---|---------------------|-------------------|------------------|--|
| 1. _____ | | | | |
| 2. <u>Ø</u> | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| _____ = Total Cover | | | | 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) |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | |
| 2. _____ | | | | |
| 3. <u>Ø</u> | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ = Total Cover | | | | 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. |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <u>Juncus patens</u> | <u>5</u> | <u>N</u> | <u>FACW</u> | |
| 2. <u>Festuca subglabra</u> | <u>85</u> | <u>Y</u> | <u>NL</u> | |
| 3. <u>Aemisson parviflorus</u> | <u>5</u> | <u>N</u> | <u>NL</u> | |
| 4. <u>Danthonia californica</u> | <u>2</u> | <u>N</u> | <u>FAC</u> | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| _____ = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> |
| 1. <u>Ø</u> | | | | |
| 2. _____ | | | | |
| _____ = Total Cover | | | | |
| % Bare Ground in Herb Stratum <u>5</u> | _____ = Total Cover | | | |

Remarks: _____

SOIL

Sampling Point: TP120 

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|----|-------------------|------------------|---------|---------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 2.5Y 4/4 | 70 | 5YR 4/6 | 10 | Am | m | SCL | |
| | 2.5Y 4/3 | 20 | | | | | | |
| 6-24 | 7.5YR 4/6 | 98 | 5YR 4/6 | 2 | | | CL | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

| | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | |

³Indicators 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: native soils e seepage on hill side. Seepage from culvert drainage from Friday ridge road.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

| | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (2 or more required)

| |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) |

Field Observations:

Surface Water Present? ☒ Yes ☐ No _____ Depth (inches): ground surface

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? Yes _____ No _____ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: *visited February & April 2017. Surface water present. Aerial imagery does not show sat. at this site (2/29/17-SHN).

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

Project/Site: Willow Creek City/County: Humboldt Sampling Date: 8/3/17
 Applicant/Owner: Organic Liberty State: CA Sampling Point: TP214
 Investigator(s): Greg O'Connell/Cindy Wilcox / Ethan Phillips Section, Township, Range: _____ T 6 north, R 5 east
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10
 Subregion (LRR): LRR A Lat: 40.8871° Long: -123.6059° Datum: _____
 Soil Map Unit Name: Holland-Goldridge families association NWI classification: None
 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 <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes _____ No <input checked="" type="checkbox"/> | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> No _____ | |
| Remarks: <u>Alt. site 2. Hillslope down gradient from Friday Ridge Road culvert. See page during April 10 & February 16 initial site recon.</u> | | |

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
|--|------------------|-------------------|------------------|---|
| 1. _____ | _____ | _____ | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. _____ | _____ | _____ | _____ | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 3. <u>Ø</u> | _____ | _____ | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B) |
| 4. _____ | _____ | _____ | _____ | Prevalence Index worksheet: |
| _____ = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | Total % Cover of: _____ Multiply by: _____ |
| 1. _____ | _____ | _____ | _____ | OBL species _____ x 1 = _____ |
| 2. _____ | _____ | _____ | _____ | FACW species _____ x 2 = _____ |
| 3. <u>Ø</u> | _____ | _____ | _____ | FAC species _____ x 3 = _____ |
| 4. _____ | _____ | _____ | _____ | FACU species _____ x 4 = _____ |
| 5. _____ | _____ | _____ | _____ | UPL species _____ x 5 = _____ |
| _____ = Total Cover | | | | Column Totals: _____ (A) _____ (B) |
| Herb Stratum (Plot size: _____) | | | | Prevalence Index = B/A = _____ |
| 1. <u>mentha pulgum</u> | <u>1</u> | <u>N</u> | <u>OBL</u> | 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. |
| 2. <u>Grisea mexicana</u> | <u>20</u> | <u>Y</u> | <u>NL</u> | |
| 3. <u>Yellow Star Thistle - Centaurea solstitialis</u> | <u>5</u> | <u>N</u> | <u>NL</u> | |
| 4. <u>Madia elegans</u> | <u>10</u> | <u>N</u> | <u>NL</u> | |
| 5. <u>Stipe Lemmonii</u> | <u>1</u> | <u>N</u> | <u>NL</u> | |
| 6. <u>Festuca subuliflora</u> | <u>15</u> | <u>N</u> | <u>NL</u> | |
| 7. <u>Hyssopus officinalis</u> | <u>10</u> | <u>N</u> | <u>NL</u> | |
| 8. <u>Cynurus echinatus</u> | <u>30</u> | <u>Y</u> | <u>NL</u> | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> |
| 1. <u>Ø</u> | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| % Bare Ground in Herb Stratum <u>15</u> | | | | |
| Remarks: _____ | | | | |

SOIL

Sampling Point: TP214 

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|---------|----------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-7 | 10YR 9/3 | 87 | 7.5YR 5/4 | 10 | Rm | m | SCL | color ✓ w/ Ethen |
| | 2.5Y 5/3 | 5 | 7.5YR 5/4 | 2 | Rm | m | | |
| 7-14 | 10YR 4/4 | 100 | | | | | gr/bck | |
| 14-24 | 2.5Y 4/3 | 84 | 5YR 4/6 | 9 | Rm | PL gr | SCL | large sand size |
| | | | 7.5YR 5/6 | 7 | Rm | m | | mix of colors. Fill? |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators 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:

7-14" horizon ^{robbie} rock-schist. One section w/ rock color 5Y 7/1. decomposing into soil around it (< 1% of horizon. Not grey soil color)

no alpha-alpha-d reactions on the soils. Fill material from older road 10' above cut

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |

Field Observations:

Surface Water Present? Yes ☒ No _____ Depth (inches): ground surface

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:

February 16 & April 10 visit shows saturation from culvert flow from Friday Ridge Road, but not on 2/27/17 aerial photos

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

Project/Site: Willow Creek City/County: Humboldt Sampling Date: 8/3/17
 Applicant/Owner: Organic Liberty State: CA Sampling Point: TP224
 Investigator(s): Greg O'Connell/Cindy Wilcox / Ethan Phillips Section, Township, Range: Section T 6 north, R 5 east
 Landform (hillslope, terrace, etc.): roadbed on hillslope Local relief (concave, convex, none): concave Slope (%): 10
 Subregion (LRR): LRR A Lat: 40.8871° Long: -123.6059° Datum:
 Soil Map Unit Name: Holland - Gold ridge families NWI classification: None

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 <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| Remarks: <u>Alt. site 2 on older road surface > 20 yrs. on Google Earth 1993. Normal circumstances (71045 old) Now an animal trail. Below Friday Ridge Road & culvert drainage</u> | | |

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: <u> </u>) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B) |
|---|------------------|-------------------|------------------|--|
| 1. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 3. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| <u> </u> = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u> |
| Sapling/Shrub Stratum (Plot size: <u> </u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 3. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 5. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| <u> </u> = Total Cover | | | | |
| Herb Stratum (Plot size: <u> </u>) | Absolute % Cover | Dominant Species? | Indicator Status | 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. |
| 1. <u>Briza maxima</u> | <u>35</u> | <u>Y</u> | <u>NL</u> | |
| 2. <u>Juncus patens</u> | <u>10</u> | <u>N</u> | <u>FACW</u> | |
| 3. <u>Mentha pulgaria</u> | <u>1</u> | <u>N</u> | <u>OBL</u> | |
| 4. <u>Acmispon porifolius</u> | <u>5</u> | <u>N</u> | <u>NL</u> | |
| 5. <u>Neritica interstata</u> | <u>5</u> | <u>N</u> | <u>FACW</u> | |
| 6. <u>Hordium murinum</u> | <u>15</u> | <u>Y</u> | <u>FAC</u> | |
| 7. <u>Medicago elegans</u> | <u>5</u> | <u>N</u> | <u>NL</u> | |
| 8. <u>Limon bienne</u> | <u>2</u> | <u>N</u> | <u>NL</u> | |
| 9. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 10. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 11. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| <u>78</u> = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <u> </u>) | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| 1. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| <u> </u> = Total Cover | | | | |
| % Bare Ground in Herb Stratum <u>30</u> | | | | |
| Remarks: <u> </u> | | | | |

SOIL

Sampling Point: TF224

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|----|----------------|----|-------------------|------------------|---------|--------------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-7 | 10YR 4/3 | 93 | 7.5YR 5/6 | 7 | | | SiC | many sand grain colors - Fill? |
| 7-17 | 2.5Y 6/3 | 75 | 10YR 6/8 | 3 | | | SC | w/occ gr or cobble |
| | 2.5Y 3/2 | 2 | 7.5YR 5/6 | 20 | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators 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:

Fill material? Disturbed site, older than 10 yrs
0-7" colors confirmed w/ethan

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): 2"

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? Yes _____ No _____ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

visited February & April 2017. Surface water present. Aerial imagery from 2/27/17 SSTN shows saturation.

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

Project/Site: Willow Creek City/County: Humboldt Sampling Date: 8/13/17
 Applicant/Owner: Organic Liberty State: CA Sampling Point: TP234
 Investigator(s): Greg O'Connell/Cindy Wilcox/Ethan Phillips Section, Township, Range: Section T 6 north, R 5 east
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 10
 Subregion (LRR): LRR A Lat: 40.8871° Long: -123.6059° Datum: _____
 Soil Map Unit Name: Holland-Goldridge families association NWI classification: None
 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes _____ No <input checked="" type="checkbox"/> | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| Remarks: <u>Between two road surfaces - Friday Ridge Road - old road bed - In culvert drainage</u> | | |

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B) |
|---|------------------|-------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| = Total Cover | | | | 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 = _____ |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. <u>Salix lasiolepis</u> | <u>5</u> | <u>Y</u> | <u>FACW</u> | |
| 2. <u>Rubus armeniacus</u> | <u>5</u> | <u>Y</u> | <u>FAC</u> | |
| 3. <u>Becheria pilularis</u> | <u>15</u> | <u>Y</u> | <u>NL</u> | |
| <u>25</u> = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | 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. |
| 1. <u>Juncus patens</u> | <u>45</u> | <u>Y</u> | <u>FACW</u> | |
| 2. <u>Acmispon parviflorus</u> | <u>10</u> | <u>N</u> | <u>NL</u> | |
| 3. <u>Viscid villosa</u> | <u>5</u> | <u>N</u> | <u>NL</u> | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| <u>60</u> = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| = Total Cover | | | | |
| % Bare Ground in Herb Stratum <u>30 - that's it</u> | | | | |
| Remarks: _____ | | | | |

SOIL

Sampling Point: TP230

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|----|-------------------|------------------|---------|---------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-8 | 10YR 4/3 | 80 | | | | | CL | w/ charcoal pieces |
| | 10YR 3/2 | 20 | | | | | | root layer (juncus) |
| 8-15 | 5YR 4/4 | 80 | | | | | SCL | w/ occ. cobble/gravel |
| | 7.5YR 2.5/2 | 20 | | | | | | |
| 15-24 | 10YR 4/2 | 15 | 10YR 5/8 | 20 | | | SCV | sandier bed - decomposing |
| | 10YR 5/4 | 65 | | | | | | rock fragments |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

| | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | |

³Indicators 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:

diorite/quartzite/iron cobbles

colors 0-8 confirmed w/ E+hanP.

HYDROLOGY

| Wetland Hydrology Indicators: | |
|--|---|
| Primary Indicators (minimum of one required; check all that apply) | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Drainage Patterns (B10) |
| | <input type="checkbox"/> Dry-Season Water Table (C2) |
| | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| | <input type="checkbox"/> Shallow Aquitard (D3) |
| | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| | <input type="checkbox"/> Frost-Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☒ No _____ Depth (inches): _____

Water Table Present? Yes _____ No ☒ Depth (inches): _____

Saturation Present? Yes _____ No ☒ Depth (inches): _____

(includes capillary fringe)

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: Willow Creek City/County: Humboldt Sampling Date: 10/27/17
 Applicant/Owner: Organic Liberty State: CA Sampling Point: TP204
 Investigator(s): Greg O'Connell/Cindy Wilcox Section, Township, Range: Section T 6 north, R 5 east
 Landform (hillslope, terrace, etc.): Toe of hillslope Local relief (concave, convex, none): _____ Slope (%): 3-6
 Subregion (LRR): LRR A Lat: 40.8871° Long: -123.608582° Datum: Humboldt
 Soil Map Unit Name: Holland-Goldridge Fam. Assoc. NWI classification: None

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 <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes _____ No <input checked="" type="checkbox"/> | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> No _____ | |
| Remarks: <u>At site 2 above residence near driveway culvert crossing.</u> | | |

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B) |
|--|------------------|-------------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | |
| 2. <u>Ø</u> | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0' _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ 5 - Wetland Non-Vascular Plants ¹ * <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) * ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. <u>Ø</u> | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. <u>Festuca subuliflora</u> | <u>70</u> | <input checked="" type="checkbox"/> | <u>NL</u> | |
| 2. <u>Rumex crispus</u> | <u>2</u> | _____ | <u>FAC</u> | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. <u>Ø</u> | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| % Bare Ground in Herb Stratum <u>30 (thatch)</u> _____ = Total Cover | | | | |
| Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> | | | | |
| Remarks: <u>* Veg mostly dead. Some species may have been missed due to season/date.</u> | | | | |

SOIL

Sampling Point: TP204

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|----|-------------------|------------------|---------|--|
| Depth (inches) | Matrix | | Redox Features | | Type ¹ | Loc ² | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | | | | |
| 0-3 | 10YR 4/3 | 90 | black | <1 | C | | 10cm | man. nodules soil dev. overgrin |
| 3-16 | 7.5YR 4/4 | 60 | | 10 | | | CL | Fill, sharp angular color boundaries in patches. |
| | 10YR 4/3 | 39 | | | | | | |
| | 2.5Y 7/3 | 1 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

| | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | |

³Indicators 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: cobble @ 16". sharp angular color boundaries

HYDROLOGY

Wetland Hydrology Indicators:

| | | |
|---|---|--|
| Primary Indicators (minimum of one required; check all that apply) | | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D7) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |

Field Observations:

| | | |
|------------------------|--|-----------------------|
| Surface Water Present? | Yes _____ No <input checked="" type="checkbox"/> | Depth (inches): _____ |
| Water Table Present? | Yes _____ No <input checked="" type="checkbox"/> | Depth (inches): _____ |
| Saturation Present? | Yes _____ No <input checked="" type="checkbox"/> | Depth (inches): _____ |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated on 2/16/17 field visit & on 2/27/17 SHW aerial photos.

Project: Organic liberty Date: 2017.07.10
Location: Alternative Site #2 Investigator(s): Greg O'Connell
OHWM-PT3

Project Description:

Agriculture-related activity.

Describe the river or stream's condition (disturbances, in-stream structures, etc.):

Dry @ time of observation. 10" deep water course that was up to 3' ft wide. High gravel/cobble component within OHWM. Approx Class III.

Off-site Information

Remotely sensed image(s) acquired? ☒ Yes ☐ No [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

See fig 2 in wet del rpt.

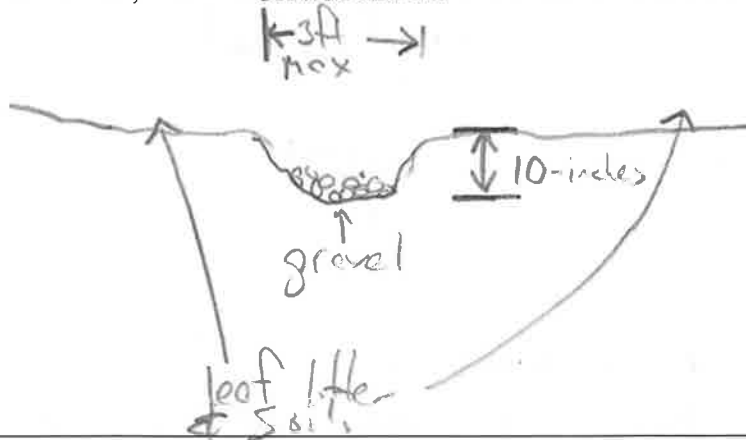
Hydrologic/hydraulic information acquired? ☐ Yes ☒ No [If yes, attach information to datasheet(s) and describe below.] Description:

List and describe any other supporting information received/acquired:

- Hydrographer GTS dataset reviewed & water feature not mapped.

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ☐ Sharp ($> 60^\circ$) | ☒ Moderate ($30-60^\circ$) | ☒ Gentle ($< 30^\circ$) | ☐ None

Notes/Description: Water feature is generally flat area, minor scour down to 10-inches from adjacent

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

| | Clay/Silt <0.05mm | Sand 0.05 – 2mm | Gravel 2mm – 1cm | Cobbles 1 – 10cm | Boulders >10cm | Developed Soil Horizons (Y/N) |
|------------|----------------------|--------------------|---------------------|---------------------|-------------------|----------------------------------|
| Above OHWM | 50 | 40 | 5 | 10 | 10 | |
| Below OHWM | 10 | 38 | 20 | 30 | 2 | |

Notes/Description:

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

| | Tree (%) | Shrub (%) | Herb (%) | Bare (%) |
|------------|----------|-----------|----------|----------|
| Above OHWM | 65 | 10 | 15 | 10 |
| Below OHWM | 65 | 5 | 1 | 29 |

Notes/Description:

Narrow OHWM area included several trees/shrubs also included above OHWM

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation

- Break in slope
- sediment change/sorting
- change in herb veg layer
- erosion/scour

Project: Organic LibertyDate: 10/27/17Location: Alt 2 below residence
OTHWM pt. 4Investigator(s): Cindy Wilcox & Greg O'Connell

Project Description:

wetland & OTHWM delineation

Describe the river or stream's condition (disturbances, in-stream structures, etc.):

Dry stream bed. stormwater fed into drainageway from driveway ditch & culvert from up slope. main source of water from Friday Ridge Road culvert collection & flowing down slope.

Off-site Information

Remotely sensed image(s) acquired? ☒ Yes ☐ No [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

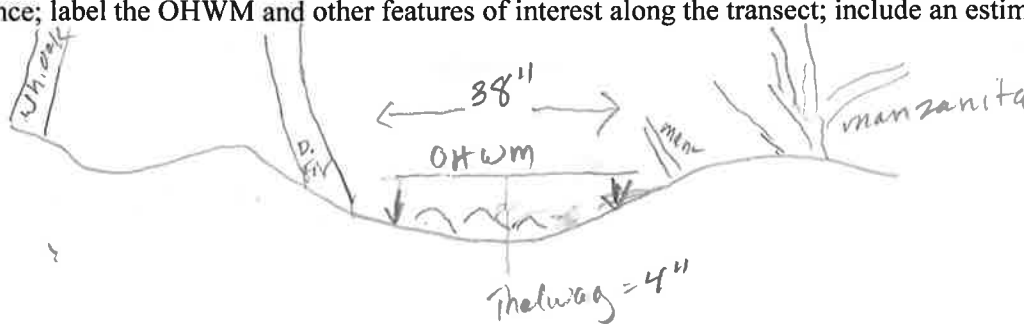
See Figure 3 in wetland & OTHWM report

Hydrologic/hydraulic information acquired? ☐ Yes ☒ No [If yes, attach information to datasheet(s) and describe below.] Description:

List and describe any other supporting information received/acquired:

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ☐ Sharp ($> 60^\circ$) | ☐ Moderate ($30-60^\circ$) | ☒ Gentle ($< 30^\circ$) | ☐ None

Notes/Description:

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

| | Clay/Silt <0.05mm | Sand 0.05 – 2mm | Gravel 2mm – 1cm | Cobbles 1 – 10cm | Boulders >10cm | Developed Soil Horizons (Y/N) |
|------------|----------------------|--------------------|---------------------|---------------------|-------------------|----------------------------------|
| Above OHWM | 84 | 10 | 1 | 5 | 0 | N |
| Below OHWM | 70 | 20 | 7 | 3 | 0 | N |

Notes/Description: flood drainage area. poorly developed soils ~ 1cm organic duff above OHWM

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

| | Tree (%) | Shrub (%) | Herb (%) | Bare (%) / <u>leaf</u> |
|------------|----------|-----------|----------|------------------------|
| Above OHWM | 55 | 20 | 10 | 15 |
| Below OHWM | 0 | 60 | 10 | 30 |

Notes/Description:

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation



Eureka, CA | Arcata, CA | Redding, CA | Willits, CA | Coos Bay, OR | Klamath Falls, OR

www.shn-engr.com