I and I Ranch, LLC

Cultivation Operations Plan

Humboldt County APN 214-112-006-000, Application # 13324

April 24, 2021

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Cultivation and Operations Plan

Project Description

I and I Ranch, LLC seeks a Special Use Permit to cultivate 43,2000 square feet of commercial cannabis pursuant to the Humboldt County Commercial Medical Marijuana Land Use Ordinance (CMMLUO). Operations will take place on a rocked flat where a historic rock quarry operation existed on Humboldt County Assessor's Parcel Number 214-112-006-000 located off Dyerville Loop Road in the Phillipsville area. The proposed cultivation activities will occur on 20% of 5 acres within mapped prime agricultural soils. Elevation is approximately 2,000 to 2,500 feet. The impacts to wildland areas by the proposed cultivation development are minimized due to historic land use disturbances, cattle grazing, and lack of forested habitat. No large trees will be removed to accommodate the proposed activities. Operations will consist of greenhouse cultivation with the use of supplemental lighting. The irrigation water source will be an existing groundwater well and a proposed rainwater catchment pond. Drying, trimming, packaging and other processing activities will occur on site in a proposed building or off site as is feasible.

Description of Cultivation Activities

Operations will consist of greenhouse cultivation with the use of supplemental lighting. Cultivation of plants to maturity will occur in greenhouses structures covering 43,200sf as is described in Table 1. Ancillary propagation with the use of supplemental lighting will occur in greenhouses structures covering 3,200sf as is described in Table 2. Nursery stock will be provided by an offsite enclosed nursery located on APN 214-101-008-000. The offsite nursery was approved as a separate application (PLN-2020-16200). Two harvest cycles per year are anticipated to occur within the months of October and November.

TABLE 1. SIZE, NUMBER AND SQUARE FOOTAGE OF FLOWER PRODUCTION AREAS.

Greenhouse Size	# of Greenhouses	Total Cultivation Area
20'x80' = 1,600sf	27	43,200sf

TABLE 2. SIZE, NUMBER AND SQUARE FOOTAGE OF ANCILLARY PROPAGATION AREAS.

Greenhouse Size	# of Greenhouses	Total Ancillary Propagation Area
20'x80' = 1,600sf	2	3,200sf

Schedule of Cultivation Activities by Month

Following is a general schedule of cultivation related activities by month. The schedule of activities will vary depending on weather conditions, business considerations, or plant growth rate.

1. January – Winter monitoring of site.
2. February- Winter monitoring of site.
3. March- Winter monitoring of site.
4. April- Amend soil and prepare cultivation area, including cover crop maintenance.
5. May- Prepare garden space and cultivation area. Plant first crop.
6. June- Water and maintain crop.
7. July- Water and maintain crops. Depending on weather and crop maturity we may harvest first crop, plant second crop, and begin drying the first harvest now.
8. August- Water and maintain crop. Depending on weather and crop maturity we may harvest first crop, plant second crop, and begin drying the first harvest now.
9. September- Water and maintain crop.
10. October- Water and maintain crop. Harvest second crop if it is mature.
11. November- Maintain, harvest, and process second crop. Prepare site for winter.
12. December- Fuel load reduction to improve forest health, reduce fire danger, and produce wood chips for site winter protection and soil health improvement Winter monitoring of site.

Watershed & Habitat Protection

The property is located in the Lower South Fork Eel River watershed and the Butte Creek-South Fork Eel River sub watershed. The property is situated at the top of ridge where headwaters of watercourses drain into tributaries to the South Fork Eel River to the southwest and Eel River to the north and east. The project areas are on gently sloped sites of less than 15% slope generally at the top of an open ridge. The 151-acre parcel was historically used for cattle grazing and project areas can be characterized as predominately annual grassland and mixed montane hardwood habitat types with stands of conifers at the ridge of Dyerville Loop Road. To support watershed and habitat conditions, I and I Ranch will closely monitor and manage the landscape to protect water quality, promote groundwater recharge, reduce fire, improve wildlife habitat conditions, and offset climate change through maintained carbon storage. Specific measures taken to improve watershed conditions and protect habitat include but are not limited to the following:

1. Protection and setbacks from riparian areas.
2. Monitor and maintenance of roads to prevent erosion.
3. Forest fuel load reduction.
4. Prevention of trash pollution.
5. Prevention of light pollution.

6. No use of rodenticides.

Biological Resources

Areas of proposed cultivation and pond sites were examined for habitat of sensitive plant and wildlife species. The forest surrounding the cultivation site as dense, young forest less than 40 years of age. The study area is primarily in annual grassland habitat type, which is an unlikely habitat for the Northern Spotted Owl. No sensitive species were observed during a Biological Reconnaissance Assessment, and proposal sites are unlikely to negatively affect sensitive species or habitat. The Biological Reconnaissance Assessment also included a scoping of potential wetlands and Streamside Management Area's onsite. The assessment concluded the existing project areas and proposed expansion areas did not contain any indications of hydrology, hydric soils or hydrophytic vegetation that would support a wetland. All existing and proposed project sites are outside SMA setbacks. The Biological Reconnaissance Assessment created by Mother Earth Engineering, dated July 2019, is presented in Appendix A.

Wetland and SMA Areas

A preliminary scoping of the property using Web Soil survey and NWI GIS layers showed that soils on the property are not hydric. Existing project areas and proposed expansion areas did not contain any indications of hydrology, hydric soils or hydrophytic vegetation that would support a wetland. All existing and proposed project sites are outside SMA setbacks. Refer to the Biological Reconnaissance Assessment presented in Appendix A for more details.

Invasive Species Control Plan

An evaluation of the existence of invasive species on the project parcel was conducted. At this time no invasive species issues exist at the project site. Refer to the Biological Reconnaissance Assessment presented in Appendix A for more details.

Northern Spotted Owl

One positive occurrence of *Strix occidentalis caurina* (Northern Spotted Owl) was observed within one mile of project areas in the CNDDB BIOS database. The observation occurred in April of 1999 and is predicted to be associated with the activity center, HUM0958. The activity center HUM0958 was established in 2000. On site investigation did not yield in a positive sighting or evidence of NSO habitation in the area. Generally, the NSO prefers forests with high, multilayered, multispecies canopy closure with large conifer overstory trees, large snags, large logs, and trees with deformities like broken tops to nest and roost in. The forests surrounding the cleared area was a dense, young forest less than 40 years of age. Given the study area is primarily in annual grassland habitat type, it is an unlikely habitat for the Northern Spotted Owl. Refer to the Biological Reconnaissance Assessment presented in Appendix A for more details.

Stormwater Management Plan

The soils underlying the project areas are primarily composed of very deep, well drained soils formed in colluvium and residuum derived from chloritic schist, sandstone and other sedimentary and metamorphic rocks. These soils have a xeric soil moisture regime and are not considered to be hydric. As such the rate of rainfall infiltration is high, preventing erosive surface runoff during most storm events. Site drainage consists of drainage via soil infiltration. Roads and flats will be properly engineered to disperse any run-off in a manner that slows, spreads, and sinks water into vegetated grassland soil. Additionally, the landscape will be monitored for erosion and preemptively maintained to prevent loss of topsoil and degradation of landscape features. The proposed developed areas that will support the project are shown on the projects Site Plan.

Light Pollution Control Plan

I and I Ranch is dedicated to being a good neighbor and minimizing light pollution from the site. To minimize light pollution from the site, all greenhouses utilizing lighting will be fitted with light-inhibiting covers between sunset and sunrise. Any security lighting for will be shielded and angled in such a way as to prevent light from spilling outside of the boundaries of the parcel. Artificial lighting used for processing activities will adhere to shielding and International Dark Sky Association standards as set forth in the CMMLUO.

Cannabis Waste & Soil Management Plan

Following is a description of the Cannabis Waste & Soil Management Plan designed to meet the requirements of section 8108 of California Code of Regulations, Title 3. Food and Agriculture, Division 8. Cannabis Cultivation, Chapter 1. Cannabis Cultivation Program. For the purpose of this section, 'cannabis waste' is organic waste, that is not hazardous, that contains unusable and unrecognizable cannabis derived from the process of cultivating and processing cannabis.

All generated cannabis waste will be managed via an on-premises composting system identified on the premises diagram. Generated cannabis waste will be added to the compost system as it is generated. Leaf material will be layered into an active compost pile as it is collected. Stem, stalk and root ball material will be layered into the active compost pile as chipped or shredded material. The compost system will be comprised of alternating layers of organic materials that include but may not be limited to:

1. Fresh cannabis leaves;
2. Chipped and shredded cannabis stems, stalks, and root balls;
3. Wood ash;
4. Animal manure;
5. Chipped and shredded non-cannabis plant materials;
6. Worm castings;
7. Straw, hay or alfalfa;

8. Spent cannabis growth medium;
9. Soil;
10. Smashed shells from chicken eggs or crab shells;
11. Composted food scraps; and
12. Partially composted cannabis waste materials.

On an annual or semi-annual basis, compost piles will be turned. Partially composted materials derived from aging cannabis waste compost piles may be layered into new cannabis waste compost piles. Finished compost will resemble dark brown, crumbled, soil like material. It will be nutrient and carbon rich and be added to cultivation soils as a nutrient amendment. Composting of organic materials and re-investment of them back into the soil has the potential to off-set climate change if conducted at a broad scale. For this reason, all agricultural systems, cannabis based or not, ought to implement on-site composting systems.

Summary of Specific Measures for Compliance with State Water Board Order

Prior to the implementation of the proposed project, enrollment and compliance with the State Water Board Cannabis General Order will occur. Following is a summary of the specific measures that will be implemented to ensure compliance with the State Water Board Cannabis General order.

Per the State Water Board General Order Tier 1 and Tier 2 Dischargers shall submit and implement a Site Management Plan (Plan) that describes how the Discharger is implementing the best practical treatment or control (BPTC) measures listed in Attachment A. The Plan may include a schedule to achieve compliance, but all work must be completed by the onsets of winter period each year. The due date does not relieve a Discharger from implementing the interim soil stabilization BPTC measures described in Attachment A. The Plan presented in outline format below will be implemented to ensure that all applicable BPTC measures are implemented and properly maintained.

Sediment Discharge BPTC Measures

1. Site maps showing access roads, vehicle parking areas, streams, stream crossings, cultivation site(s), disturbed areas, buildings, and other relevant site features will be maintained.
2. The access road will be maintained throughout the year to prevent sediment discharge and vehicle damage. Storm water will be dispersed and drained from the access road via out sloped road surface, rolling dips, culverts and drainage ditches.
3. Potential legacy waste discharge issues will be restored, monitored and managed.

Fertilizer, Pesticide, Herbicide, and Rodenticide BPTC Measures

1. No rodenticides will be used. Records identifying the agricultural products used at the site, when they are delivered to the site, how they are stored, and how they are used at the site will be maintained.

2. A CDFA compliant Pest Management Plan will be implemented.
3. If products are not consumed during the growing season, they will be stored within secondary containment within an animal proof storage to prevent discharge over the winter season.
4. A protocol for how bulk fertilizers and chemical concentrates are stored, mixed, applied, and how empty containers are disposed will be created.
5. The following spill prevention, containment, and clean-up practices will be implemented to prevent the discharge of fertilizers, pesticides, herbicides and other agricultural chemicals:
6. Fertilizers, pesticides, herbicides and other agricultural chemicals shall not be mixed, prepared, over applied, or disposed of in any location where they could enter the riparian setback or waters of the state.
   6.1. All fertilizers, pesticides, herbicides and other agricultural chemicals shall be used consistently with project labeling, storage instructions, or DPR requirements for pesticide applications.
   6.2. Disposal of unused fertilizers, pesticides, herbicides and other agricultural chemicals, and containers shall be consistent with labels.
   6.3. Absorbent materials designated for spill containment and spill cleanup equipment or maintained onsite for use in an accidental spill of fertilizers, pesticides, herbicides and other agricultural chemicals.
   6.4. The cannabis cultivator shall immediately notify the California Office of Emergency Services at 1-800-852-7550 and immediately initiate cleanup activities for all spills that could enter a waterbody or degrade groundwater.
   6.5. A specific storage area for fertilizers, pesticides, herbicides and other agricultural chemicals is maintained. All such storage areas shall comply with the riparian setback requirements, be in a secured location in compliance with label instructions, outside of areas of known slope instability, and be protected from accidental ignition, weather, and wildlife. All storage areas shall have appropriate secondary containment structures, as necessary, to protect water quality and prevent spillage, mixing, discharge, or seepage. Storage tanks and containers must be of suitable material and construction to be compatible with the substances stored and conditions of storage, such as pressure and temperature.
   6.6. Throughout the wet season, it will be ensured that any temporary storage areas have a permanent cover and side-wind protection or be covered during non-working days and prior to and during rain events.
   6.7. No agricultural chemicals will be applied within 48 hours of any weather pattern that is forecast to have a 50 percent or greater chance of precipitation of 0.25 inches or greater per 24 hours.
   6.8. To minimize infiltration and water quality degradation, irrigation water and fertilizers are applied consistent with crop need.
   6.9. No restricted materials, including restricted pesticides will be allowed on site.
   6.10. Plants are maintained in optimal health to reduce the need for pesticides.

6.11. When not in use, potting soil and soil amendments are placed and stored with covers, when needed, to protect from rainfall and erosion, to prevent discharge to waters of the state, and to minimize leaching of waste constituents to groundwater.

Petroleum Product BPTC Measures

1. A summary table that identifies the petroleum products used at the site, when they are delivered to the site, how they are stored, and used at the site will be maintained. If petroleum products are not consumed during the growing season, they are stored within secondary containment to prevent discharge over the winter season.
2. A site map that shows the petroleum product storage locations will be maintained.
3. The following describes how fuels, lubricants, and other petroleum products will be stored, mixed, applied, and empty containers are disposed of:
   3.1. An area outside of the riparian setback is designated for equipment storage, short-term maintenance, and refueling. No maintenance activities or refueling of equipment in any location where the petroleum products or other pollutants may enter waters of the state as per Fish and Game Code section 5650 (a)(1) is allowed.
   3.2. Equipment and vehicles are frequently inspected for leaks.
   3.3. All leaks, drips, and spills are immediately cleaned up. Except for emergency repairs that are necessary for the safe transport of equipment or vehicles to an appropriate repair facility; performing equipment or vehicle repairs, maintenance, and washing onsite will not occur.
   3.4. If emergency repairs generate waste fluids, care is taken to ensure they are contained and properly disposed or recycled off-site.
   3.5. Dry cleanup methods (e.g., absorbent materials, cat litter, and/or rags) are used whenever possible. Spilled dry materials are swept up, contained, and properly dispose of.
4. The following describes procedures for petroleum product spill prevention and cleanup:
   4.1. Refueling of vehicles or equipment shall occur only outside of riparian setbacks.
   4.2. All equipment using oil, hydraulic fluid, or petroleum products shall be inspected for leaks prior to use.
   4.3. Stationary equipment (e.g., motors, pumps, generators, etc.) and vehicles not in use shall be located outside of riparian setbacks.
   4.4. Spill and containment equipment appropriate for the conditions at and near the site (e.g., oil spill booms if surface water could be impacted by a spill, sorbent pads, etc.) shall be stored onsite at all locations where equipment is used or staged.
   4.5. All petroleum, petroleum products, and similar fluids shall be stored in a manner that provides chemical compatibility, provides secondary containment, and protection from accidental ignition, the sun, wind, and rain.
   4.6. No use of underground storage tank(s) for the storage of petroleum products occurs onsite.

4.7. Absorbent materials designated for spill containment and spill cleanup equipment are kept on-site for use in an accidental spill of petroleum products, hazardous materials, and other substances which may degrade waters of the state. The cannabis cultivator shall immediately notify the California Office of Emergency Services at 1-800-852-7550 and immediately initiate cleanup activities for all spills that could enter a waterbody or degrade groundwater.

4.8. A separate storage area for pesticides, and fertilizers, and another storage area for petroleum or other liquid chemicals (including diesel, gasoline, oils, etc.) is established. All such storage areas comply with the riparian setback requirements, are in a secured location in compliance with label instructions, outside of areas of known slope instability, and protected from accidental ignition, weather, and wildlife. All storage areas shall have appropriate secondary containment structures, as necessary, to protect water quality and prevent spillage, mixing, discharge, or seepage. Storage tanks and containers must be of suitable material and construction to be compatible with the substances stored and conditions of storage, such as pressure and temperature.

Trash/Refuse, and Domestic Wastewater BPTC Measures

1. Describe the types of trash/refuse that will be generated at the site. Describe how the material is contained and properly disposed of.

1.1. In general, the types of trash/refuse generated on site will be plastics, metals, and organic materials. A Cannabis Waste Management will be provided.

1.2. A site map that locates the trash/refuse storage locations is provided in Attachment A.

2. A description of the number of employees, visitors, or residents at the site will be maintained that specifies:

2.1. It is estimated that 6 employees will be needed throughout the cultivation season. Visitors are generally limited to consultants, business associates, and government personnel. The following employee practices will be implemented:

2.2. I and I Ranch will only employ persons for hire as allowable by law.

2.3. I and I Ranch shall 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).

2.4. At all times workers shall have access to safe drinking water, toilets and hand washing facilities.

3. A description of the types of domestic wastewater generated at the site (e.g., household generated wastewater or chemical toilet) will be maintained.

Winterization BPTC Measures

1. The following activities will be performed to winterize the site and prevent discharges of waste prior to winter precipitation:

    1.1. Verification of chemical storage secondary containment effectiveness and tidiness. Update chemical inventory list posted within storage area.

    1.2. Verification of petroleum product secondary storage effectiveness and tidiness.

    1.3. Verification of trash removal and storage security.

    1.4. Verification of wastewater systems functionality.

    1.5. Apply erosion repair and control measures to the bare ground (e.g., cultivation area, access paths, etc.) to prevent discharge of sediment to waters of the state. Seed and mulch all areas of disturbed soils to control erosion and sediment discharges from land disturbance. Use native seed.

    1.6. Mulch and or cover-crop cultivation soils OR cover to prevent nutrient loss.

    1.7. Cover and berm all loose stockpiled construction materials (e.g., soil, spoils, aggregate, amendments etc.) that are not actively being used (scheduled for use within 48 hours) to prevent erosion by storm water. Add waste organic materials to compost pile.

    1.8. Stock adequate supplies of ground cover (mulch) and berm materials (short logs, straw bales, waddles) onsite to be available should precipitation event cause soil exposure or threaten to cause drainage point erosion.

    1.9. Maintenance of all culverts, drop inlets, trash racks and similar devices to ensures they are not blocked by debris or sediment. The outflow of culverts shall be inspected to ensure erosion is not undermining the culvert. Culverts shall be inspected prior to the onset of fall and winter precipitation and following precipitation events that produce at least 0.5 inch/day or 1.0 inch/7 days of precipitation to determine if maintenance or cleaning is required.

    1.10. Armoring and preparation of road, driveway and trail drainage points using rock, straw bale, wood etc. to prevent the development of surface ruts, gullies, or surface erosion that will result in sediment delivery to surface waters.

    1.11. Preparation and winter closure of temporary access roads to all motorized vehicles use of no later than the onset of the winter period each year.

    1.12. Application of linear sediment controls (e.g., silt fences, wattles, brush contours, straw bales, etc.) along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to limit sheet flow length at the frequency specified below:

Slope (%)	Sheet Flow Length Not to Exceed (feet)
0-25	20
25-50	15
>50	10

1.13. Maintain all drainage or sediment capture features (e.g., drainage culverts, drainage trenches, settling ponds, etc.) to remove debris, soil blockages, and ensure adequate capacity for winter storm flows.

1.14. Stop the use of all heavy equipment of any kind for the duration of the winter period, unless authorized for emergency repairs contained in an enforcement order.

1.15. Inspect water system hoses, valves and connections for leaks and degradation. Replace as needed to prevent loss of water.

1.16. Winterization of compost pile. Minimum Standard requires: inspection and reinforcement of surrounding berms or barriers that will prevent runoff water, dissolved nutrients and solids from leaving area; consolidation of compost pile materials; covering of compost pile with spent soil, thick layer of organic materials such as leaves, manure, chipped cannabis plant materials, wood chips etc. making sure that no potting soil or cannabis materials are identifiable.

1.17. Inspect riparian areas for trash or other manmade debris, remove and dispose of any found items.

1.18. Inspect riparian areas for potential erosion sites.

1.19. Inspect riparian areas for non-native invasive plant species

2. A description of any revegetation activities that will occur either at the beginning or end of the precipitation season will be provided.

3. Apply erosion repair and control measures to the bare ground (e.g., cultivation area, access paths, etc.) to prevent discharge of sediment to waters of the state. Seed and mulch all areas of disturbed soils to control erosion and sediment discharges from land disturbance. Use native seed.

4. Mulch and or cover-crop cultivation soils OR cover to prevent nutrient loss.

5. If any BPTC measure cannot be completed before the onset of winter period, the Regional Water Board will be contacted to establish a compliance schedule.

6. A description of any activities that will be performed to address legacy waste discharge issues will be provided.

Compliance with Performance Standards for Noise at Cultivation Sites

Currently, the project area experiences general ambient noise from nature and traffic on Dyerville Loop Road. There are no residential areas within 300 hundred feet of the project location. During the implementation of the construction phase of the project, noise will temporarily increase above ambient levels due to the presence of construction workers and associated machinery. Once construction is completed, general project operations will generate noise via human voices, vehicle traffic, fans, and the backup generator if it is needed. Most

noise producing work will take place inside the greenhouses or the processing buildings which will muffle sounds of human voices. Noise from cultivation and related activities shall not result in an increase of more than three decibels of continuous noise above existing ambient noise levels at any property line of the site. The project is not in a TPZ or U zone.

One positive occurrence of *Strix occidentalis caurina* (Northern Spotted Owl) was observed within one mile of project areas in the CNDDB BIOS database. The observation occurred in April of 1999 and is predicted to be associated with the activity center, HUM0958. The activity center HUM0958 was established in 2000 and is approximately 4,400 feet west of existing cultivation area. On site investigation did not yield in a positive sighting or evidence of NSO habitation in the area. Generally, the NSO prefers forests with high, multilayered, multispecies canopy closure with large conifer overstory trees, large snags, large logs, and trees with deformities like broken tops to nest and roost in. The forests surrounding the cleared area was a dense, young forest less than 40 years of age. Given the study area is primarily in annual grassland habitat type, it is an unlikely habitat for the Northern Spotted Owl.

Water Source, Storage and Use

The water source will be an existing groundwater well and a proposed rainwater catchment pond. Irrigation strategies will include close monitoring of soil moisture content and the use of hand or drip irrigation. The projected water usage is about 1,950,000 gallons per year. Water storage will occur within a proposed 2.5-million-gallon rainwater catchment pond. The following sections provides greater details about the proposed water sources, storage and use.

Water Source

Water for irrigation will be provided by one existing permitted well (DEH Permit #13/14-0169), and one proposed rainwater catchment system. According to aerial analysis using Google Earth Pro, the well is approximately 2,733 feet in elevation. The well is also 0.21 miles south from a Class III tributary to Anderson Creek. The elevation of Anderson Creek is approximately 2,107 feet. According to the Well Completion Report, the depth of the well is 160 feet, and the depth of the first water is 75 feet, which is approximately 551 feet above Anderson Creek. The well bore hole penetrates through reddish clay, green serpentine, grey fractured sandstone, and dark grey shale with sandstone. Due to the linear and depth distance from the well to the nearest surface water, and the geological log showing the well casing to infiltrate through reddish clay, green serpentine, grey fractured sandstone, and dark grey shale with sandstone before collecting water, it is well is physically hydrologically disconnected from surface water. The Well Completion Report is presented in Attachment B.

Water Storage

Upon permitting a 2.5-million-gallon rainwater catchment pond will be designed, permitted and built. Short term storage of irrigation water will occur prior to irrigation in several rigid plastic holding tanks of less than 5,000 gallons.

Irrigation Plan

Irrigation water will be pumped from the rainwater catchment pond or well into rigid plastic holding tanks of less than 5,000 gallons in size prior to application via drip irrigation or hand watering methods. I and I Ranch will use conservative water use practices that include but may not be limited to:

1. Closely monitoring soil moisture and plant health.
2. Drip irrigation
   2.1. By delivering water directly to plant roots, water loss to evaporation will be minimized.
3. Irrigation scheduling
   3.1. Soil and plant moisture will be closely monitored to prevent excessive use of water.
4. Capturing and storing rainwater
   4.1. A rainwater catchment system will be designed, permitted and built to capture and store rainwater to be used as the primary irrigation water source. However, the existing groundwater well will supplement rainwater as needed.

Projected Water Usage by Month

The projected water usage presented below are estimates based on current water use.

Source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Well/Pond	0	0	0	0	0	400,000	400,000	400,000	400,000	350,000	0	0

Processing Practices and Plan

Processing such as drying, curing, trimming, and packaging is proposed to occur onsite in a yet to be constructed building. However, processing activities may also occur offsite in a compliant manner.

Location

Cannabis cultivated by I and I Ranch, LLC may be dried in a proposed, or delivered to off-site processing facilities as is feasible. A private road will be used to access the onsite processing facility. The proposed processing building will be used to dry and cure plants prior to trimming and packaging for distribution. A hand washing station will be included in the building design.

Summary of Processing Practices

The following Processing Practices shall be implemented and practiced on-site at all times:

1. Great care will be taken to maintain a clean working environment during all stages of processing. Work surfaces and equipment will be kept in a clean and sanitary condition. Protocols to prevent contamination of cannabis product with mold or mildew will be followed at all times. Workers shall clean hands sufficiently when handling cannabis or use gloves.
2. During harvest cannabis plants are cut down to approximately 18-inch lengths of stem and transported from garden area to processing area to be hung for drying. Large water leafs are also removed during this process. All work is performed while wearing gloves using sheers or clippers.
3. Bud sections are hung in an on-site drying building for 5-7 days to dry. During the drying process, the buds are carefully monitored for moisture content and mold growth.
4. Once it is determined that buds have reached the desired moisture content, stems are removed, and flowers are cured in open bags. Cured cannabis is stored securely in the processing shed.

Employee Practices

The applicant anticipates hiring a maximum of (6) employees during peak operations. The following practices will be implemented:

1. I and I Ranch will only employ persons for hire as allowable by law.
2. I and I Ranch shall 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).
3. At all times workers shall have access to safe drinking water, toilets and hand washing facilities.

Worker Safety Practices

Safety protocols will be implemented to protect the health and safety of employees. All employees shall be provided with adequate safety training relevant to their specific job functions, which may include:

1. Employee accident reporting;
2. Security breach;
3. Fire prevention;
4. Materials handling policies; and
5. Use of protective clothing such as long sleeve shirts, brimmed hats, and sunglasses.

Each garden site and or processing area have the following emergency equipment:

1. Personal protective equipment including gloves and respiratory protection are provided where necessary;
2. Fire extinguisher;
3. First Aid Kit;

4. Snake Bite/Bee Sting Kit; and
5. Eye Washing Kit.

Emergency Contacts

Operations and processing facilities shall visibly post and maintain an emergency contact list which includes at a minimum:

- Land owner contact(s): Shane Gomes: 831-291-6186
- Emergency responder contact(s): 911
- Nonemergency Sheriff: 707-445-7251
- Myers Flat Volunteer Fire Department: 707-943-3094
- Poison Control Centers 800-222-1222

Materials Management Plan

No project-related activities will involve storage or use of hazardous materials at a reportable quantity.

Fertilizers, Amendments and other Agricultural Products

I and I Ranch, will follow best organic operation practices. Fertilizers, amendments or other agricultural products will be stored in dedicated locations within the proposed building and smaller sheds that will provide the necessary security and containment. All fertilizers or other regulated and non-regulated agricultural products shall occur within covered areas with secondary containment.

Fuel Use & Storage

Only small amounts (less than 55-gallons at any one time) of fuels will be stored for generator and small engine use. Fuel will be stored in approved portable devices in covered areas with secondary containment.

Energy Plan

Power for the project will be provided by an onsite solar system and a backup generator. The generator will be stored inside a structure on a sufficiently sized drip tray to prevent pollution.

Site Access & Road Use

The project will be accessed via a private driveway from Dyerville Loop Road. The proposed driveway will be designed to meet the required category 4 standard. Parking infrastructure will comply with the Humboldt County Zoning Regulations section 314-109.1.

There will be a maximum of six round trip vehicle trips per day. I and I Ranch will monitor and maintain the road to ensure that it is in good condition, and not a source of sediment. Workers

will be instructed to drive minimally and to share vehicles when possible. Workers will be encouraged to walk when possible to minimize environmental impact and improve personal health. Roads will be used minimally during wet winter months.

Security Plan

This security plan has been developed to incorporate best practices suggested by security industry professionals and law enforcement personnel. The security plan will be continually updated and improved as further information is available.

1. Few people have access to the property, which lowers the probability of breach of security measures.
2. This property is located at the end of a private road; there is no easement access through the property.
3. Dogs are present.
4. A locked gate accesses the property.
5. 'No Trespassing' signs are posted on the single-access road.
6. 'No Hunting' signs are posted.
7. Solar powered lights are to be placed along access road, which will alert workers of incoming traffic.
8. The cultivation area is visually obscured from the main road.
9. The processing facility shall be a secure lockable structure.
10. Operations shall be discreet and not draw attention.

Onsite Wastewater Plan

- Structures and manmade landscape features on the property (see site map).
- Potentially, 6 people will be working under County Commercial Medical Marijuana Permit during production April-October.
- Work areas will have toilets and handwashing stations that are served by rented commercial portable systems in the short term and permitted septic systems in the long term.
- Distance between restrooms and work areas will be less than approximately 500 feet.
- During the construction phase of project implementation rented portable toilets and hand washing stations will be utilized. The constructed project will include toilet and handwashing facilities that discharge into permitted septic systems.

Hazardous Materials/ Solid Waste/ Recycling

I and I Ranch acknowledges that the Humboldt County Environmental Health Division, which administers the Hazardous Materials program as one of the Certified Unified Program Agencies, regulates hazardous materials and wastes from agricultural businesses, and will follow all appropriate requirements under the Hazardous Materials Program, including but not limited to:

- Any fuels stored, will be in approved storage containers. Gasoline are stored in covered area with containment device.
- All fertilizers, soil amendments, and pesticides used onsite will be stored indoors in approved containers. Solid Waste/Recycling
- Garbage will be stored in secure areas within a rodent proof enclosed trailer, in sealed storage containers that are self-closing.
- Garbage will be removed from property on a bi-weekly basis.
- Solid waste will be hauled to an approved Humboldt County collection locations.
- Excess used soils are cover cropped, amended and reused.
-

Appendix A: Biological Reconnaissance Assessment

Biological Reconnaissance Assessment

APN 214-111-006 & 214-112-006

July 2019

Prepared For:

I and I Ranch

Shane Gomes

Prepared By:

MOTHER EARTH ENGINEERING

661 G Street Arcata, California 95521
707-633-8321 | motherearthengineering.com

April 24, 2021

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Appendices

Executive Summary

The purpose of this report is to provide a preliminary reconnaissance assessment of the biological resources affected by commercial cannabis cultivation for I and I Ranch, LLC located at 18645 Dyerville Loop Road, Philipsville of Humboldt County, California (APN 214-111-006 & 214-112-006). At APN: 214-112-006, I and I Ranch is seeking a special permit for 43,560 square feet of commercial cannabis cultivation under Humboldt County's Commercial Cannabis Land Use Ordinance. At APN: 214-111-006, I and I Ranch seeks to cultivate 23,520 square feet of commercial cannabis cultivation.

Jurisdictional resources considered for this report include wetlands and non-wetland "waters of the U.S." regulated by the U.S. Army Corps of Engineers (USACE); "waters of the State" regulated by the North Coast Regional Water Quality Control Board (NCRWQCB); and the bed, bank, and channel of all lakes, rivers, and/or streams (and associated riparian vegetation), as regulated by the California Department of Fish and Wildlife (CDFW). "Streamside Management Areas" (SMAs) [section 3432(5) of the Humboldt County 1984 General Plan] are defined in the Humboldt County General Plan (Page G-8) and include, a natural resource area along both sides of streams containing the channel and adjacent land.

Mother Earth Engineering staff visited the site on 17 July 2019 to determine the extent of project impacts, assess potential habitat for sensitive species and develop guidelines and strategies for mitigation measures. Additional consultation with agency staff including USACE, NCRWQCB, CDFW, Humboldt County and US Fish and Wildlife Service (USFW) will continue throughout the life of the project.

The property is characterized as a mosaic of open oak woodlands and grasslands with stands of conifers at the ridge of Dyerville Loop Road. Project sites were historically used as cattle ranching. The project areas are sloped between 3-30% at approximately 1,800 to 2,500 feet above sea level. The property shows documented observations of Peregrine falcons and Howell's montia within the property study area. However, no direct observations were made within the property study area during the site evaluation.

In general, the site was generally well maintained and established. Road traffic, noise, dust and visual impacts were at a minimum. Solid waste pollution or other discharge into terrestrial habitats and further aquatic habitats were not observed. All greenhouses are enclosed by tarp past dusk and no rodenticides are in use. The impacts of the proposed expansion of cultivation sites at PA-1 and PA-2 are minimal. Both sites are flat, stable areas that were historically used for cattle grazing. No trees would be removed at either site. On the day of assessment, the vegetation at both sites contained typical grassland, nonnative disturbance species such as *Plantago lanceolata* (English plantain) and *Elymus caput-medusae* (medusa head).

Due to historic land use disturbance, lack of forested habitat, and current species composition, it is unlikely that expansion at these sites would negatively affect listed, sensitive species. Current cultivation activities are established and have a low probability of negatively affecting the species. Areas of proposed cultivation and pond sites were examined for habitat of sensitive plant and wildlife species. No sensitive species were observed, and proposal sites are unlikely to negatively affect sensitive species or habitat. Additional consultation with agency staff including the California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (USACE), Humboldt County and US Fish and Wildlife Service (USFW) will continue throughout the project application.

1. Introduction

1.1 Purpose and Need

This document was prepared to provide preliminary assessment of the biological resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), the Regional Water Quality Board (RWQCB), and the Humboldt County Streamside Management Area guidance (SMA) for the 232-acre property owned by Shane Gomes of I and I Ranch. The purpose of this assessment is to provide an evaluation of biological resources on site and assess any potential project impacts to biological resources, specifically rare or endangered species within project sites.

1.2 Project Description

At APN: 214-112-006, I and I Ranch is seeking a special permit for 43,560 square feet of commercial cannabis cultivation under Humboldt County's Commercial Cannabis Land Use Ordinance. At APN: 214-111-006, I and I Ranch seeks to cultivate 23,520 square feet of commercial cannabis cultivation. The Applicant proposes to build a pond at two potential sites: one on APN: 214-111-006 and one on APN: 214-112-006. The study boundary includes areas of direct and indirect impacts surrounding existing and proposed cultivation and proposed pond sites (*Appendix A, Figure 1*).

2. Regulatory Background

2.1 U.S. Army Corps of Engineers (USACE)

The USACE Regulatory Branch regulates activities that may discharge dredged or fill materials into "waters of the U.S." under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all "waters of the U.S." where the material (1) replaces any portion of a "waters of the U.S." with dry land or (2) changes the bottom elevation of any portion of any "waters of the U.S.". These fill materials include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in these waters. The selection of disposal sites for dredged or fill material is done in accordance with guidelines specified in Section 404(b)(1) of the CWA, which were developed by the U.S. Environmental Protection Agency (USEPA).

2.2 Regional Water Quality Control Board (RWQCB)

The RWQCB is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all "waters of the State" and to all "waters of the U.S.," including wetlands (isolated and non-isolated).

Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide certification that there is reasonable assurance an activity with the potential for discharge into navigable waters will not violate water quality standards. Water Quality Certification must be based on findings that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives found in each of the nine RWQCBs' Basin Plans.

2.3 California Department of Fish and Wildlife

The CDFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes pursuant to the California Fish and Game Code (§§1600–1616). Activities of state and local agencies, as well as

public utilities that are project proponents, are regulated by the CDFW under Section 1602 of the California Fish and Game Code.

Because the CDFW includes streamside habitats under its jurisdiction that, under the federal definition, may not qualify as wetlands on a project site, its jurisdiction may be broader than that of the USACE. Riparian forests in California often lie outside the plain of ordinary high water regulated under Section 404 of the CWA, and often do not have all three parameters (wetland hydrology, hydrophytic vegetation, and hydric soils) sufficiently present to be regulated as a wetland.

However, riparian forests are frequently included within CDFW regulatory jurisdiction under Section 1602 of the California Fish and Game Code.

The CDFW jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric and saturated soils conditions. In general, the CDFW extends jurisdiction from the top of a stream bank or to the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within or near a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish and other aquatic plant and/or wildlife species. It also includes watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

2.4 Humboldt County-Streamside Management Area

"Streamside Management Areas" (SMAs) [Section 3432(5) of the Humboldt County 1984 General Plan] are defined in the Humboldt County General Plan (Page G-8) and include a natural resource area along both sides of streams containing the channel and adjacent land. Updates to the SMA guidance for cannabis activities are defined in the Environmental Impact Assessment Biological Resources Section[1].

Project applicants proposing development activities within a SMA or wetland areas are required to include a site-specific biological report prepared consistent with these regulations. The written report prepared by a qualified biologist is subsequently referred to CDFW for review and comment. If required, after agency review of the preliminary habitat assessment, protocol level surveys will be completed per recommendations by the Final Environmental Impact Report (FEIR) amendments to the Humboldt County Code Regulating Commercial Cannabis Activities[2].

2.5 Additional Laws and Policies

In addition to the above-mentioned policies, numerous other policies exist to protect wetlands, waters and biological resources including the California Environmental Quality Act (CEQA), California Endangered Species Act (CESA) and the Z'berg-Nejedly Forest Practice Act.

[1] https://humboldtgov.org/DocumentCenter/View/58840/Section-311-Biological-Resources-Revised-DEIRPDF

[2] Final Environmental Impact Report: Amendments to the Humboldt County Code Regulating Commercial Cannabis Activities. Prepared by Ascent Environmental. Accessed via https://humboldtgov.org/DocumentCenter/View/62689/Humboldt-County-Cannabis-Program-Final-EIR60mb-PDF. Accessed [July 2019]

3. Environmental Setting

3.1 Project Location

The project area is located off Dyerville Loop Road in the Phillipsville area (S8, T3S, R4E) of Humboldt County, California (*Appendix A, Figure 1)*. The project is located on two (2) parcels, APN: 214-111-006 and APN 214-112-006, that sums to 232 acres within the U.S. Geological Survey's (USGS) Miranda 7.5-minute quadrangle map. The parcel is zoned Agricultural Grazing (AG). Elevation is approximately 2,000 to 2,500 feet (*Appendix A, Figure 2*).

3.2 Soil, Topography, Hydrology

The soil complex of the project areas on this parcel is composed primarily of Dryfield-Yorknorth-Witherell complex, 5 to 30 percent slopes (667) and Yorknorth-Witherell complex, 30 to 50 percent slopes (662). These complexes consist of very deep, well drained soils formed in colluvium and residuum derived from chloritic schist, sandstone and other sedimentary and metamorphic rocks. Dryfield soils contain less than 35 percent clay in the control section and occur on linear to slightly convex positions. Witherell soils have fractured bedrock above 50 centimeters and are on convex positions. These soils typically occur on upper mountain side slopes and are used for livestock grazing. These soils have a xeric soil moisture regime and are not considered to be hydric[3].

The property is situated at the top of ridge where headwaters of watercourses drain into tributaries tributary to the South Fork Eel River to the southwest and Eel River to the north and east. The project areas are on gently sloped sites of less than 15% slope generally at the top of an open ridge. The property is located in the Lower South Fork Eel River watershed and the Butte Creek-South Fork Eel River subwatershed[4]. The area is mapped as possessing moderate levels of instability in the Humboldt County GIS database. The property was historically used for cattle grazing and project areas can be characterized as predominately annual grassland and mixed montane hardwood habitat types.

4. Methods

On 17 July 2019, Mother Earth Engineering staff conducted a site visit to survey current and remediated cultivation areas to evaluate potential habitat and record observed, biological resources. The study area, represented as the survey boundary in green dashes, includes areas of direct and indirect impact of current cultivation and proposed expansion areas and potential habitat for special status plant and wildlife species. The orange polygon represents the existing cultivation area and the green polygons represent the two (2) proposed cultivation sites (*Appendix A, Figure 1*).

Approximately three (3) field hours were spent conducting a habitat assessment for listed species and species of concern. The study area was scanned for rare plants and wildlife signs including tracks, scat, tree habitat (cavities, nests scrapes or accumulated vegetation). Full floristic surveys were not conducted at this time. The entire parcel was not surveyed.

[3] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: https://websoilsurvey.sc.egov.usda.gov/. Accessed [July 2019]

[4] Caltrans Water Quality Planning Tool available at: http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx.

Before field visits occurred, the site was remotely evaluated for potential habitat value to protected, endangered, threatened, rare, and sensitive species by Geographic Information Systems (GIS), the California Natural Diversity Database (CNDDB) RareFind and BIOS, and the California Native Plant Society Rare Plant Inventory (CNPS). The localized CNDDB 9-Quad area of Fort Seward was queried to generate occurrences of special-status animal species (Table 1). Within one (1) mile of property project areas, occurrences of *Montia howellii* (Howell's montia) has been observed and the potential for *Falco peregrinus anatum* (peregrine falcon) may occur (*Appendix A, Figure 2)*.

4.1 Limitations

All plant species growing within the study area may not have been observed due to varying flowering phenologies and life forms, such as bulbs, biennials, and annuals. Other potentially dominant species within vegetation communities on site may be present during other times of the year. Some of the plant species identified in this report are tentative due to the absence of morphological characters, resulting from immature reproductive structures or seasonal desiccation, which is required to make species-level determinations.

5. Results and Discussion

5.1 Vegetation

The property is characterized as a mosaic of gently rolling annual grasslands and mixed montane hardwood-conifer (*Appendix A, Figure 4*). The tree layer of this property was dominated primarily of *Pseudotsuga menziesii* var. *menziesii* (Douglas fir) with some stands of *Arbutus menziesii* (pacific madrone), *Quercus garryana* (Oregon white oak), *Notholithocarpus densiflorus* (tanoak) and *Umbellularia californica* (California bay).

Pond Site 1 and Proposed Cultivation Area 1: The site on APN: 214-112-006 was previously used for cattle ranching and is composed of typical disturbance species. First pond site at (PO-1) is characterized as a depression in an open grassland with stands of *Pseudotsuga menziesii* var. *menziesii* (Douglas fir). The area is composed of annual and perennial forbs and grass species but is dominated by nonnative, introduced annual grasses. Observed species include *Cirsium vulgare* (spear thistle), *Poa pratensis* (Kentucky bluegrass), *Bromus diandrus* (ripgut brome), *Vulpia myuros* (foxtail fescue) *Bromus hordeaceus* (soft brome), *Vicia ssp*. (vetch), *Elymus caput-medusae* (medusahead), *Mentha pulegium* (pennyroyal), *Plantago lanceolata* (English plaintain), *Rumex acetosella* (red sorrel), *Hypericum perforatum* (Klamath weed), *Cynosurus echinatus* (dogtail grass), *Polypogon sp*. (rabbits foot grass), *Trifolium sp*. (clover), *Hypochaeris radicata* (rough cat's-ear), *Brodiaea elegans* (harvest brodiaea) and *Holcus lanatus* (common velvet grass). A small depression was observed to contain *Juncus sp*. (rush) and *Luzula sp*. (woodrush).

Downslope of the PO-1 is the headwaters of an ephemeral watercourse. The open grassland habitat turns into a shady, montane hardwood habitat type with *Toxicodendron diversilobum* (poison oak), *Chlorogalum pomeridianum* (wavyleaf soap plant), *Mentha pulegium* (pennyroyal), *Fragaria vesca* (wild strawberry) and *Rumex crispus* (curly dock).

The proposed cultivation area at PA-1 is a flat, open grassland area with slopes less than 15%. The area was dominated with *Plantago lanceolata* (English plaintain), and *Rumex acetesolla* (red sorrel), both nonnative and invasive species. No sensitive species were observed here. The second proposed cultivation site (PA-2) is approximately 350 feet north of PA-1 and is a highly altered and disturbed, flat area that was cleared out by previous owners. No sensitive species were observed here.

The existing cultivation site CA-1 on APN: 214-111-006 is an established site with no sensitive species observed. Proposed pond site 2 (PO-2) is characterized as a depression in a mixed grassland area with conifer encroachment. Relatively young Douglas firs and tanoak to be removed. Scan of trees did not yield in any nest observations. Few invasive *Cytisus scoparius* (Scotch broom) are to be removed. This site eventually drains into a more forested area with *Toxicodendron diversilobum* (poison oak), *Rubus leucodermis* (whitebark raspberry), *Mentha pulegium* (pennyroyal), *Polypogon sp.* (rabbits foot grass), *Trifolium sp.* (clover), *Hypochaeris radicata* (rough cat's-ear), *Dryopteris sp.* (wood ferns), *Cirsium sp.* (thistle) and *Clinopodium douglasii* (yerba buena).

5.2 Wetlands and SMA areas

Only the areas surrounding cultivation and current project impacts in the parcel were surveyed. A preliminary scoping of the property using Web Soil survey and NWI GIS layers showed that soils on the property are not hydric. Existing project areas and proposed expansion areas did not contain any indications of hydrology, hydric soils or hydrophytic vegetation that would support a wetland. An ephemeral depression was observed in a slight dip in the PO-1 area. All existing and proposed project sites are outside SMA setbacks.

5.3 Northern Spotted Owl

One positive occurrence of *Strix occidentalis caurina* (Northern Spotted Owl) was observed within one mile of project areas in the CNDDB BIOS database. The observation occurred in April of 1999 and is predicted to be associated with the activity center, HUM0958. The activity center HUM0958 was established in 2000 and is approximately 4,400 feet west of existing cultivation area. On site investigation did not yield in a positive sighting or evidence of NSO habitation in the area. Generally, the NSO prefers forests with high, multilayered, multispecies canopy closure with large conifer overstory trees, large snags, large logs, and trees with deformities like broken tops to nest and roost in[5]. The forests surrounding the cleared area was a dense, young forest less than 40 years of age. Given the study area is primarily in annual grassland habitat type, it is an unlikely habitat for the Northern Spotted Owl. However, a protocol level survey was not conducted.

5.4 CNDDB, Special Status Species and other Database Results

The CNDDB BIOS and RareFind, as well as California Native Plant Society (CNPS) databases, were scoped both before and after the field visit to search for reference sites or known occurrences in or around the project area. Scoping results for the nine (9) USGS 7.5 min quads surrounding Miranda are included in Appendix C of this report. Other literature and databases used for consultation to evaluate potential unique biological communities and special-status species include but not limited to:

- USDA's Ecoregion Classification system
- California's Vegetation Classification and Mapping Program (VegCamp)
- U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC)
- National Marine Fisheries Service California Species List Tool (NOAA 2019)
- CalFlora database
- CNPS Inventory of Rare and Endangered Vascular Plants of California online inventory (CNPS)
- CDFW CNDDB/Spotted Owl Viewer online database
- *The Jepson Manual, Vascular Plants of California* Second Edition (Baldwin et al. 2012)
- NRCS Websoil Survey

[5] Spotted Owl Species account https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=10406

- *A Manual of California Vegetation* Second Edition (Sawyer et al. 2009)

The following special status wildlife species have the potential to occur in the study boundary[6][7]. Species such as *Falco peregrinus anatum* (peregrine falcon) and *Montia howelli* (Howell's montia) have been observed within property boundaries. Impacts to special status animals are evaluated in this section based on their likelihood to occur in the area due to habitat needs and natural life history.

Mammals

Special-status wildlife species such as *Pekania pennanti* (west coast fisher), *Martes caurina humboldtensis* (Humboldt marten), *Arborimus pomo* (Sonoma tree vole) and *Lasiurus blossevilli* (western red bat) requires forests and canopy for suitable habitat. Project areas on the property are all historic cattle ranching, altered grassland areas with no suitable habitat for forest wildlife species. At the day of the assessment, no species or evidence of special status wildlife species were observed.

Birds

***Falco peregrinus anatum* (American peregrine falcon)**

The American peregrine falcon is a fully protected species by the State of California. They are the largest falcon over most of the continent with long, pointed wings, and a long tail. They can be observed throughout North America but most commonly along coasts. They perch and nest on water towers, cliffs, and other human made structures. Nest consists of a scrape or a ledge in an open site. Due to their widespread habitat suitability and distribution, there is potential for habitat near and within study boundaries. However, current cultivation activities and proposed sites do not take place within potential nesting habitat and have a low probability of negatively affecting the species. No large rock outcrops were observed in the surrounding area to support nesting habitat. Should further development resulting in disturbance become necessary, Mitigation Measure 3.4-1d of the CCLUO MMRP should be implemented.

Fish

No perennial or fish bearing water courses flow through the subject property. The nearest river is the South Fork Eel River approximately 2.5 miles west and southwest of the property project areas. The South Fork Eel River is known to host *Oncorhynchus mykiss irideus pop. 36* (summer-run North California Coast steelhead) and *Entosphenus tridentatus* (Pacific Lamprey). These species are a California Species of Special Concern and Federally Threatened. Declines in fish populations have been linked to habitat degradation from poor timber harvest practices, mining operations, excessive sport harvesting, road construction and increased sedimentation from poor land management practices. Suitable habitat for state and federally listed anadromous salmonids is likely present within the flowing waters of the South Fork Eel River. The Applicant is currently enrolled with the North Coast Regional Water Board's Cannabis Discharge Waiver Program and will implement sediment and erosion control measures to prevent sediment discharge to nearby watercourses.

Reptiles and Amphibians

No perennial water courses flow through the subject property. There is no riparian habitat near or within the existing cultivation site or proposed sites of the study boundary. Due to the lack of a developed riparian zone, it

[6] California Natural Diversity Database (CNDDB) Rarefind and Bios Commercial Subscription (Accessed via http:// https://www.wildlife.ca.gov/data/cnddb/maps-and-data)
[7] California Native Plant Society (CNPS) Inventory or Rare or Endangered Plants (Accessed via http://www.rareplants.cnps.org/advanced.html)

is unlikely that the existing activities and proposed expansion sites will negatively impact sensitive and listed aquatic and/or riparian-related species. Species requiring colder, permanent water (foothill yellow-legged frog, red-legged frog, southern torrent salamander, pacific tailed frog) are expected in the more permanent tributaries to the South Fork Eel River. The Applicant is currently enrolled with the North Coast Regional Water Board's Cannabis Discharge Waiver Program and will implement sediment and erosion control measures to prevent sediment discharge to nearby watercourses.

Plants

***Montia howellii* (Howelli's montia)**

M. howellii is small, low mat-forming annual herb in the Montiaceae family. It has the California Rare Plant Rank of 2B.2 and is state listed S2 for imperiled. *M. howellii* is found in vernally wet, mesic sites and often in compacted soils. Threats to population include logging, road construction and maintenance, vehicles, and competition. The CNDDB lists an occurrence of *Montia howellii* recorded in 2005 near the southeastern portion of APN 214-112-006. On site investigation of the study area did not yield to any positive observations of this species. The areas of existing and proposed cultivation and pond sites are situated in drier, disturbed grasslands with little habitat for *M. howellii*. It is unlikely that the current and proposed activities will negatively impact *M. howellii*.

6.0 Conclusion and Discussion

Mother Earth Engineering staff conducted a preliminary biological habitat assessment on July 17, 2019 for potential listed species and species of concern at subject property APN 214-111-006 and 214-112-006. Parcel and project areas were scoped using the CDFW's California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) Rare Plant Inventory to determine the extent of project impacts, assess potential habitat for sensitive species and develop guidelines and strategies for mitigation measures, as necessary.

In general, the site was generally well maintained and established. Road traffic, noise, dust and visual impacts were at a minimum. Solid waste pollution or other discharge into terrestrial habitats and further aquatic habitats were not observed. All greenhouses are enclosed by tarp past dusk and no rat poison are in use. The impacts of the proposed expansion of cultivation sites at PA-1 and PA-2 are minimal. Both sites are flat, stable areas that were historically used for cattle grazing. No trees would be removed at either site. At the day of assessment, the vegetation at both sites contained typical grassland, nonnative disturbance species such as *Plantago lanceolata* (English plantain) and *Elymus caput-medusae* (medusa head). Due to historic land use disturbance, lack of forest habitat, and current species composition, it is unlikely that expansion at these sites would negatively affect listed, sensitive species.

The proposed pond location at PO-2 on APN 214-111-006 is characterized as a depression in a mixed grassland area with stands of young Douglas firs. If site at PO-2 is to move forward, relatively young Douglas firs, tanoak, and few invasive *Cytisus scoparius* (Scotch broom) in the center of the depression are to be removed. During site assessment, a scan of trees did not yield in any nest observations.

There is no riparian habitat near or within the existing cultivation site or proposed sites of the study boundary. Due to the lack of a developed riparian zone, it is unlikely that the existing activities and proposed expansion sites will negatively impact sensitive and listed aquatic and/or riparian-related species. Additional consultation with agency staff including the California Department of Fish and Wildlife (CDFW), U.S. Army Corps of

Engineers (USACE), Humboldt County and US Fish and Wildlife Service (USFW) will continue throughout the project application.

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Appendix A

Maps

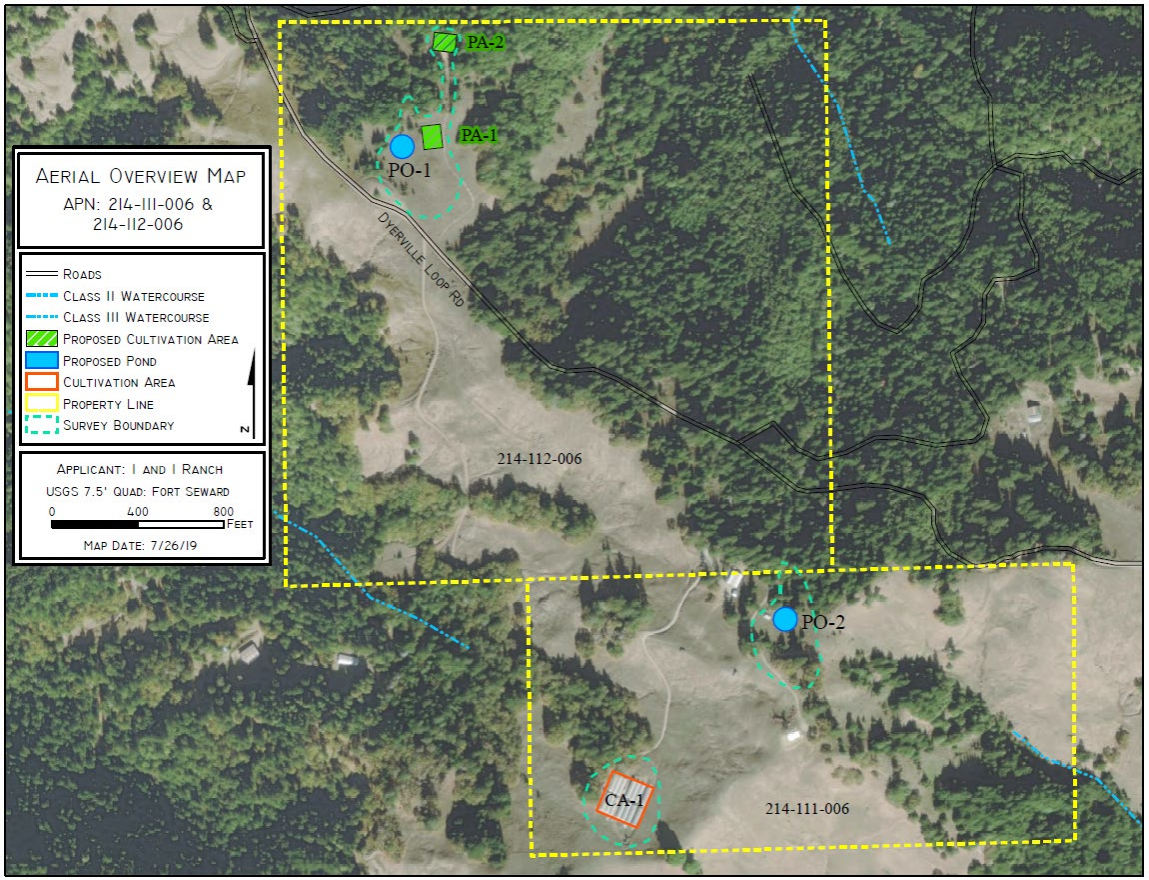

Figure 1: Aerial Overview of the subject property.

APN# 214-112-006-000
Applicant: I and I Ranch, LLC

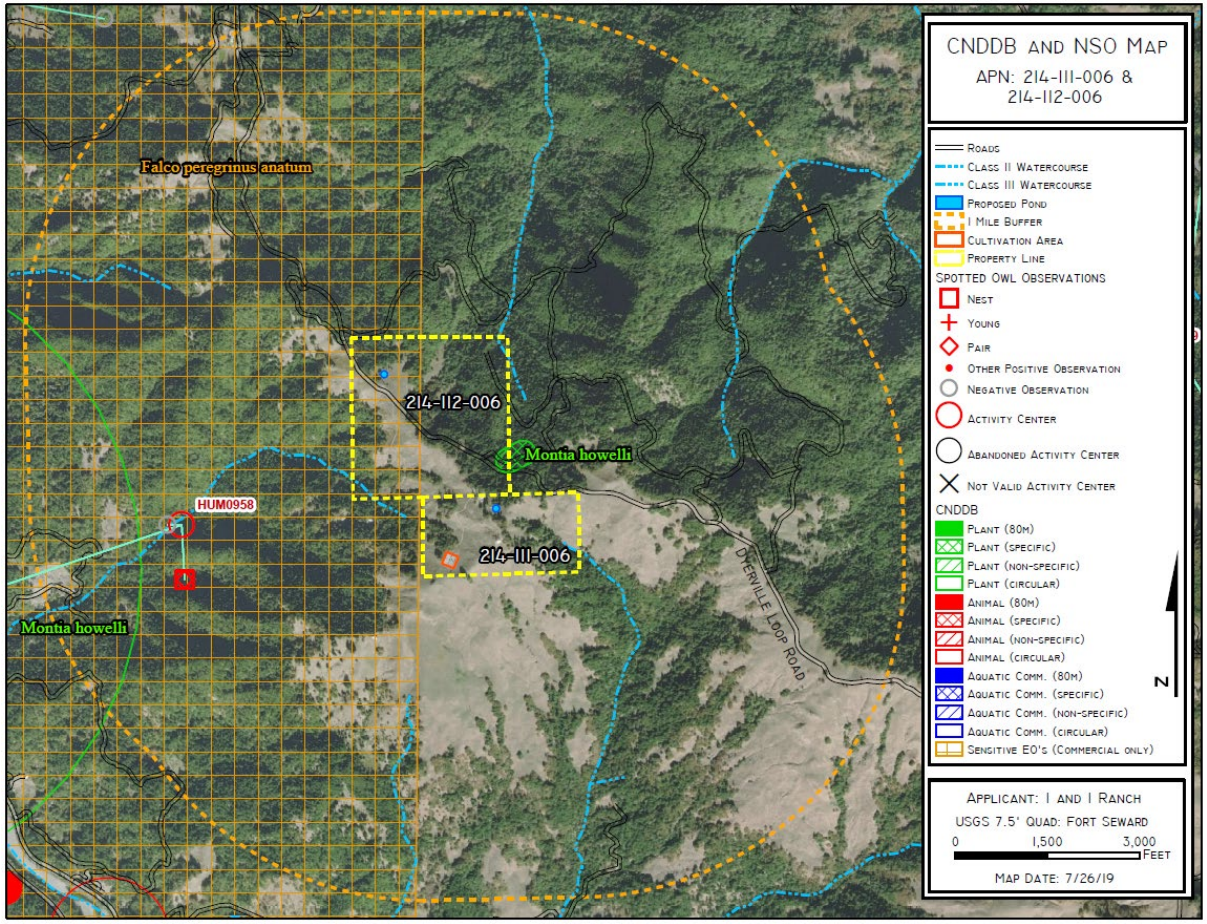

Figure 2: CNDDB and NSO map

Applicant: I and I Ranch, LLC APN# 214-112-006-000

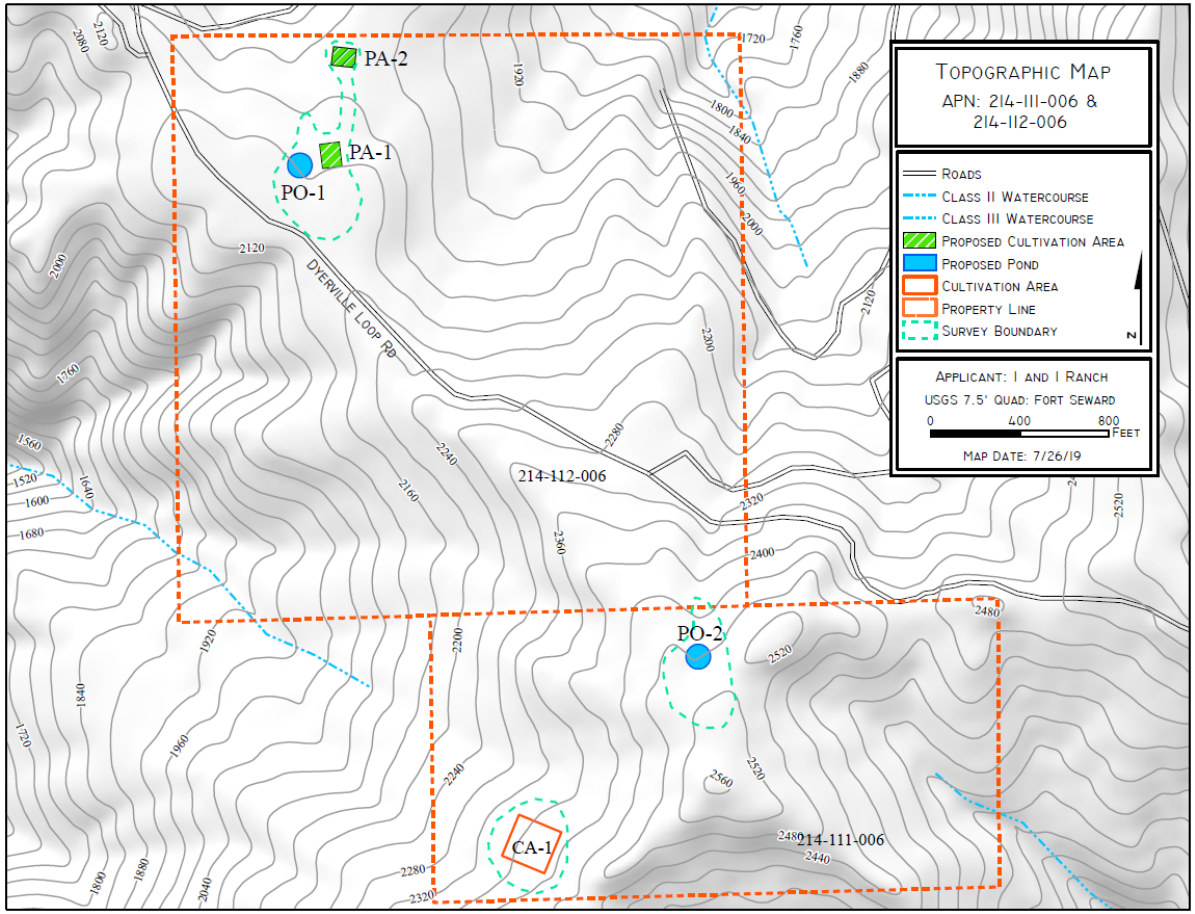

Figure 3 – Topographic map

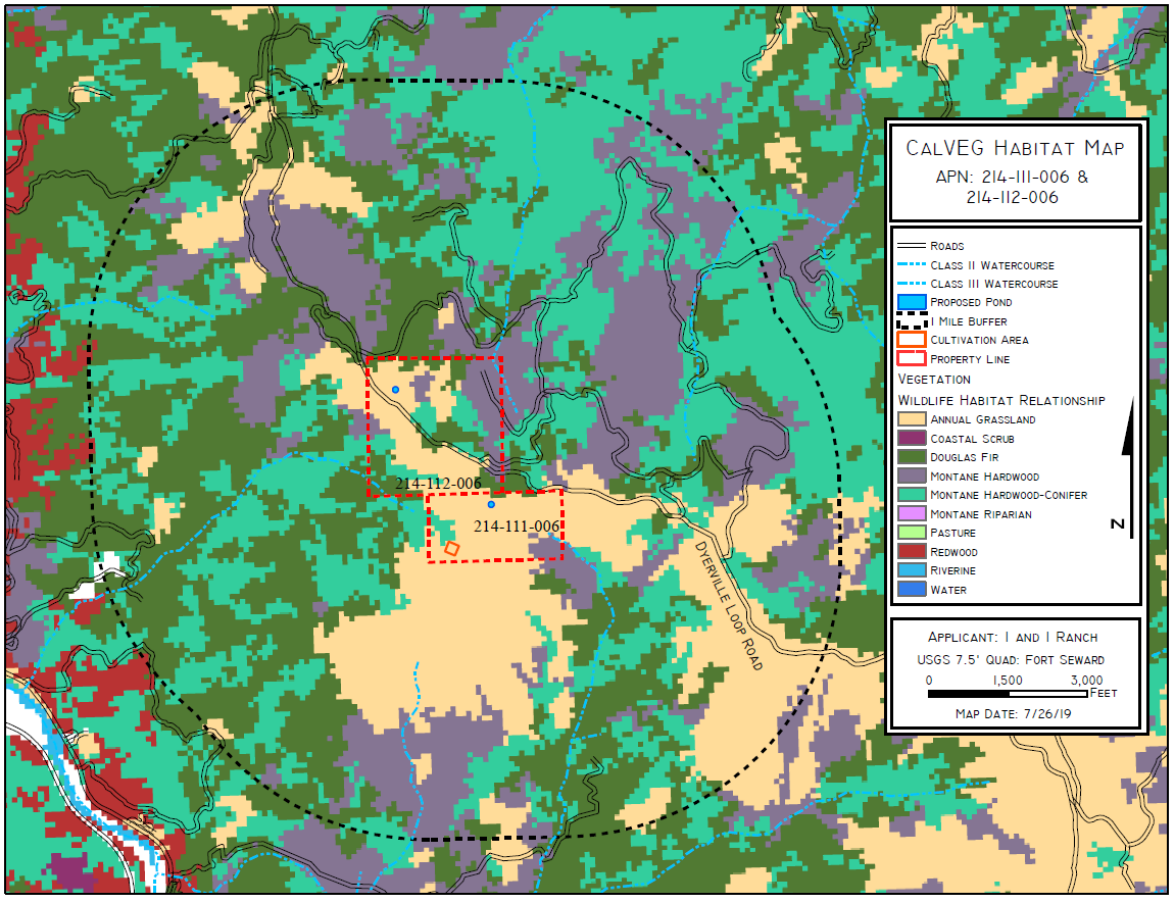

Figure 4 – CalVEG Habitat map for the subject property. The property is characterized as a vegetation mosaic of annual grassland, montane hardwood, Douglas fir and montane hardwood-conifer.

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Appendix B

Photos

Picture 1: View of the proposed pond area PO-1 looking west. Picture taken 17 July 2019.

Picture 2: Another view of the proposed pond area PO-1 looking east. Picture taken 17 July 2019.

Picture 3: Representative vegetation at proposed site PO-1 looking south and upslope. Picture taken 17 July 2019.

Picture 4: A shallow swale observed at PO-1. Picture taken 17 July 2019.

Picture 5: The tree line beginning downslope of PO-1 looking north. Picture taken 17 July 2019.

Picture 6: View of the proposed cultivation area 1 (PA-1). Picture taken 17 July 2019.

Picture 7: Representative vegetation and habitat at PA-1 looking south. Picture taken 17 July 2019.

Picture 8: Another view of PA-1. Picture taken 17 July 2019.

Picture 9: Proposed cultivation site PA-2 approximately 350 ft north of PA-1. Picture taken 17 July 2019.

Picture 10: Proposed cultivation site PA-2 approximately 350 ft north of PA-1. Picture taken 17 July 2019.

Picture 11: Proposed pond site PO-2 on APN: 214-111-006 looking west. Picture taken 17 July 2019.

Picture 12: Downslope of proposed pond site PO-2 on APN: 214-111-006. Picture taken 17 July 2019.

Picture 13: Representative vegetation at proposed pond site PO-2 on APN: 214-111-006. Picture taken 17 July 2019.

Picture 13: Representative vegetation at proposed pond site PO-2 on APN: 214-111-006. Invasive broom to be removed. Picture taken 17 July 2019.

Picture 14: Representative vegetation and habitat at current cultivation area CA-1 seen in foreground on APN: 214-111-006. Picture taken 17 July 2019.

Picture 15: Representative vegetation at the current cultivation site CA-1 on APN: 214-111-006. Picture taken 17 July 2019.

Appendix C

Database Results

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Table 1-CNDDB and CNPS nine-quad database results for the Miranda USGS 7.5' quadrangle July 2019.

Animals

Scientific Name	Common Name	Taxon Group	Other Status	General Habitat	Micro Habitat	Habitat Present in Study Area
Accipiter cooperii	Cooper's hawk	Birds	CDFW_WL-Watch List | IUCN_LC-Least Concern	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Yes
Antrozous pallidus	pallid bat	Mammals	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	No
Aquila chrysaetos	golden eagle	Birds	BLM_S-Sensitive | CDF_S-Sensitive | CDFW_FP-Fully Protected | CDFW_WL-Watch List | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	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.	No
Arborimus pomo	Sonoma tree vole	Mammals	CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	North coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood & montane hardwood-conifer forests.	Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	Potentially present – but unlikely
Ascaphus truei	Pacific tailed frog	Amphibians	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Occurs in montane hardwood-conifer, redwood, Douglas-fir & ponderosa pine habitats.	Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.	No perennial streams in study area.
Bombus caliginosus	obscure bumble bee	Insects	IUCN_VU-Vulnerable	Coastal areas from Santa Barbara county to north to Washington state.	Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.	Yes
Bombus occidentalis	western bumble bee	Insects	USFS_S-Sensitive | XERCES_IM-Imperiled	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.		Yes
Brachyramphus marmoratus	marbled murrelet	Birds	CDF_S-Sensitive | IUCN_EN-Endangered | NABCI_RWL-Red Watch List	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 six miles inland, often in Douglas-fir.	No
Empidonax traillii brewsteri	little willow flycatcher	Birds	USFWS_BCC-Birds of Conservation Concern	Mountain meadows and riparian habitats in the Sierra Nevada and Cascades.	Nests near the edges of vegetation clumps and near streams.	No
Emys marmorata	western pond turtle	Reptiles	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	No

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Erethizon dorsatum	North American porcupine	Mammals	IUCN_LC-Least Concern	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.	Wide variety of coniferous and mixed woodland habitat.	Potentially present in study area.
Falco peregrinus anatum	American peregrine falcon	Birds	CDF_S-Sensitive | CDFW_FP-Fully Protected | USFWS_BCC-Birds of Conservation Concern	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.	No nest sites
Lasiurus blossevillii	western red bat	Mammals	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | WBWG_H-High Priority	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests.	Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Possible foraging, but no roosting trees
Martes caurina humboldtensis	Humboldt marten	Mammals	CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	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.	No
Myotis evotis	long-eared myotis	Mammals	BLM_S-Sensitive | IUCN_LC-Least Concern | WBWG_M-Medium Priority	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests.	Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.	Unlikely – no roost sites
Noyo intersessa	Ten Mile shoulderband	Mollusks		Found in coastal dunes, coastal scrub, and riparian redwood forest habitats.		No
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	Fish	AFS_TH-Threatened	Federal listing refers to populations between Cape Blanco, Oregon and Punta Gorda, Humboldt County, California.	State listing refers to populations between the Oregon border and Punta Gorda, California.	No perennial water in study area
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	Fish	CDFW_SSC-Species of Special Concern	No. Calif coastal streams south to Middle Fork Eel River. Within range of Klamath Mtns province DPS & No. Calif DPS.	Cool, swift, shallow water & clean loose gravel for spawning, & suitably large pools in which to spend the summer.	No perennial water in study area
Pandion haliaetus	osprey	Birds	CDF_S-Sensitive | CDFW_WL-Watch List | IUCN_LC-Least Concern	Ocean shore, bays, freshwater lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	No
Pekania pennanti	fisher - West Coast DPS	Mammals	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	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.	Unlikely – study area is an open grassland
Rana aurora	northern red-legged frog	Amphibians	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	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.	No

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Rana boylii	foothill yellow-legged frog	Amphibians	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened | USFS_S-Sensitive	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	No perennial water in study area
Rhyacotriton variegatus	southern torrent salamander	Amphibians	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	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 rocks within trickling water.	No perennial water in study area
Taricha rivularis	red-bellied newt	Amphibians	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County.	Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	No

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Plants

Scientific Name	Common Name	Family	Lifeform	CRPR	GRank	SRank	Habitat	Micro Habitat	Habitat present in study area
Astragalus agnicidus	Humboldt County milk-vetch	Fabaceae	perennial herb	1B.1	G2	S2	Broadleafed upland forest, North Coast coniferous forest	openings, disturbed areas, sometimes roadsides	Yes
Ceanothus gloriosus var. exaltatus	glory brush	Rhamnaceae	perennial evergreen shrub	4.3	G4T4	S4	Chaparral	Sandy	No
Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	4.2	G4?	S3?	Meadows and seeps, North Coast coniferous forest (streambanks)	Mesic	No
Epilobium septentrionale	Humboldt County fuchsia	Onagraceae	perennial herb	4.3	G4	S4	Broadleafed upland forest, North Coast coniferous forest	sandy or rocky	No
Erigeron biolettii	streamside daisy	Asteraceae	perennial herb	3	G3?	S3?	Broadleafed upland forest, Cismontane woodland, North Coast coniferous forest	rocky, mesic	No – study boundary is too dry
Erythronium oregonum	giant fawn lily	Liliaceae	perennial bulbiferous herb	2B.2	G4G5	S2	Cismontane woodland, Meadows and seeps	sometimes serpentinite, rocky, openings	No
Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	2B.2	G4G5	S3	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	Mesic, streambanks	No – study boundary is too dry
Gilia capitata ssp. pacifica	Pacific gilia	Polemoniaceae	annual herb	1B.2	G5T3	S2	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland		Yes
Howellia aquatilis	water howellia	Campanulaceae	annual herb (aquatic)	2B.2	G3	S2	Marshes and swamps (freshwater)		No, outside elevation range
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	2B.3	G4?	S1S2	North Coast coniferous forest		No
Lathyrus glandulosus	sticky pea	Fabaceae	perennial rhizomatous herb	4.3	G3	S3	Cismontane woodland		Yes
Lilium	redwood lily	Liliaceae	perennial	4.2	G3	S3	Broadleafed upland forest,	Sometimes	No

rubescens			bulbiferous herb				Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	serpentinite, sometimes roadsides	
Listera cordata	heart-leaved twayblade	Orchidaceae	perennial herb	4.2	G5	S4	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest		No
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	4.1	G5	S3	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)	often edges, openings, and roadsides	No
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	4.2	G5	S4	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	mesic, sometimes roadsides	Unlikely
Montia howellii	Howell's montia	Montiaceae	annual herb	2B.2	G3G4	S2	Meadows and seeps, North Coast coniferous forest, Vernal pools	vernally mesic, sometimes roadsides	No – study boundary is too dry
Packera bolanderi var. bolanderi	seacoast ragwort	Asteraceae	perennial rhizomatous herb	2B.2	G4T4	S2S3	Coastal scrub, North Coast coniferous forest	Sometimes roadsides	No – study boundary is too dry
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	1B.2	G3	S3	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	sometimes serpentinite	No
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	4.2	G4G5	S4	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	mesic	No – study boundary is too dry
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	4.2	G3	S3	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	Often in disturbed areas	Unlikely
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	1B.2	G5T2	S2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	often roadcuts	Yes
Tracyina rostrata	beaked tracyina	Asteraceae	annual herb	1B.2	G2	S2	Chaparral, Cismontane woodland, Valley and foothill grassland		Yes
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)	4.2	G4	S4	Broadleafed upland forest, North Coast coniferous forest	On tree branches; usually on old growth	No large conifers in study area

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Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	2B.3	G4G5	S3?	Chaparral, Cismontane woodland, Lower montane coniferous forest		No

Attachment B: Well Completion Report

*The free Adobe Reader may be used to view and complete ...orm. However, software must be purchased to complete, sav... ...d reuse a saved form.

File Original with DWR

Page 1 of 2

Owner's Well Number 1

Date Work Began 02/24/2014 Date Work Ended 2/27/2014

Local Permit Agency Humboldt County E.H.D.

Permit Number 13/14-0169 Permit Date 2/18/14

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0203507

DWR Use Only – Do Not Fill In

State Well Number/Site Number

N W

Latitude Longitude

APN/TRS/Other

Geologic Log

Orientation ○ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Direct Rotary Drilling Fluid Air

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
0	14	Reddish Clay
14	43	Reddish Weathered Sandstone
43	65	Green Serpentine
65	135	Grey Fractured Sandstone
135	163	Dk. Grey Shale W/Sandstone

RECEIVED

MAR 5 2014

HUMBOLDT CO. DIVISION OF ENVIRONMENTAL HEALTH

Total Depth of Boring 163 Feet

Total Depth of Completed Well 160 Feet

Well Owner

Name [redacted]

Mailing Address [redacted]

City [redacted] State [redacted] Zip [redacted]

Well Location

Address [redacted]

City Garberville County Humboldt

Latitude ___ ___ ___ N Longitude ___ ___ ___ W

Deg. Min. Sec. Deg. Min. Sec.

Datum ___ Dec. Lat. ___ Dec. Long. ___

APN Book 214 Page 111 Parcel 06

Township ___ Range ___ Section ___

Location Sketch

(Sketch must be drawn by hand after form is printed.)

North

West East

South

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

- (•) New Well
- ○ Modification/Repair
  - ○ Deepen
  - ○ Other ___
- ○ Destroy

Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

- (•) Water Supply
  - ☑ Domestic ☐ Public
  - ☐ Irrigation ☐ Industrial
- ○ Cathodic Protection
- ○ Dewatering
- ○ Heat Exchange
- ○ Injection
- ○ Monitoring
- ○ Remediation
- ○ Sparging
- ○ Test Well
- ○ Vapor Extraction
- ○ Other ___

Water Level and Yield of Completed Well

Depth to first water 75 (Feet below surface)

Depth to Static Water Level ___ (Feet) Date Measured 02/26/2014

Estimated Yield * 3 (GPM) Test Type Air Lift

Test Length 4.0 (Hours) Total Drawdown 155 (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	80	10	Blank	PVC Sch. 80	CL200	5		
80	160	10	Screen	PVC Sch. 80	CL200	5	Milled Slots	0.032

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	20	Bentonite	Sanitary Seal
20	160	Filter Pack	3/8" Pea Gravel

Attachments

- ☐ Geologic Log
- ☐ Well Construction Diagram
- ☐ Geophysical Log(s)
- ☐ Soil/Water Chemical Analyses
- ☑ Other Location Maps

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name FISCH DRILLING

Person, Firm or Corporation

3150 JOHNSON RD. HYDESVILLE CA 95547

Address City State Zip

Signed [signature] 02/28/2014 683865

C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2008

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY ... ...ERED FORM

April 24, 2021