APPENDIX A
SITE PHOTOGRAPHS

Figure 1-Groundwater Well B. (photo from 1600 Addendum)

Figure 2- Groundwater Well A. (photo from 1600 Addendum)

Figure 3-Water Storage Tanks, 2,500-gallon each. (photo from 1600 Addendum)

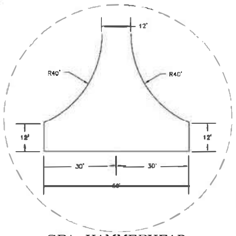
Figure 4- Two 500-gallon Mixing Tanks. (photo from 1600 Addendum)

Figure 5- Two 30’ x 96’ Cannabis Cultivation Greenhouses. (photo from 1600 Addendum)

APPENDIX B
SITE MAP

PLOT PLAN
APN: 210-250-022
101 LARRABEE VALLEY ROAD, BRIDGEVILLE, CA. 95526

FOR
STEPHEN GUNN
3831 WALNUT DRIVE, EUREKA, CA 95503



SRA HAMMERHEAD
T TURNAROUND DETAILS
1"=20'

CULTIVATION TOTALS

EXISTING CULTIVATION AREA

PERMIT	LABEL	SIZE	AMOUNT	SQUARE FOOTAGE
#12091	GREENHOUSE 1-2	27'X100'	(4)	5,400 SF
	GREENHOUSE 3	27'X111'	(1)	2,997 SF
	PART OF GREENHOUSE 4	27'X59.37'	(1)	1,603 SF
	#12093 TOTAL SQUARE FOOTAGE:			10,000 SF
#12093	GREENHOUSE 5-11	27'X100'	(7)	18,900 SF
	PART OF GREENHOUSE 4	27'X40.61'	(1)	1,097 SF
	#12093 TOTAL SQUARE FOOTAGE:			19,997 SF
	TOTAL EXISTING CULTIVATION AREA:			29,997 SF

PROPOSED CULTIVATION AREA

PERMIT	LABEL	SIZE	AMOUNT	SQUARE FOOTAGE
#12095	GREENHOUSE 12-19	25'X100'	(8)	20,000 SF
#12288	GREENHOUSE 20-27	25'X100'	(8)	20,000 SF
#12253	GREENHOUSE 28-35	25'X100'	(8)	20,000 SF
	TOTAL PROPOSED CULTIVATION AREA:			60,000 SF

NURSERY TOTALS

(2) (30'X96') GREENHOUSES 36-37
(1) (30'X108') GREENHOUSE 38
(2,880) + (2,880) + (3,240) = 9,000 SF

CULTIVATION NOTES

REFUSE AREA, COMPOST AREA, AND PESTICIDE/AGRICULTURAL CHEMICAL STORAGE AREA TO BE SHARED AMONG (2) PREMISES ON PROPERTY.

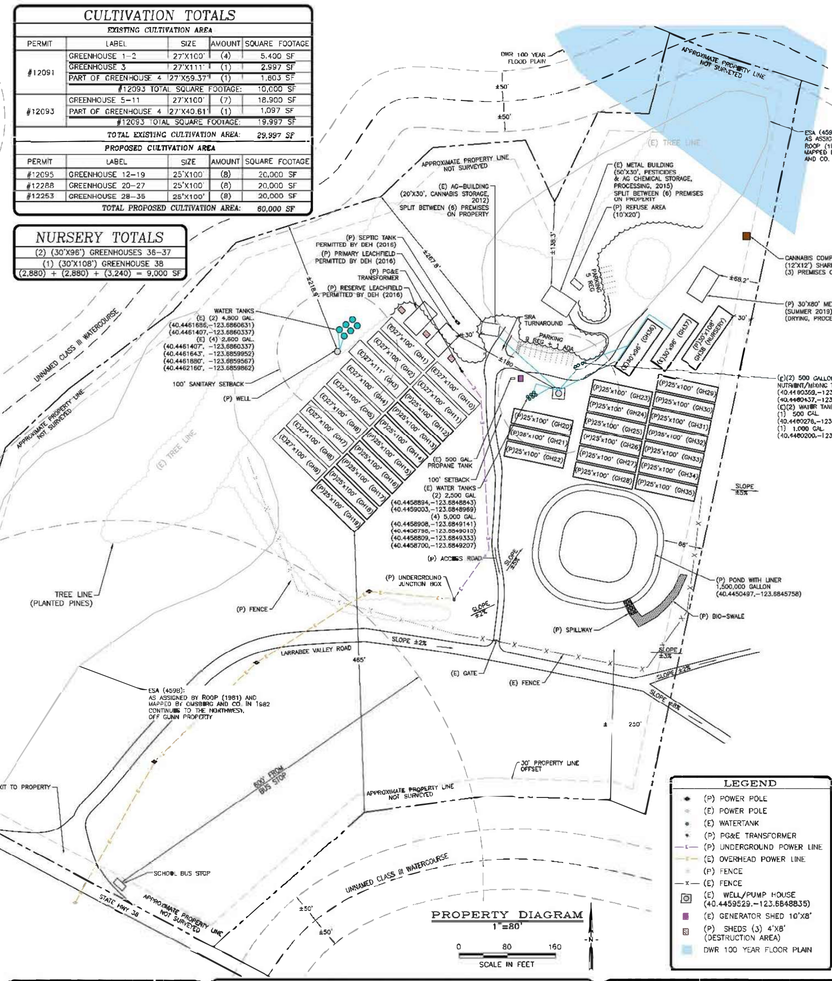
12'X12' COMPOST AREA SHARED AMONG (2) PREMISES ON PROPERTY.

THERE ARE NO SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, PUBLIC PARKS, OR TRIBAL CULTURAL RESOURCES WITHIN 600' OF CULTIVATION AREAS.

THERE ARE NO OFFSITE RESIDENCES WITHIN 300' OF CULTIVATION AREAS.

OD START PROPAGATING BEGINS LATER IN SEASON THAN LIGHT DEPRAVATION PROPAGATING WHEN NOT PROPAGATING OD PLOTS START. STARTS FOR GREENHOUSE PLOTS WILL BE IDENTIFIED.

ONLY ONE PERMIT TO BE PROCESSED AT A TIME: NO COMMINGLING OF PERMITS ON SITE

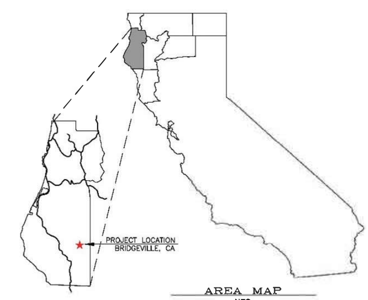


PROPERTY DIAGRAM
1"=80'

0 80 160
SCALE IN FEET

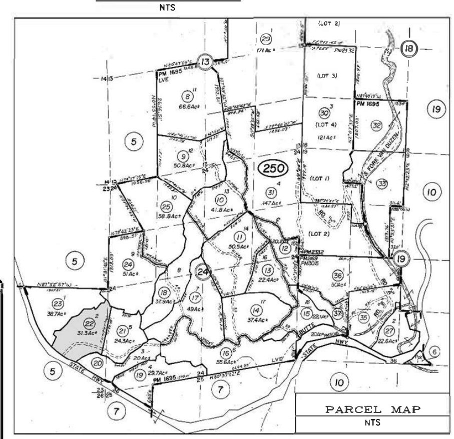
LEGEND

Symbol	Description
	(P) POWER POLE
	(E) POWER POLE
	(E) WATERTANK
	(P) PG&E TRANSFORMER
—E—	(P) UNDERGROUND POWER LINE
—E—	(E) OVERHEAD POWER LINE
	(P) FENCE
—x—	(E) FENCE
	(E) WELL/PUMP HOUSE (40.4459529,-123.6848835)
	(E) GENERATOR SHED 10'X8'
	(P) SHEDS (3) 4'X8' (DESTRUCTION AREA)
	DWR 100 YEAR FLOOR PLAIN



VICINITY MAP
NTS

AREA MAP
NTS



PARCEL MAP
NTS

G ENERALNOTES

WATER: WELL
WASTEWATER: ONSITE WASTEWATER TREATMENT SYSTEM
POWER: PG&E
PHONE: VERIZON
CREEKS/STREAMS: TWO CLASS III STREAMS
TREES TO BE REMOVED: 31 PINE TREES
GRADING: >50 CY

SRA REQUIREMENTS

PROVIDE ADEQUATE WATER STORAGE AND DELIVERY AS OUTLINED BY SRA ORDINANCE AND CALFIRE REQUIREMENTS

PROVIDE ADEQUATE TURN AROUND AND PULLOUTS AS OUTLINED BY SRA ORDINACE REQUIREMENTS AND CALFIRE REQUIREMENTS

SURVEY NOTES

A FIELD SURVEY FOR TOPOGRAPHIC PURPOSES WAS CONDUCTED BY TRINITY VALLEY CONSULTING ENGINEERS (TVCE) IN 2017. A BOUNDARY SURVEY WAS NOT CONDUCTED. ALL PROPERTY LINES DEPICTED ON THESE PLANS REFLECT APPROXIMATE LOCATIONS BASED ON COUNTY RECORDS.

CONTRACTOR ALERT!

CONTRACTOR MUST CONTACT USA DIG AT 800-227-2600 AT LEAST 72 HOURS BEFORE ANY EARTHWORK OR ACTIVITIES THAT MAY IMPACT EXISTING UNDERGROUND UTILITIES

EXISTING UTILITY ALIGNMENTS BOTH HORIZONTALLY AND VERTICALLY MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION ACTIVITIES.

WASTE HANDLING NOTES

REFUSE SHALL BE STORED ON A CONCRETE SLAB AND UNDER ROOF COVER OR IN A PORTABLE/LOCKABLE DUMPSTER. REFUSE MUST BE HAULED TO AN APPROVED WASTE FACILITY WEEKLY

COMPOST SHALL BE STORED AND COMPOSTED ONSITE ON EXISTING 30'X30' CONCRETE SLAB. CANNABIS WASTE CANNOT EXCEED 50% OF THE GENERATED ORGANIC MATERIAL.

CANNABIS WASTE TO BE STORED IN DESIGNATED HOLDING AREA PRIOR TO COMPOSTING, PER STATE REGULATIONS.

PARKING REQUIREMENTS NOTES

1. HUMBOLDT COUNTY ZONING REGULATIONS (109.1.3.4.2)
(1) PARKING SPACE FOR EACH EMPLOYEE AT THE PEAK SHIFT. A MINIMUM OF (2) SPACES ARE REQUIRED.
2. CALIFORNIA BUILDING CODE (11B-208.1)
1-25 PARKING SPACES PROVIDED = 1 REQUIRED ADA SPACE

14 EMPLOYEES = 14 PARKING SPACES + 1 ADA PARKING SPACE

GENERATOR REQUIREMENTS:

1. THE NOISE PRODUCED BY A GENERATOR USED FOR CANNABIS CULTIVATION SHALL NOT BE AUDIBLE BY HUMANS FROM NEIGHBORING RESIDENCES. THE DECIBEL LEVEL FOR GENERATORS AT THE PROPERTY LINE SHALL BE NO MORE THAN 60 DECIBELS. WHERE APPLICABLE, SOUND LEVELS MUST ALSO SHOW THAT THEY WILL NOT RESULT IN THE HARASSMENT OF MARBLED MURRELET OR SPOTTED OWL SPECIES. WHEN GENERATOR USE IS TO OCCUR IN THE VICINITY OF POTENTIAL HABITAT, CONFORMANCE WILL BE EVALUATED USING CURRENT AUDITORY DISTURBANCE GUIDANCE PREPARED BY THE UNITED STATE FISH AND WILDLIFE SERVICE, AND FURTHER CONSULTATION WHERE NECESSARY.
2. NOISE SHELTER WILL BE CONSTRUCTED FOR MOBILE GENERATORS. SHELTER WILL BE CONSTRUCTED FROM LUMBER FRAMING, PLYWOOD PROTECTION, AND FIRE RESISTANT INSULATION IF NECESSARY.
3. STORAGE OF FUEL. FUEL SHALL BE STORED AND HANDLED IN COMPLIANCE WITH APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS, AND IN SUCH A WAY THAT NO SPILLAGE OCCURS.

TVCE
67 WALNUT WAY
PO BOX 1567
WILLOW CREEK, CA 95573
PHONE (530) 629-3000
FAX (530) 629-3011

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

STEPHEN GUNN
3831 WALNUT DRIVE, EUREKA, CA 95503

PLOT PLAN
101 LARRABEE VALLEY ROAD, BRIDGEVILLE, CA
APN: 210-250-022

DRAWN BY:	A. DOMINICK
DESIGNED BY:	T. LYNN
CHECKED BY:	J. McKNIGHT
APPROVED BY:	TVCE
DATE OF ISSUE:	DECEMBER 2020
SCALE:	AS SHOWN
PROJECT NO:	1161.01
DRAWING NO:	T01

TRINITY VALLEY CONSULTING ENGINEERS, INC.

APPENDIX C
RARE PLANT DATABASE/HABITAT SUITABILITY DATABASE

Table 1. CNPS Rare Plant Inventory Nine-quad Search Results with Habitat Suitability[1].

Scientific Name	Common Name	List	Habitat	Low (ft)	High (ft)	Habitat Present on Site
Allium hoffmanii	Beegum onion	4.3	Lower montane coniferous forest (serpentinite)	3605	5905	No-Project too low in elevation.
Anisocarpus scabridus	scabrid alpine tarplant	1B.3	Upper montane coniferous forest (metamorphic, rocky)	5410	7545	No-Project too low in elevation.
Arctostaphylos hispidula	Howell's manzanita	4.2	Chaparral (serpentinite or sandstone)	390	4100	Unlikely-Chaparral not present.
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	1295	5300	Possible-
Arnica spathulata	Klamath arnica	4.3	Lower montane coniferous forest (serpentinite)	2095	5905	Unlikely-Serpentinite not present.
Astragalus agnicidus	Humboldt County milk-vetch	1B.1	Broadleafed upland forest, North Coast coniferous forest	390	2625	Possible-Broadleafed upland forest present.
Astragalus rattanii var. rattanii	Rattan's milk-vetch	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	95	2705	Unlikely-Chaparral, Cismontane woodland not present. Streambanks present.
Astragalus umbraticus	Bald Mountain milk-vetch	2B.3	Cismontane woodland, Lower montane coniferous forest	490	4100	Unlikely-Cismontane woodland and Lower montane coniferous forest not present.
Calycadenia micrantha	small-flowered calycadenia	1B.2	Chaparral, Meadows and seeps (volcanic), Valley and foothill grassland	15	4920	Possible-Valley and foothill grassland present.
Carex praticola	northern meadow sedge	2B.2	Meadows and seeps (mesic)	0	10500	Possible-Meadow areas present.
Carex scabriuscula	Siskiyou sedge	4.3	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	2325	7695	Unlikely- Lower montane coniferous forest, meadow and seep, and upper montane coniferous forest not present.
Collomia tracyi	Tracy's collomia	4.3	Broadleafed upland forest, Lower montane coniferous forest	980	6890	Possible-Broadleafed upland forest present.
Coptis laciniata	Oregon goldthread	4.2	Meadows and seeps, North Coast coniferous forest (streambanks)	0	3280	Possible-Meadow areas present.
Cryptantha rostellata	red-stemmed cryptantha	4.2	Cismontane woodland, Valley and foothill grassland	130	2625	Possible-Valley and foothill grassland present.
Cypripedium fasciculata	clustered lady's-slipper	4.2	Lower montane coniferous forest, North Coast coniferous forest	325	7990	Unlikely-Lower montane coniferous forest and North Coast coniferous forest not present.
Cypripedium montane	mountain lady's-slipper	4.2	Broadleafed upland forest, Cismontane woodland, Lower montane coniferous forest, North Coast coniferous forest	605	7300	Possible- Broadleaf Upland forest present.
Epilobium organum	Oregon fireweed	1B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	1640	7350	Unlikely- Bogs and fens, Lower montane coniferous forest, meadow and seep and Upper montane coniferous forest not present.
Epilobium septentrional	Humboldt County fuchsia	4.3	Broadleafed upland forest, North Coast coniferous forest	145	5905	Possible-Broadleafed upland forest present.
Erigeron septentrional	Mad River fleabane daisy	1B.2	Lower montane coniferous forest, Meadows and seeps (open, dry)	4180	4920	Possible-Meadow areas present.
Erythronium organum	giant fawn lily	2B.2	Cismontane woodland, Meadows and seeps	325	3775	Possible-Meadow areas present.
Erythronium revoluta	coast fawn lily	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	0	5250	Possible-Broadleafed upland forest present.
Bucephalus glabrate	Siskiyou aster	4.3	Lower montane coniferous forest, Upper montane coniferous forest	390	8875	Unlikely- Lower montane coniferous forest and Upper montane coniferous forest not present.
Fritillaria glauca	Siskiyou fritillaria	4.2	Alpine boulder and rock field, Subalpine coniferous forest, Upper montane coniferous forest	5690	8005	No-Project too low in elevation.

[1] *Inventory of Rare and Endangered Vascular Plants. California Native Plants Society. 2018. http://rareplants.cnps.org/.*

Epilobium organum	Oregon fireweed	1B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	1640	7350	Unlikely- Bogs and fens, Lower montane coniferous forest, meadow and seep and Upper montane coniferous forest not present.
Epilobium septentrional	Humboldt County fuchsia	4.3	Broadleafed upland forest, North Coast coniferous forest	145	5905	Possible-Broadleafed upland forest present.
Erigeron septentrional	Mad River fleabane daisy	1B.2	Lower montane coniferous forest, Meadows and seeps (open, dry)	4180	4920	Possible-Meadow areas present.
Erythronium organum	giant fawn lily	2B.2	Cismontane woodland, Meadows and seeps	325	3775	Possible-Meadow areas present.
Erythronium revoluta	coast fawn lily	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	0	5250	Possible-Broadleafed upland forest present.
Bucephalus glabrate	Siskiyou aster	4.3	Lower montane coniferous forest, Upper montane coniferous forest	390	8875	Unlikely- Lower montane coniferous forest and Upper montane coniferous forest not present.
Fritillaria glauca	Siskiyou fritillaria	4.2	Alpine boulder and rock field, Subalpine coniferous forest, Upper montane coniferous forest	5690	8005	No-Project too low in elevation.

Gilia capitata ssp. Pacifica	Pacific gilia	1B.2	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland	15	5465	Possible-Valley and foothill grassland present.
Hossack Hossack	Yolla Bolly Mtns. bird's-foot trefoil	1B.2	Meadows and seeps, Upper montane coniferous forest (openings)	5395	7005	No-Project too low in elevation.
Howellia aquatilis	water howellia	2B.2	Marshes and swamps (freshwater)	3555	4230	No-Project too low in elevation.
Kopsiopsis hookeri	small groundcone	2B.3	North Coast coniferous forest	295	2905	Unlikely-North Coast coniferous forest not present.
Lathyrus biflorus	two-flowered pea	1B.1	Lower montane coniferous forest (serpentinite)	4490	4545	No-Project too low in elevation.
Lilium rubescens	redwood lily	4.2	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	95	6265	Possible- Broadleaf Upland forest present.
Listera cordata	heart-leaved twayblade	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	15	4495	Unlikely- Bogs and fens, lower montane coniferous forest, and North Coast coniferous forest not present.
Lupinus constancei	The Lassics lupine	1B.1	Lower montane coniferous forest (serpentinite)	4920	6560	No-Project too low in elevation.
Lupinus elmeri	South Fork Mountain lupine	1B.2	Lower montane coniferous forest	3995	6560	No-Project too low in elevation.
Lycopodium clavatum	running-pine	4.1	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)	145	4020	Unlikely- Lower montane coniferous forest, marshes and swamps, and North Coast coniferous forest not present.
Meesia triquetra	three-ranked hump moss	4.2	Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest (mesic)	4265	9690	No-Project too low in elevation.

Mitellastra caulescens	leafy-stemmed mitrewort	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	15	5575	Possible-Meadow areas present.
Montia howellii	Howell's montia	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools	0	2740	Possible-Meadow areas present.
Packera bolanderi var. bolanderi	seacoast ragwort	2B.2	Coastal scrub, North Coast coniferous forest	95	2135	No-Project too high in elevation.
Piperia candida	white-flowered rein orchid	1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	95	4300	Possible- Broadleaf Upland forest present.
Pityopus californicus	California pinefoot	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	45	7300	Possible- Broadleaf Upland forest present.
Platanthera stricta	slender bog-orchid	4.2	Lower montane coniferous forest, Meadows and seeps	3280	7545	No-Project too low in elevation.
Ptilidium californicum	Pacific fuzz wort	4.3	Lower montane coniferous forest, Upper montane coniferous forest	3740	5905	No-Project too low in elevation.
Ribes laxiflorum	trailing black currant	4.3	North Coast coniferous forest	15	4575	Unlikely-North Coast coniferous forest not present.
Sabulina decumbens	The Lassics sandwort	1B.2	Lower montane coniferous forest, Upper montane coniferous forest	4920	5495	No-Project too low in elevation.
Sanicula tracyi	Tracy's sanicle	4.2	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	325	5200	Unlikely- Cismontane woodland, Lower montane coniferous forest, and Upper montane coniferous forest not present.
Sedum laxum ssp. flavidum	pale yellow stonecrop	4.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	1490	6560	Possible- Broadleaf Upland forest present.
Sidalcea malachroides	maple-leaved checkerbloom	4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	0	2395	Possible- Broadleaf Upland forest present.
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	45	2885	Unlikely- Coast bluff scrub, Coastal prairie, and North Coast coniferous forest not present.
Thermopsis robusta	robust false lupine	1B.2	Broadleafed upland forest, North Coast coniferous forest	490	4920	Possible-Broadleafed upland forest present.
Usnea longissima	Methuselah's beard lichen	4.2	Broadleafed upland forest, North Coast coniferous forest	160	4790	Possible-Broadleafed upland forest present.
Wyethia longicaulis	Humboldt County wyethia	4.3	Broadleafed upland forest, Coastal prairie, Lower montane coniferous forest	2460	5005	Possible- Broadleaf Upland forest present.

Table 1. CNDDB Nine-quad Search Results with Habitat Suitability[1].

Scientific Name	Common Name	List	Habitats	General Habitat	Habitat Present on Site
Accipiter cooperii	Cooper's hawk	N	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.	Possible- Riparian areas present.
Accipiter gentilis	northern goshawk	N	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.	Unlikely- No North coast coniferous forest or Subalpine coniferous forest.
Aquila chrysaetos	golden eagle	N	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.	Possible- Broadleaved upland forest and Valley and foothill grassland present.
Arborimus pomo	Sonoma tree vole	N	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 occasionaly take needles of grand fir, hemlock or spruce.	Unlikely- Not much Old growth or Redwood.
Ascaphus truei	Pacific tailed frog	N	Occurs in montane hardwood-conifer, redwood, Douglas-fir & ponderosa pine habitats.	Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.	Possible- Riparian areas present.
Atractelmis wawona	Wawona riffle beetle	N	Aquatic; found in riffles of rapid, small to medium clear mountain streams; 2000-5000 ft elev.	Strong preference for inhabiting submerged aquatic mosses	Possible- Riparian areas present.
Bombus caliginosus	obscure bumble bee	N	Coastal areas from Santa Barbara county to north to Washington state.	Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.	Possible- Prefer coastal areas.
Bombus occidentalis	western bumble bee	Ca CE	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.		No habitat stated.
Corynorhinus townsendii	Townsend's big-eared bat	N	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.	Possible- Broadleaved upland forest and Valley and foothill grassland present.

[1] *California Natural Diversity Database*. California Department of Fish and Wildlife. 2019. https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data.

Emys marmorata	western pond turtle	N	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.	Possible- Riparian areas present.
Erethizon dorsatum	North American porcupine	N	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.	Possible- Broadleaved upland forest.
Falco peregrinus anatum	American peregrine falcon	FD Ca D	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.	Possible- Riparian areas present.
Martes caurina humboldtensis	Humboldt marten	Ca E	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.	Unlikely- No North coast coniferous forest or Old growth present.
Myotis evotis	long-eared myotis	N	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.	Possible- forested woodland areas present.
Myotis volans	long-legged myotis	N	Most common in woodland and forest habitats above 4000 ft. 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.	Unlikely- No Upper montane coniferous forest present.
North Central Coast Summer Steelhead Stream	North Central Coast Summer Steelhead Stream	N			Possible- Riparian areas present.
Noyo intersessa	Ten Mile shoulderband	N	Found in coastal dunes, coastal scrub, and riparian redwood forest habitats.		Possible- Riparian areas present.
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	Ca CE	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.	Possible- Flowing waters on parcel. May be too inland.
Pandion haliaetus	osprey	N	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.	Possible- Riparian areas present.

Pekania pennanti	fisher - West Coast DPS	Ca T	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.	Possible- Riparian areas present.
Rana aurora	northern red-legged frog	N	Humid forests, woodlands, grasslands, and streamside 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.	Possible- Riparian areas present.
Rana boylii	foothill yellow-legged frog	Ca CT	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.	Possible- Riparian areas present.
Rhyacotriton variegatus	southern torrent salamander	N	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.	Possible- Riparian areas present.
Upland Douglas Fir Forest	Upland Douglas Fir Forest	N			No

APPENDIX D

TRIBAL CONSULTATION LETTERS

COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING DIVISION

3015 H Street • Eureka CA 95501
Phone: (707) 445-7541 • Fax: (707) 268-3792

May 12, 2021

Bear River Band of Rohnerville Rancheria
Josefina Cortez, Chairwoman
266 Keisner Drive
Loleta, CA 95551

FROM: Humboldt County Planning & Building Department

RE: 12095, MDF Enterprises

Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Josefina Cortez, Chairwoman:

Below please find a description of the proposed project, a description of the project location, and a copy of the cultural resources report dated May 2018, updated site plan and confirmation of findings.

Project Description
MDF is proposing mixed light cultivation on the 31.85-acre property associated with the APN:210-250-022. Cultivation areas include the following greenhouses.

1. (10) Existing 27'x100' greenhouses
2. (1) Existing 27'x111' greenhouses
3. (8) Proposed 25'x100' greenhouses
4. (16) Proposed 25'x100' greenhouses

Total nursery area will equal 10% of the total permitted cultivation area and include the following structures.

1. (2) Existing 30'x96' greenhouses
2. (1) Proposed 30'x108' nursery building

Total cultivation areas, inclusive of existing, as well as proposed new cultivation and five different ZCCs, will be 90,000 s.f. ZCC #12091 entails approximately 10,000 ft^2 approved by the County, of which 5,500 ft^2 will be new cultivation. ZCC #12093 consists of 20,000 ft^2 of approved RRR from less suitable property. Still pending, is another 20,000 ft^2, ZCC #12095. The last two ZCCs #12253 and #12288 both involve 20,000 ft^2 of proposed RRR cultivation from APNs 104-192-001 and 104-192-019.

Project Location
The project is located in Humboldt County, in the Larabee Valley area, on the North side of State Hwy 36, at the intersection of State Hwy 36 and Larabee Valley Road, on the property known as 101 Larabee Valley Road.

Lead Agency Point of Contact
Desmond Johnston, Senior Planner
Humboldt County Planning & Building Department
3015 H Street

Eureka, CA 95501-4484
Phone: 707-441-2622
djohnston@co.humboldt.ca.us

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the Humboldt County Planning & Building Department.

Respectfully,

Desmond Johnston

Desmond Johnston
Senior Planner

Cc: Erika Cooper, Tribal Historic Preservation Officer

Attachment: 12095 Cultural Resource Investigation

COUNTY OF HUMBOLDT

PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING DIVISION

3015 H Street • Eureka CA 95501
Phone: (707) 445-7541 • Fax: (707) 268-3792

May 12, 2021

Bear River Band of Rohnerville Rancheria
Edward "Gusto" Bowie, Cultural Liaison
266 Keisner Drive
Loleta, CA 95551

FROM: Humboldt County Planning & Building Department

RE: 12095, MDF Enterprises

Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Edward "Gusto" Bowie:

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Lead Agency Point of Contact

Desmond Johnston, Senior Planner
Humboldt County Planning & Building Department

Eureka, CA 95501-4484
Phone: 707-441-2622
djohnston@co.humboldt.ca.us

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Respectfully,

Desmond Johnston

Desmond Johnston
Senior Planner

Cc: Erika Cooper, Tribal Historic Preservation Officer

Attachment: 12095 Cultural Resource Investigation

COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING DIVISION

3015 H Street • Eureka CA 95501
Phone: (707) 445-7541 • Fax: (707) 268-3792

May 12, 2021

Cher-Ae Heights Indian
Community of the Trinidad Rancheria
Garth Sundberg, Chairperson
P.O. Box 630
Trinidad, CA, 95570-0630

FROM: Humboldt County Planning & Building Department

RE: 12095, MDF Enterprises

Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Garth Sundberg:

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Lead Agency Point of Contact
Desmond Johnston, Senior Planner
Humboldt County Planning & Building Department

3015 H Street
Eureka, CA 95501-4484
Phone: 707-441-2622
djohnston@co.humboldt.ca.us

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the Humboldt County Planning & Building Department.

Respectfully,

Desmond Johnston

Desmond Johnston
Senior Planner

Attachment: 12095 Cultural Resource Investigation

Local Government Tribal Consultation List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

■ **CEQA Tribal Consultation List (AB 52)** – *Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2*

☐ **General Plan (SB 18)** - *Per Government Code § 65352.3.*

Local Action Type:

☐ **General Plan** ☐ **General Plan Element** ☐ **General Plan Amendment**

☐ **Specific Plan** ☐ **Specific Plan Amendment** ☐ **Pre-planning Outreach Activity**

Required Information

Project Title: MDF Enterprises, Inc. - Zoning Clearance Certificate 12095

Local Government/Lead Agency: Humboldt County

Contact Person: Desmond Johnston

Street Address: 315 H Street

City: Eureka **Zip:** 95501

Phone: (707) 441-2622 **Fax:**

Email: djohnston@co.humboldt.ca.us

Specific Area Subject to Proposed Action

County: Humboldt County **City/Community:** Bridgeville, CA

Project Description:

A Zoning Clearance Certificate for RRR of an existing 10,000 square foot mixed light medical cannabis cultivation operation on APN: 210-141-011-000 to be relocated to APN 210-250-022 (Apps 12091; APN 210-250-022). The Applicant is requesting 20,000 square feet of mixed light medical cannabis cultivation on APN 210-250-022 under the RRR incentive program. A Restoration, Mitigation and Monitoring Plan has been submitted. The site is subject to a Cleanup and Abatement Order from the North Coast Regional Water Quality Control Board (CAO#R1-2015-0048). Restoration activities include 1) restoration of the stream channel disturbed by the pond and earthen dam to pre-disturbance conditions; 2) measures to reduce or eliminate erosion and sediment delivery from graded pads and roads; 3) revegetation of the disturbed areas of the property with native seed, native plant species, and straw mulch and; 4) establishing a monitoring schedule and reporting schedule for the success of the restoration plan elements. Two additional Zoning Clearance Certificate permits for RRRs are to be relocated and that will add up to 90,000 square feet of cultivation on the parcel.

Additional Request

■ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): Bridgeville

Township: 1N **Range:** 4E **Section(s):** 23

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[**Vacant**]

COMMISSIONER
[**Vacant**]

COMMISSIONER
[**Vacant**]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

May 5, 2021

Desmond Jonhston

County of Humboldt

Via Email to: djohnston@co.humboldt.ca.us

Re: Native American Consultation, Pursuant to Senate Bill 18 (SB18), Government Codes §65352.3 and §65352.4, as well as Assembly Bill 52 (AB52), Public Resources Codes §21080.1, §21080.3.1 and §21080.3.2, MDF Enterprises, Inc. - Zoning Clearance Certificate 12095, Humboldt County

Dear Ms. Johnston:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties or projects.

Government Codes §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans.

Public Resources Codes §21080.3.1 and §21080.3.2 requires public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to tribal cultural resources as defined, for California Environmental Quality Act (CEQA) projects.

The law does not preclude local governments and agencies from initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

Best practice for the AB52 process and in accordance with Public Resources Code §21080.3.1(d), is to do the following:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The NAHC also recommends, but does not require that lead agencies include in their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential affect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

    - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE, such as known archaeological sites;
    - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
    - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
    - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

      All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.

3. The result of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission. The request form can be found at http://nahc.ca.gov/wp-content/uploads/2015/08/Local-Government-Tribal-Consultation-List-Request-Form-Update.pdf.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez

Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
Humboldt County
5/5/2021

Bear River Band of Rohnerville Rancheria
Josefina Cortez, Chairwoman
266 Keisner Road
Loleta, CA, 95551
Phone: (707) 733 - 1900
Fax: (707) 733-1723

Mattole
Wiyot

Bear River Band of the Rohnerville Rancheria
Edward "Gusto" Bowie, Cultural Liaison
266 Keisner Rd.
Loleta, CA, 95551
Phone: (707) 733 - 1900
Fax: (707) 733-1723

Mattole
Wiyot

Cher-Ae Heights Indian Community of the Trinidad Rancheria
Garth Sundberg, Chairperson
P.O. Box 630
Trinidad, CA, 95570-0630
Phone: (707) 677 - 0211
Fax: (707) 677-3921
gsundberg@TrinidadRancheria.com

Miwok
Tolowa
Yurok

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed MDF Enterprises, Inc. - Zoning Clearance Certificate 12095, Humboldt County.

APPENDIX E:
HYDROLOGIC CONNECTIVITY ANALYSIS

Timberland Resource Consultants

165 South Fortuna Boulevard, Fortuna, CA 95540
707-725-1897 • fax 707-725-0972
trc@timberlandresource.com

MDF Enterprises Inc.
Stephen Gunn
1714 Franklin St. #100
Oakland, CA. 94612

June 22, 2021

APN 210-250-022 Well Log Evaluation

At your request, I have reviewed the well logs prepared by Fisch Drilling: Permit No. 16/17-0940 & Permit No. 11/12-0324 to assess the potential for direct hydrologic connection between the two wells and nearby surface waters. Based upon my evaluation of the evidence, neither well appears to be diverting surface water based upon the following:

1. The presence of a stratum of alluvium within the screened interval does not exist. The presence of rounded rocks or gravels is a strong indication that the driller intersected an area that was formerly a stream channel. No alluvium was encountered within the "screened interval" of 40-120 feet" for the 2012 well, and 40-180 feet for the 2018 well.

2. Positive pore pressures are present in the borehole at both wells. If the depth to the first encountered water is greater than the depth to the static water level after the well has been completed, developed, and pumped; this would suggest positive pore pressure in the aquifer and is an indicator that the well has been completed in a confined aquifer. The presence of observable positive pore pressure in an aquifer precludes a direct connection to surface water. If a direct connection did exist, pore pressures would be in equilibrium with the ambient atmospheric pressure. Positive pore pressures were present in the aquifer at both well sites.

3. A confining layer is present. In the geologic logs, the screened interval for both wells lay below a substantial aquitard, which in this case is Franciscan bedrock (2012 well) and bedrock shale and sandstone (2018 well). In order for a confined aquifer to exist, there must be an aquitard that allows some level of positive pore pressure to develop in an aquifer. A confining layer was encountered by the driller at both sites.

4. The wells were developed within an upland valley at an elevation of approximately 2,700 feet above mean sea level. The wells are located greater than 300 feet from any surface waters. In addition, the wells are located greater than approximately 1 mile from Butte Creek and greater than 1.5 miles from the Little Van Duzen River; both larger Class I watercourses. Based upon both well's geologic log, underlying geology, and distance from surface water; neither well appears capable of intercepting a "subterranean stream" underlying Butte Creek or the Little Van Duzen River. In determining the legal classification of groundwater, the following physical conditions must exist for the State Water Board to classify groundwater as a subterranean stream flowing through a known and definite channel:

   (1) A subsurface channel must be present;
   (2) The channel must have a relatively impermeable bed and banks;
   (3) The course of the channel must be known or capable of being determined by reasonable inference; and

(4) Groundwater must be flowing in the channel.

For reference, subterranean streams occur within the contact point between the stream's bedrock canyon and the underlying alluvium. In these cases, the "hypothetical" subsurface channel has relatively impermeable bed and banks that demonstrate a significant difference in permeability between the blue clay or shale and the alluvium filling the channel. Further, the course of such a hypothetical channel is known by reasonable inference, by projecting the slopes of the canyon to a point where they meet beneath the alluvium. Groundwater in these cases is flowing in the subterranean stream formed by the channel.

Based upon the two well logs, none of these conditions exist in the underlying formation per each well log.

Sincerely,

Chris Carroll, RPF #2628
Timberland Resource Consultants

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

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0147726

Page 1 of 2

Owner's Well Number 1

Date Work Began 03/12/2012 Date Work Ended 3/13/2012

Local Permit Agency Humboldt County E.H.D.

Permit Number 11/12-0324 Permit Date 2/28/12

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Direct Rotary Drilling Fluid Bentonite mud

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
0	1	Top Soil
1	28	Brown Clay
28	39	Brown Gravel
39	46	Blue Clay
46	86	Blue ClayW/Sand Layers
86	98	Melange
98	120	Franciscan

Total Depth of Boring 120 Feet

Total Depth of Completed Well 120 Feet

Well Owner

Name Stephen Gunn

Mailing Address 2663 38th Ave.

City San Francisco State CA Zip 94116

Well Location

Address 101 Larabee Valley Road

City Bridgeville County Humboldt

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

Datum Decimal Lat. Decimal Long.

APN Book 210 Page 250 Parcel 022

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 46 (Feet below surface)

Depth to Static Water Level 41 (Feet) Date Measured 03/12/2012

Estimated Yield * 4 (GPM) Test Type Air Lift

Test Length 4.0 (Hours) Total Drawdown 53 (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	40	10	Blank	PVC Sch. 80	CL200	5		
40	120	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	120	Filter Pack	#3 Well Sand

Attachments

☐ Geologic Log

☐ Well Construction Diagram

☐ Geophysical Log(s)

☐ Soil/Water Chemical Analyses

☑ Other Location Map

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 ROAD (Address) HYDESVILLE (City) CA (State) 95547 (Zip)

Signed (C-57 Licensed Water Well Contractor) 03/13/2012 (Date Signed) 683865 (C-57 License Number)

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

State of California

Well Completion Report

Form DWR 188 Submitted 4/26/2018

WCR2018-003342

Owner's Well Number 2 | Date Work Began 04/23/2018 | Date Work Ended 04/25/2018

Local Permit Agency Humboldt County Department of Health & Human Services - Land Use Program

Secondary Permit Agency | Permit Number 16/17-0940 | Permit Date 04/10/2017

Well Owner (must remain confidential pursuant to Water Code 13752)

Name Stephen Gunn

Mailing Address 3831 Walnut Drive

City Eureka State CA Zip 95503

Planned Use and Activity

Activity New Well

Planned Use Water Supply Irrigation - Agriculture

Well Location

Address 101 Larabee Valley RD

City Bridgeville Zip 95526 County Humboldt

Latitude ___ ___ ___ N Longitude ___ ___ ___ W

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

Dec. Lat. 40.4458840 Dec. Long. -123.6861570

Vertical Datum | Horizontal Datum WGS84

Location Accuracy | Location Determination Method

APN 210-250-022

Township 01 N

Range 04 E

Section 23

Baseline Meridian Humboldt

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation Vertical Specify

Drilling Method Direct Rotary Drilling Fluid Bentonite

Total Depth of Boring 180 Feet

Total Depth of Completed Well 180 Feet

Water Level and Yield of Completed Well

Depth to first water 42 (Feet below surface)

Depth to Static Water Level 41 (Feet) Date Measured 04/25/2018

Estimated Yield* 7 (GPM) Test Type Air Lift

Test Length 4 (Hours) Total Drawdown 139 (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	16	brown clay and sandstone
16	22	brown gravel
22	24	blue clay
24	27	blue gravel
27	41	blue clay
41	52	blue fractured sandstone
52	111	blue clay
111	148	blue fractured sandstone & blue clay
148	180	bedrock shale and sandstone

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	PVC	OD: 5.563 in. | SDR: 21 | Thickness: 0.265 in.	0.265	5.563			
1	40	180	Screen	PVC	OD: 5.563 in. | SDR: 21 | Thickness: 0.265 in.	0.265	5.563	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	180	Filter Pack	Other Gravel Pack	3/8 Inch	Pea Gravel

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)
0	180	10

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 ROAD (Address) | HYDESVILLE (City) | CA (State) | 95547 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 04/26/2018 (Date Signed) | 683865 (C-57 License Number)

Attachments

scan.pdf - Location Map

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

APPENDIX F:
BIOLOGICAL/BOTANICAL SURVEYS

Updated Botanical Survey Results

MDF Enterprises
101 Larabee Valley Road
APN: 210-250-022

Prepared by:

Kyle Wear
Botanical Consultant
kyle_wear@suddenlink.net
(707) 601-1725

Prepared for:

Steven Gunn
3831 Walnut Drive
Eureka, CA 95503

Date:

June 13, 2021

TABLE OF CONTENTS

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Appendices

1. INTRODUCTION

The purpose of this report is to address potential impacts to sensitive botanical resources, including special status plants and natural communities, from an additional 64,000 square feet of proposed cannabis cultivation on APN 210-250-022 in Larabee Valley. This report supersedes the original May 25, 2021 version and includes an additional June 13 survey. The project area is in an area that has already been developed or significantly disturbed from existing permitted cannabis cultivation, rainwater catchment pond construction, and associated activities. This report also addresses wetlands and invasive plants. A site plan for the project is provided in Appendix A.

2. DEFINITIONS

2.1. Special Status Plants

Special status plants include those listed as rare, threatened, or endangered under the federal Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA). Additionally, impacts to taxa with California Rare Plant Ranks (CRPR) of 1A, 1B, 2A, and 2B must be analyzed in environmental documents related to the California Environmental Quality Act (CEQA), or those considered functionally equivalent to CEQA. Impacts to plants with CRPRs of 3 and 4 should also addressed. Protection measures for populations of these taxa may be warranted if they are determined to have local or biological significance.

2.2. Special Status Plant Communities

Special status plant communities are communities with limited distribution that may be vulnerable to environmental impacts. Natural communities recognized as sensitive are provided on the California Department of Fish and Wildlife (CDFW) Sensitive *Natural Communities List* (CDFW 2018). The list is based on the vegetation classification in *A Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009). Natural communities with G or S ranks of 3 or lower are considered sensitive.

2.3. Wetlands

The Army Corps of Engineers defines wetlands as:

> "…areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

2.4. Invasive Plants

Invasive species are non-native plants and animals whose introduction causes or is likely to cause environmental or economic damage or harm to human health. Invasive species can cause a decline of endangered species and native diversity through direct competition and by

alteration of ecological processes. The California Invasive Plant Council (Cal-IPC) maintains a list of plants considered invasive in California (Cal-IPC 2021).

3. ENVIRONMENTAL SETTING

3.1. Project Location

The parcel is in Larabee Valley approximately 5 miles southwest of Dinsmore on the Larabee Valley USGS quadrangle in Humboldt County (Figure1).

3.2. Soil, Topography, and Hydrology

The soil in most of the project sites is mapped as Frostvalley, 0 to 2 percent slopes (USDA, NRCS 2021). This soil type is composed of alluvium derived from metasedimentary rock. A soil map of the area is provided in Appendix B. The project area is on a flat terrace at approximately 2,500 feet above sea level. A tributary of the Little Van Duzen River flows along the northwestern edge of the parcel.

3.3. Vegetation

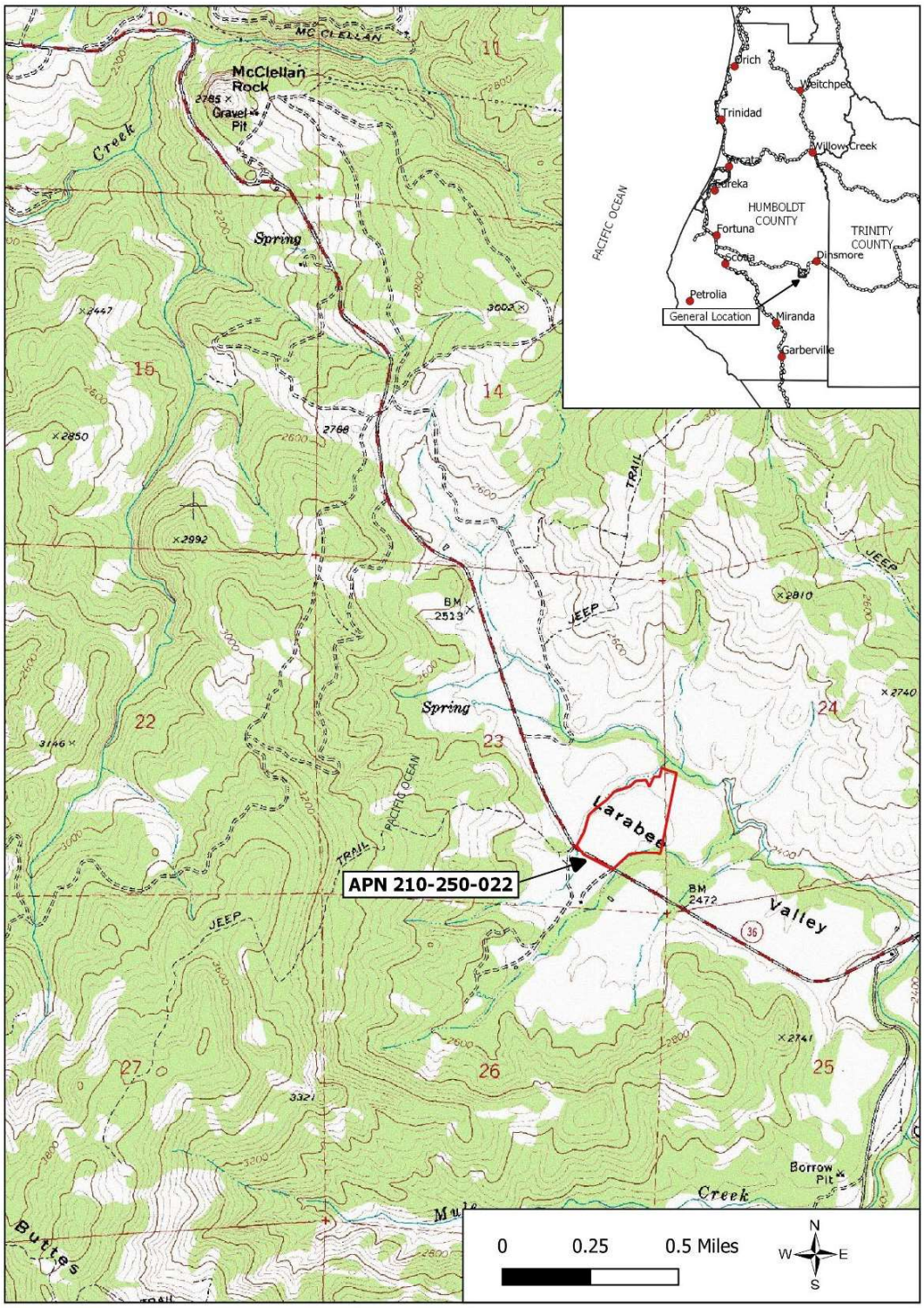
The project area is mostly already disturbed by existing cannabis development and generally unvegetated or composed of ruderal herbaceous vegetation.

The stands of trees visible in aerial images on much of the parcel are predominantly non-native pines and appear to be Japanese black pine (*Pinus thunbergii*) or Manchurian pine (*Pinus tabuliformis*); the understory is mostly devoid of herbaceous vegetation.

The grasslands adjacent to the project area are relatively homogeneous and are dominated by sweet vernal grass (*Anthoxanthum odoratum*), European hairgrass (*Aira caryophyllea*), and other non-native herbaceous plants including sheep sorrel (*Rumex acetosella*) and rough cat's-ear (*Hypochaeris radicata*). There is a native herbaceous component that includes miniature lupine (*Lupinus bicolor*), California poppy (*Eschscholzia californica*), and cream cups (*Platystemon californicus*).

There are small stands or isolated native trees on the parcel including Douglas-fir (*Pseudotsuga menziesii*), Pondera pine (*Pinus ponderosa*), and Oregon white oak (*Quercus garryana*). The riparian vegetation associated with the stream along the northern edge of the parcel is dominated by willows (*Salix* spp.).

Figure 1. Location Map.



4. REGULATORY SETTING

The U.S. Fish and Wildlife Service (USFWS) has authority over plants listed under the ESA. Plants listed under CESA are the responsibility of California CDFW. CDFW is also authorized to comment and make recommendations on CEQA projects. However, Humboldt County is the lead agency responsible for permitting cannabis cultivation in a manner consistent with CEQA.

5. METHODS

5.1. Special Status Plants

The *California Natural Diversity Database* (CDFW 2021a) and the CNPS *Inventory of Rare and Endangered Plants* (CNPS 2021a) were consulted to compile a list of special status plants that have potential to occur in the project area (Table 1). The scoping list includes all plants with documented occurrences on the Larabee Valley USGS quadrangle or adjacent quadrangles. Of primary concern are plants with CRPRs of 1 and 2, as these species must be addressed in CEQA review.

Table 1. Special Status Plant Scoping List.

Scientific Name **Common Name**	**Listing Status**	**Blooming Period**	**Habitat**	**Potential to Occur in Project Area.**
Allium hoffmanii Beegum onion	4.3	Jun-Jul	Lower montane coniferous forest (serpentinite)	No Potential. Occurs on serpentine.
Anisocarpus scabridus scabrid alpine tarplant	1B.3	(Jun)Jul-Aug(Sep)	Upper montane coniferous forest (metamorphic, rocky)	No Potential. Occurs in much higher elevation rocky habitat.
Arctostaphylos hispidula Howell's manzanita	4.2	Mar-Apr	Chaparral (serpentinite or sandstone)	Unlikely. Project area lacks chaparral.
Arctostaphylos manzanita ssp. elegans Konocti manzanita	1B.3	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest-volcanic	Unlikely. Occurs on volcanic soil.
Arnica spathulata Klamath arnica	4.3	May-Aug	Lower montane coniferous forest (serpentinite)	No Potential. Occurs on serpentine.
Astragalus agnicidus Humboldt County milk-vetch	1B.1, CE	Apr-Sep	Broadleafed upland forest, North Coast coniferous forest-openings, disturbed areas, sometimes roadsides	Unlikely. Typically occurs indisturbed areas in coniferous forest.
Astragalus rattanii var. rattanii Rattan's milk-vetch	4.3	Apr-Jul	Chaparral, Cismontane woodland, Lower montane coniferous forest-gravelly streambanks	Unlikely. Project area lacks gravely streambanks.
Astragalus umbraticus Bald Mountain milk-vetch	2B.3	May-Aug	Cismontane woodland, Lower montane coniferous forest-sometimes roadside	Unlikely. Project area is not Cismontane woodland or Lower montane coniferous forest.

Scientific Name **Common Name**	**Listing Status**	**Blooming Period**	**Habitat**	**Potential to Occur in Project Area.**
Calycadenia micrantha small-flowered calycadenia	1B.2	Jun-Sep	Chaparral, Meadows and seeps (volcanic), Valley and foothill grassland-Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas	Unlikely. Maybe some potential in grassland. Project lacks rocky scree habitat.
Carex praticola northern meadow sedge	2B.2	May-Jul	Meadows and seeps (mesic)	Unlikely. Occurs in wetlands.
Carex scabriuscula Siskiyou sedge	4.3	May-Jul	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest-mesic, sometimes serpentinite seeps	Unlikely. Occurs in wetlands.
Collomia tracyi Tracy's collomia	4.3	Jun-Jul	Broadleafed upland forest, Lower montane coniferous forest-rocky, sometimes serpentinite	Unlikely. Not associated with grasslands.
Coptis laciniata Oregon goldthread	4.2	(Feb)Mar-May(Sep-Nov)	Meadows and seeps, North Coast coniferous forest (streambanks)-Mesic	Unlikely. Occurs in riparian habitat.
Cryptantha rostellata red-stemmed cryptantha	4.2	Apr-Jun	Cismontane woodland, Valley and foothill grassland-Often gravelly, volcanic openings; often roadsides	Moderate. Potential in grasslands.
Cypripedium fasciculatum clustered lady's-slipper	4.2	Mar-Aug	Lower montane coniferous forest, North Coast coniferous forest-usually serpentinite seeps and streambanks	Unlikely. Occurs on streambanks.
Cypripedium montanum mountain lady's-slipper	4.2	Mar-Aug	Broadleafed upland forest, Cismontane woodland, Lower montane coniferous forest, North Coast coniferous forest	Unlikely. Not associated with grassland.
Epilobium oreganum Oregon fireweed	1B.2	Jun-Sep	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest-mesic	Unlikely. Usually higher elevation mesic habitat.
Epilobium septentrionale Humboldt County fuchsia	4.3	Jul-Sep	Broadleafed upland forest, North Coast coniferous forest-sandy or rocky	Unlikely. Project area lacks suitable rocky habitat.
Erigeron maniopotamicus Mad River fleabane daisy	1B.2	May-Aug	Lower montane coniferous forest, Meadows and seeps (open, dry)-open, disturbed areas (road cuts); rocky	Unlikely. Occur in higher elevation habitat.

Scientific Name **Common Name**	**Listing Status**	**Blooming Period**	**Habitat**	**Potential to Occur in Project Area.**
Erythronium oregonum giant fawn lily	2B.2	Mar-Jun(Jul)	Cismontane woodland, Meadows and seeps-sometimes serpentinite, rocky, openings	Unlikely. Project area lacks typical rocky habitat.
Erythronium revolutum coast fawn lily	2B.2	Mar-Jul(Aug)	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest-Mesic, streambanks	Unlikely. Project area lacks typical mesic rocky habitat.
Eucephalus glabratus Siskiyou aster	4.3	Jun-Sep	Lower montane coniferous forest, Upper montane coniferous forest-rocky openings	Unlikely. Usually higher elevation rocky habitat and not associated with grasslands.
Fritillaria glauca Siskiyou fritillaria	4.2	(Apr-May)Jun-Jul	Alpine boulder and rock field, Subalpine coniferous forest, Upper montane coniferous forest-serpentinite, talus slopes	Unlikely. Occurs in higher elevation habitat.
Gilia capitata ssp. pacifica Pacific gilia	1B.2	Apr-Aug	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland	Moderate-High. Potential in grasslands.
Hemizonia congesta ssp. tracyi Tracy's tarplant	4.3	May-Oct	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest-openings, sometimes serpentinite	High. Potential in grasslands.
Hosackia yollabolliensis Yolla Bolly Mtns. bird's-foot trefoil	1B.2	Jun-Aug	Meadows and seeps, Upper montane coniferous forest (openings)-dry barren exposed slopes, often gravelly	Unlikely. Occurs in higher elevation habitat.
Howellia aquatilis water howellia	2B.2, FT	Jun	Marshes and swamps (freshwater)	No Potential. Project area lacks marshes and swamps.
Iliamna latibracteata California globe mallow	1B.2	Jun-Aug	Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks)-Often in burned areas	Unlikely. Typically higher elevation mesic habitat.
Kopsiopsis hookeri small groundcone	2B.3	Apr-Aug	North Coast coniferous forest	Unlikey. Not associated with grasslands. Non-native pine stands are not suitable habitat.
Lathyrus biflorus two-flowered pea	1B.1	Jun-Aug	Lower montane coniferous forest (serpentinite)	Unlikely. Occurs on serpentine.
Lathyrus glandulosus sticky pea	4.3	Apr-Jun	Cismontane woodland	Unlikely. Not associated with grasslands.

Scientific Name **Common Name**	**Listing Status**	**Blooming Period**	**Habitat**	**Potential to Occur in Project Area.**
Leptosiphon acicularis bristly leptosiphon	4.2	Apr-Jul	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland	Moderate-High. Potential in grasslands.
Leptosiphon latisectus broad-lobed leptosiphon	4.3	Apr-Jun	Broadleafed upland forest, Cismontane woodland	Moderate-High. Potential in grasslands.
Lilium rubescens redwood lily	4.2	Apr-Aug(Sep)	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest-Sometimes serpentinite, sometimes roadsides	Unlikely. Typically along roads and open areas in native coniferous forest.
Lilium washingtonianum ssp. purpurascens purple-flowered Washington lily	4.3	Jun-Aug	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest-often serpentinite	Unlikely. Not associated with grasslands.
Listera cordata heart-leaved twayblade	4.2	Feb-Jul	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	Unlikely. Not associated with grasslands.
Lupinus constancei The Lassics lupine	1B.1	Jul	Lower montane coniferous forest (serpentinite)	No Potential. Occurs on serpentine.
Lupinus elmeri South Fork Mountain lupine	1B.2	Jun-Jul(Aug)	Lower montane coniferous forest	Unlikely. Occurs in higher elevation habitat and not associated with grasslands.
Lycopodium clavatum running-pine	4.1	Jun-Aug(Sep)	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)-often edges, openings, and roadsides	Unlikely. Occur in mesic redwood forest habitat.
Lycopus uniflorus northern bugleweed	4.3	Jul-Sep	Bogs and fens, Marshes and swamps	Unlikely. Occurs in wetlands.
Meesia triquetra three-ranked hump moss	4.2	Jul	Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest (mesic)-soil	Unlikely. Occurs in higher elevation mesic habitat.
Mitellastra caulescens leafy-stemmed mitrewort	4.2	(Mar)Apr-Oct	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest-mesic, sometimes roadsides	Unlikely. Occur in riparian habitat. Maybe some potential in along stream outside project area.
Montia howellii Howell's montia	2B.2	(Jan-Feb)Mar-May	Meadows and seeps, North Coast coniferous forest, Vernal pools-vernally mesic, sometimes roadsides	Unlikely. Project area is likely too dry.

Scientific Name **Common Name**	**Listing Status**	**Blooming Period**	**Habitat**	**Potential to Occur in Project Area.**
Navarretia leucocephala ssp. bakeri Baker's Navarretia	1B.1	Apr-Jul	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools- Mesic	Unlikely. Project are lacks vernal pools or similar habitat.
Packera bolanderi var. bolanderi seacoast ragwort	2B.2	(Jan-Apr)May-Jul(Aug)	Coastal scrub, North Coast coniferous forest-Sometimes roadsides	Unlikely. Not associated with grasslands.
Piperia candida white-flowered rein orchid	1B.2	(Mar)May -Sep	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest- sometimes serpentinite	Unlikely. Not associated with grasslands.
Pityopus californicus California pinefoot	4.2	(Mar-Apr)May-Aug	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest- mesic	Unlikely. Not associated with grasslands.
Platanthera stricta slender bog-orchid	4.2	May-Aug	Lower montane coniferous forest, Meadows and seeps- mesic	Unlikely. Project area lacks suitable mesic habitat.
Pleuropogon refractus nodding semaphore grass	4.2	(Mar)Apr-Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest- Mesic	Unlikely. Occur in riparian habitat.
Ptilidium californicum Pacific fuzz wort	4.3	May-Aug	Lower montane coniferous forest, Upper montane coniferous forest- Usually epiphytic on trees, fallen and decaying logs, and stumps; rarely on humus over boulders	Unlikely. Occurs in higher elevation habitat.
Ribes laxiflorum trailing black currant	4.3	Mar-Jul(Aug)	North Coast coniferous forest- sometimes roadside	Moderate-Unlikely. Maybe some potential along roads.
Sabulina decumbens The Lassics sandwort	1B.2	Jul	Lower montane coniferous forest, Upper montane coniferous forest- serpentinite	No Potential. Occurs on serpentine.
Sanicula tracyi Tracy's sanicle	4.2	Apr-Jul	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest- openings	Moderate-Unlikely. Maybe some potential in grasslands.

Scientific Name **Common Name**	**Listing Status**	**Blooming Period**	**Habitat**	**Potential to Occur in Project Area.**
Sedum laxum ssp. flavidum pale yellow stonecrop	4.3	May-Jul	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest-Serpentinite or volcanic	No Potential. Project area lacks suitable rock habitat.
Sidalcea malachroides maple-leaved checkerbloom	4.2	(Mar)Apr-Aug	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland-Often in disturbed areas	Moderate-Unlikely. Maybe some potential in grasslands.
Sidalcea malviflora ssp. patula Siskiyou checkerbloom	1B.2	(Apr)May-Aug	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest-often roadcuts	High. Potential in grasslands.
Thermopsis robusta robust false lupine	1B.2	May-Jul	Broadleafed upland forest, North Coast coniferous forest	Unlikely. Not associated with grasslands.
Usnea longissima Methuselah's beard lichen	4.2		Broadleafed upland forest, North Coast coniferous forest-On tree branches; usually on old growth hardwoods and conifers	Unlikely. Occur on native conifer branches.
Veratrum insolitum Siskiyou false-hellebore	4.3	Jun-Aug	Chaparral, Lower montane coniferous forest-Clay	Unlikely. Not associated with grasslands.
Wyethia longicaulis Humboldt County wyethia	4.3	May-Jul	Broadleafed upland forest, Coastal prairie, Lower montane coniferous forest-sometimes roadsides	Moderate. Potential in grasslands.

SPECIAL STATUS PLANT LISTING STATUS

Endangered Species Act (ESA)	California Endangered Species Act (CESA)
FE: Federally Endangered	**CE**: California Endangered
FT: Federally Threated	**CT**: California Threated
FR: Federally Rare	**CR**: California Rare

California Rare Plant Ranks

1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
2A: Plants Presumed Extirpated in California, But Common Elsewhere
2B: California Rare Plant Rank 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3. Review List: Plants about which more information is needed.
4. Watch List: Plants of limited distribution

Threat Ranks

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

5.2. Special Status Natural Communities

Of primary consideration for project areas outside coniferous forest in northwestern California include, but are not limited to sensitive native grassland communities and oak woodlands (Table 2).

Table 2. Special Status Natural Communities Scoping List.

Common Name	Scientific Name	Rarity
Idaho fescue -California oatgrass grassland	*Festuca idahoensis – Danthonia californica* Herbaceous Alliance	NGR S3
Needle grass -Melic grass grassland	*Nassella* spp.-*Melica* spp. Herbaceous Alliance	G3 S3
California brome – blue wildrye prairie	*Bromus carinatus - Elymus glaucus* Herbaceous Alliance	G3 S3
Oregon white oak woodland and forest	*Quercus garryana* Forest and Woodland Alliance	G4 S3

A list of all special status plant communities in the Northern California Coast and Coast Ranges regions queried from the *Manual of California Vegetation Online* (CNPS 2021b) is provided in Appendix C.

5.3. Wetlands

Federal, State, and County wetland delineation methods follow the *1987 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)* (Army Corps 2010). A positive wetland determination is made when all three wetland parameters (hydrophytic vegetation, hydric soil, and wetland hydrology) are present.

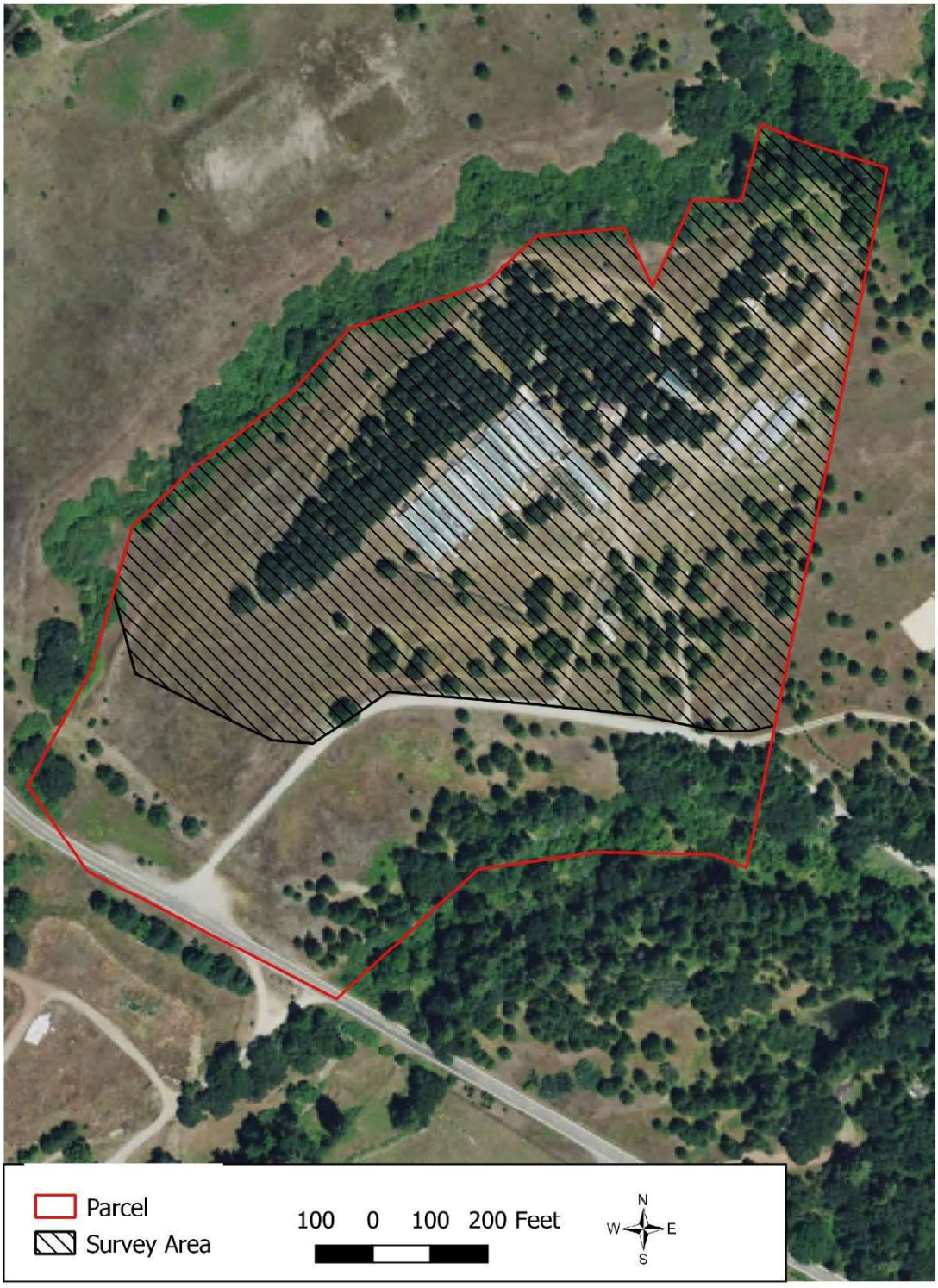
5.4. Invasive Plants

For the purposed of this report only plants with Cal-IPC rankings of “High” were considered. These species have severe ecological impacts and high rates of dispersal.

5.5. Surveys

The surveys were conducted on April 11, 2021, by Alex Powell, B.S. and May 16, and June 13, 2021, by Kyle Wear, M.A. Mr. Wear has over 25 years of experience conducting floristic surveys, wetland delineations, and other botanical work in northern California. Mr. Powell has over 10 years of experience conducting floristic surveys and other botanical work in northern California.

Figure 2. Botanical Survey Area Map.



The surveys were conducted according to Protocols *for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). All plants encountered were identified to the taxonomic level necessary to determine whether they are special status. Plant taxonomy generally follows *The Jepson Manual Vascular Plants of California, Second Edition* (Baldwin et. al. 2012), however the plant list may include more recent name changes. A map showing the area covered by the surveys is provided in Figure 2.

The survey was timed to coincide with when plants on the scoping list (Table 1) with potential to occur would be identifiable (generally, but not necessarily during the blooming period) and when other common plants would be identifiable so that a comprehensive floristic plant list of the area could be compiled.

6. RESULTS AND DISCUSSION

6.1. Special Status Plants

No special status plants were encountered on the surveys. A list of plants observed is provided in Table 3. The three surveys were seasonally appropriate for the site and spanned the portion of the season where all special status plants on the scoping list that could occur in the project area would have been recognizable the surveyors. Additionally, the surveys were conducted during a period when other plants were identifiable. Thus, no plants listed under the ESA, CESA, or CEQA will be impacted by the project.

Table 3. Plant List.

Scientific Name	Common Name
Achillea millefolium	common yarrow
Acmispon parviflorus	lotus
Agrostis sp.	bent grass
Aira caryophyllea	European hairgrass
Amelanchier alnifolia	western serviceberry
Anthoxanthum odoratum	sweet vernal grass
Arbutus menziesii	madrone
Arctostaphylos manzanita ssp. manzanita	common manzanta
Arrhenatherum elatius	tall oatgrass
Briza maxima	rattlesnake grass
Bromus diandrus	ripgut grass
Bromus hordeaceus	soft chess
Calandrinia cilata	red maids
Cerastium glomeratum	mouse ear chickweed
Chamomilla suaveolens	pineapple weed
Claytonia perfoliata	miner's lettuce

Scientific Name	Common Name
Cynosurus echinatus	dogtail grass
Danthonia californica	California oatgrass
Delphinium sp.	larkspur
Dichelostemma capitatum	blue dicks
Epilobium densiflorum	dense-flowered Boisduvalia
Erodium botrys	long-beaked storksbill
Eschscholzia californica	California poppy
Fragaria vesca	wood strawberry
Festuca myuros	rattail sixweeks grass
Fritillaria affinis var. *affinis*	checker lily
Galium aparine	goose grass
Galium sp.	bedstraw
Gamochaeta ustulata	purple cudweed
Heracleum maximum	cow parsnip
Hypericum perforatum	St. John's-wort
Hypochaeris glabra	smooth cat's-ear
Hypochaeris radicata	hairy cat's-ear
Lithophragma affine	woodland star
Lupinus bicolor	miniature lupine
Luzula comosa	common wood rush
Osmorhiza berteroi	sweet-cicely
Pinus ponderosa	Ponderosa pine
Pinus sp.	pine (non-native)
Plantago lanceolata	English plantain
Platystemon californicus	cream cups
Prunus virginiana var. demissa	western chokecherry
Pseudotsuga menziesii	Douglas-fir
Pteridium aquilinum var. *pubescens*	bracken fern
Quercus garryana	Oregon white oak
Quercus kelloggii	California black oak
Rumex acetosella	sheep sorrel
Salix lasiandara ssp. *lasiandra*	Pacific willow
Salix sitchensis	Sitka willow
Sanicula bipinnatifida	purple sanicle
Spergularia rubra	purple sand spurry
Stachys ajugoides	hedge nettle
Symphoricarpos sp.	snowberry

Scientific Name	Common Name
Trillium albidum	giant wakerobin
Vicia sativa	vetch
Viola glabella	stream violet
Viola praemorsa	Astoria violet

6.2. Special Status Natural Communities

The non-native grassland and introduced pine stands described in Section 3.3 above are not consistent with any special status natural community. California oatgrass was documented in the undisturbed portion of the parcel but was at less than 1% cover and occurred in a relatively small area. Cover of California oatgrass would need to be at least 10% to be considered Idaho fescue -California oatgrass grassland.

Oregon white oak was recorded outside the project area along the edge of the property but was limited to isolated small stands or individual trees and is not Oregon white oak woodland and forest.

6.3. Wetlands

No hydrophytic vegetation, such as stands of rushes or sedges, or indicators of hydric soil or wetland hydrology were observed outside the Streamside Management Area on the parcel.

6.4. Invasive Plants

No highly invasive plants were observed on the parcel. The Cal-IPC Inventory does not list any pine species as invasive.

7. REFERENCES

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APPENDIX A. Site Plan

PROPERTY DIAGRAM
APN: 210-250-022
101 LARRABEE VALLEY ROAD, BRIDGEVILLE, CA. 95526

FOR
STEPHEN GUNN
3831 WALNUT DRIVE, EUREKA, CA 95503

CULTIVATION TOTALS

EXISTING			
(8) GREENHOUSE	(GH1-2, 4-9)	27'X100'	21,600 SF
(1) GREENHOUSE	(GH3)	17'X100'	1,700 SF
(2) GREENHOUSE	(GH22-23)	30'X100'	6,000 SF
TOTAL EXISTING CULTIVATION AREA:			29,300
PROPOSED			
(7.3) GREENHOUSE	(GH10, 12-20)	27'X100'	19,700 SF
(1) GREENHOUSE	(GH3) ADDITIONAL	10'X100'	1,000 SF
(2) GREENHOUSE	(GH24-25)	100'X200'	40,000 SF
TOTAL PROPOSES CULTIVATION AREA:			60,700 SF
TOTAL EXISTING + TOTAL PROPOSES CULTIVATION AREA:			90,000 SF

NURSERY TOTALS

(1) GREENHOUSE (GH11) 27'X100'	2,700 SF
(1) GREENHOUSE (GH21) 20'X100'	2,000 SF
TOTAL NURSERY AREA:	4,700 SF

GENERAL NOTES

REFUSE AREA, COMPOST AREA. AND PESTICIDE/ AGRICULTURAL CHEMICAL STORAGE AREA TO BE SHARED AMONG (6) PREMISES ON PROPERTY.

12'X12' COMPOST AREA SHARED AMONG (6) PREMISES ON PROPERTY.

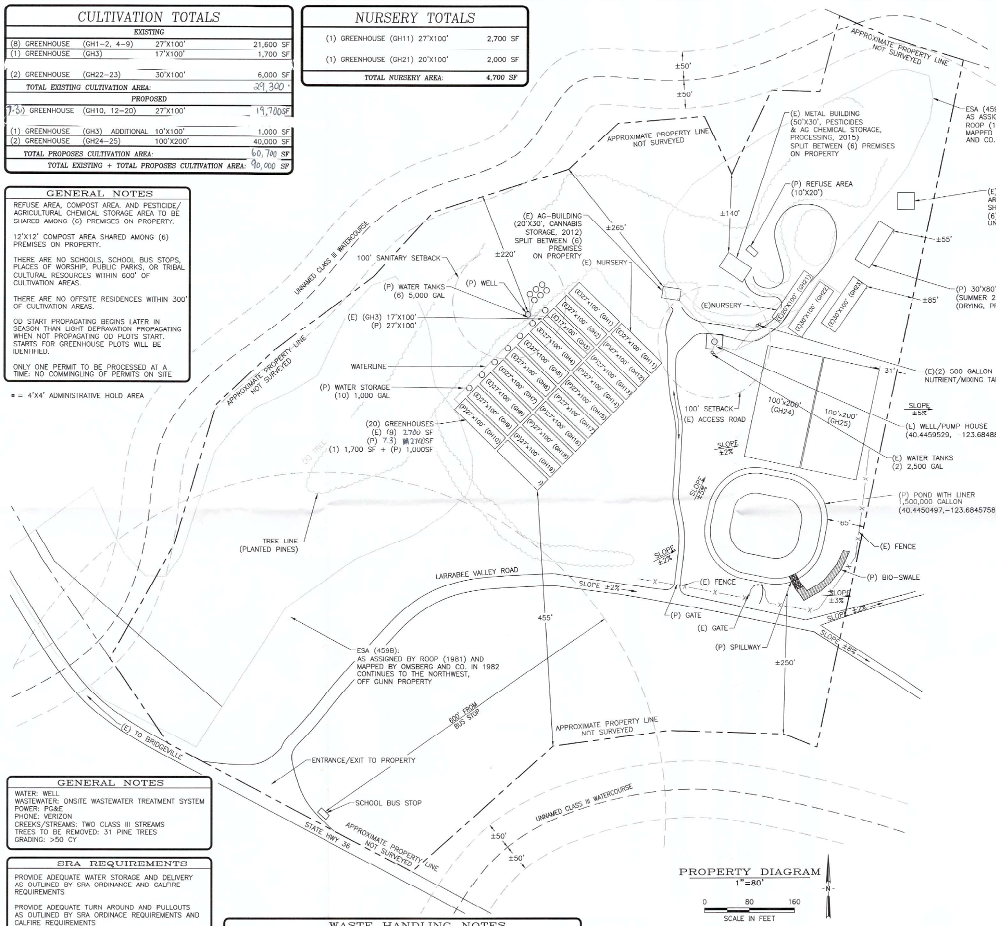
THERE ARE NO SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, PUBLIC PARKS, OR TRIBAL CULTURAL RESOURCES WITHIN 600' OF CULTIVATION AREAS.

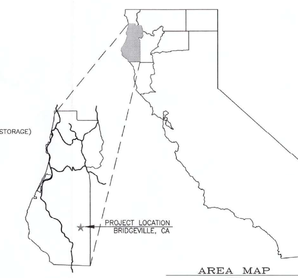
THERE ARE NO OFFSITE RESIDENCES WITHIN 300' OF CULTIVATION AREAS.

OD START PROPAGATING BEGINS LATER IN SEASON THAN LIGHT DEPRAVATION PROPAGATING WHEN NOT PROPAGATING OD PLOTS START. STARTS FOR GREENHOUSE PLOTS WILL BE IDENTIFIED.

ONLY ONE PERMIT TO BE PROCESSED AT A TIME: NO COMMINGLING OF PERMITS ON SITE

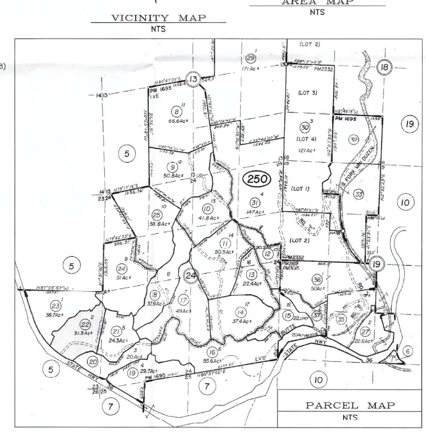
▪ = 4'X4' ADMINISTRATIVE HOLD AREA





AREA MAP
NTS

VICINITY MAP
NTS



PARCEL MAP
NTS

GENERAL NOTES

WATER: WELL
WASTEWATER: ONSITE WASTEWATER TREATMENT SYSTEM
POWER: PG&E
PHONE: VERIZON
CREEKS/STREAMS: TWO CLASS III STREAMS
TREES TO BE REMOVED: 31 PINE TREES
GRADING: >50 CY

SRA REQUIREMENTS

PROVIDE ADEQUATE WATER STORAGE AND DELIVERY AS OUTLINED BY SRA ORDINANCE AND CALFIRE REQUIREMENTS

PROVIDE ADEQUATE TURN AROUND AND PULLOUTS AS OUTLINED BY SRA ORDINACE REQUIREMENTS AND CALFIRE REQUIREMENTS

SURVEY NOTES

A FIELD SURVEY FOR TOPOGRAPHIC PURPOSES WAS CONDUCTED BY TRINITY VALLEY CONSULTING ENGINEERS (TVCE) IN 2017. A BOUNDARY SURVEY WAS NOT CONDUCTED. ALL PROPERTY LINES DEPICTED ON THESE PLANS REFLECT APPROXIMATE LOCATIONS BASED ON COUNTY RECORDS.

WASTE HANDLING NOTES

REFUSE SHALL BE STORED ON A CONCRETE SLAB AND UNDER ROOF COVER OR IN A PORTABLE/LOCKABLE DUMPSTER. REFUSE MUST BE HAULED TO AN APPROVED WASTE FACILITY WEEKLY.

COMPOST SHALL BE STORED AND COMPOSTED ONSITE ON EXISTING 30'X30' CONCRETE SLAB. CANNABIS WASTE CANNOT EXCEED 50% OF THE GENERATED ORGANIC MATERIAL.

CANNABIS WASTE TO BE STORED IN DESIGNATED HOLDING AREA PRIOR TO COMPOSTING, PER STATE REGULATIONS.

CONTRACTOR ALERT!

CONTRACTOR MUST CONTACT USA DIG AT 800-227-2600 AT LEAST 72 HOURS BEFORE ANY EARTHWORK OR ACTIVITIES THAT MAY IMPACT EXISTING UNDERGROUND UTILITIES.

EXISTING UTILITY ALIGNMENTS BOTH HORIZONTALLY AND VERTICALLY MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION ACTIVITIES.

GENERATOR REQUIREMENTS:

1. THE NOISE PRODUCED BY A GENERATOR USED FOR CANNABIS CULTIVATION SHALL NOT BE AUDIBLE BY HUMANS FROM NEIGHBORING RESIDENCES. THE DECIBEL LEVEL FOR GENERATORS AT THE PROPERTY LINE SHALL BE NO MORE THAN 60 DECIBELS. WHERE APPLICABLE, SOUND LEVELS MUST ALSO SHOW THAT THEY WILL NOT RESULT IN THE HARASSMENT OF MARBLED MURRELET OR SPOTTED OWL SPECIES, WHEN GENERATOR USE IS TO OCCUR IN THE VICINITY OF POTENTIAL HABITAT. CONFORMANCE WILL BE EVALUATED USING CURRENT AUDITORY DISTURBANCE GUIDANCE PREPARED BY THE UNITED STATE FISH AND WILDLIFE SERVICE, AND FURTHER CONSULTATION WHERE NECESSARY.

2. NOISE SHELTER WILL BE CONSTRUCTED FOR MOBILE GENERATORS. SHELTER WILL BE CONSTRUCTED FROM LUMBER FRAMING, PLYWOOD PROTECTION, AND FIRE RESISTANT INSULATION IF NECESSARY.

3. STORAGE OF FUEL. FUEL SHALL BE STORED AND HANDLED IN COMPLIANCE WITH APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS, AND IN SUCH A WAY THAT NO SPILLAGE OCCURS.

TVCE
67 WALNUT WAY
PO BOX 1567
WILLOW CREEK, CA 95573
PHONE (530) 625-3000
FAX (530) 625-3011

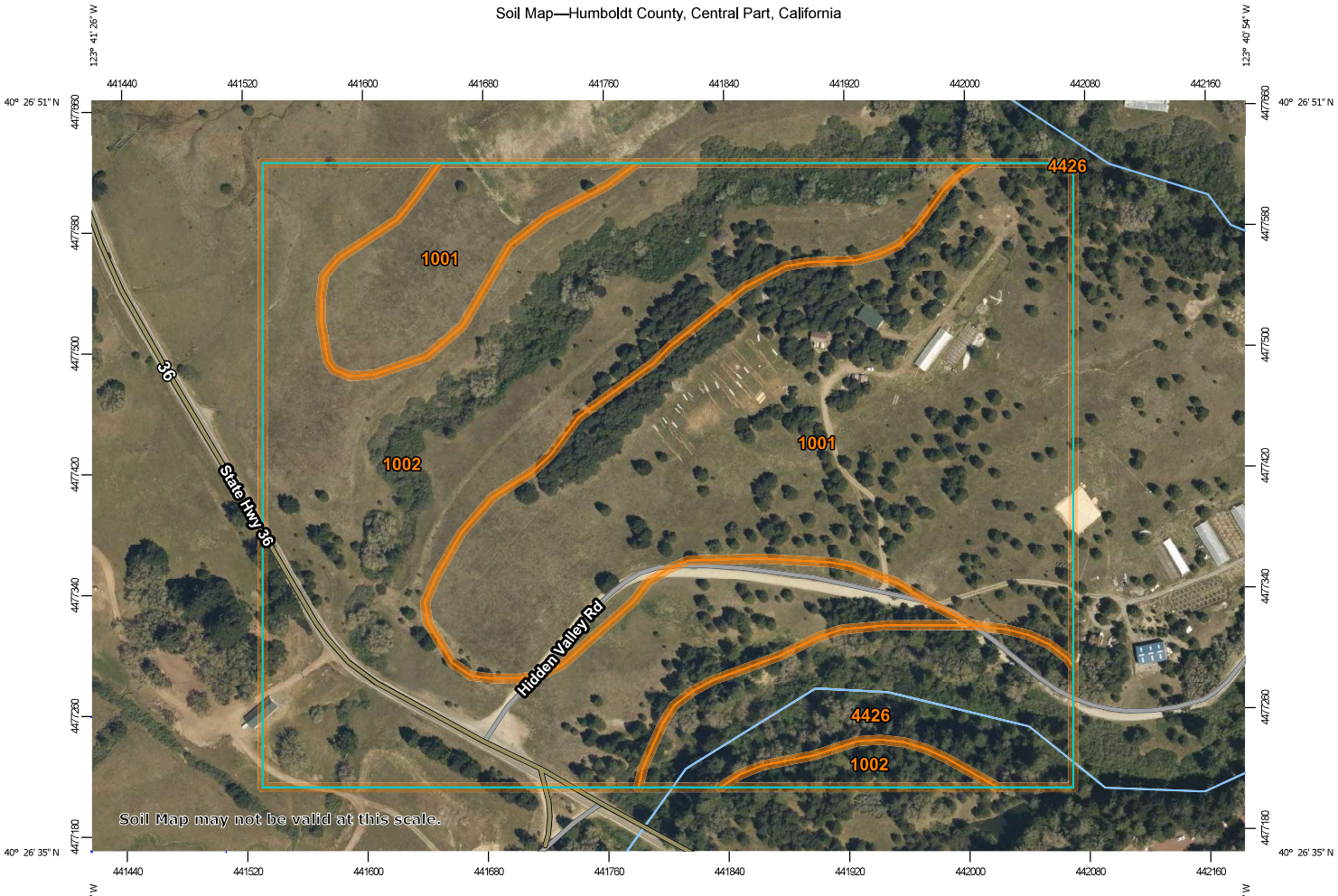
STEPHEN GUNN
3831 WALNUT DRIVE, EUREKA, CA 95503
PROPERTY DIAGRAM
101 LARRABEE VALLEY ROAD, BRIDGEVILLE, CA
APN: 210-250-022

DRAWN BY:	A. DOMINICK
DESIGNED BY:	T. LYNN
CHECKED BY:	J. McKNIGHT
APPROVED BY:	TVCE
DATE OF ISSUE:	AUGUST 2019
SCALE:	AS SHOWN
PROJECT NO:	1161.01
DRAWING NO:	C00

RECEIVED OCT 15 2019 Humboldt County Planning Division

APPENDIX B. NRCS Soil Map

Soil Map—Humboldt County, Central Part, California



Map Scale: 1:3,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Central Part, California
Survey Area Data: Version 6, Jun 1, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 8, 2019—Jun 21, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1001	Frostvalley, 0 to 2 percent slopes	24.0	43.4%
1002	Frostvalley-Mulecreek complex, 2 to 9 percent slopes	25.7	46.6%
4426	Pasturerock-Coyoterock-Maneze complex, 15 to 50 percent slopes, dry	5.5	10.0%
Totals for Area of Interest		**55.3**	**100.0%**

APPENDIX C. List of Special Status Natural Communities in Northwestern California

Scientific Name	Common Name	Primary lifeform	Global rarity	State rarity
Abies grandis	Grand fir forest	Tree	G4	S2.1
Abronia latifolia - Ambrosia chamissonis	Dune mat	Herb	G3	S3
Acer macrophyllum	Bigleaf maple forest and woodland	Tree	G4	S3
Acer negundo	Box-elder forest and woodland	Tree	G5	S2.2
Aesculus californica	California buckeye groves	Tree	G3	S3
Alnus incana	Mountain alder thicket	Shrub	G4	S3
Alnus viridis	Sitka alder thickets	Shrub	G5	S3?
Alopecurus geniculatus	Water foxtail meadows	Herb	G3?	S3?
Arbutus menziesii	Madrone forest	Tree	G4	S3.2
Arctostaphylos bakeri	Stands of Baker manzanita	Shrub	G1	S1.2
Arctostaphylos (canescens, manzanita, stanfordiana)	Hoary, common, and Stanford manzanita chaparral	Shrub	G3	S3
Arctostaphylos montana	Mount Tamalpais manzanita chaparral	Shrub	G2	S2
Arctostaphylos (nummularia, sensitiva)	Glossy leaf manzanita chaparral	Shrub	G2	S2
Arctostaphylos patula - Arctostaphylos nevadensis	Green leaf manzanita - Pinemat manzanita chaparral	Shrub	G5	S3
Argentina egedii	Pacific silverweed marshes	Herb	G4	S2
Bolboschoenus maritimus	Salt marsh bulrush marshes	Herb	G4	S3
Bromus carinatus - Elymus glaucus	California brome - blue wildrye prairie	Herb	G3	S3
Calamagrostis nutkaensis	Pacific reed grass meadows	Herb	G4	S2
Calocedrus decurrens	Incense cedar forest and woodland	Tree	G4	S3.2
Carex (aquatilis, lenticularis)	Water sedge and lakeshore sedge meadows	Herb	G5	S3
Carex barbarae	White-root beds	Herb	G2?	S2?
Carex densa	Dense sedge marshes	Herb	G2?	S2?
Carex echinata	Star sedge fens	Herb	G4?	S3?
Carex integra	Small-fruited sedge meadows	Herb	G4?	S2?
Carex luzulina	Woodland sedge fens	Herb	G3	S2?
Carex nudata	Torrent sedge patches	Herb	G3	S3
Carex obnupta	Slough sedge swards	Herb	G4	S3
Carex (pansa, praegracilis)	Sand dune sedge swaths	Herb	G4?	S3?
Carex serratodens	Twotooth sedge seeps	Herb	G3	S3?
Ceanothus (oliganthus, tomentosus)	Hairy leaf - woolly leaf ceanothus chaparral	Shrub	G3	S3
Cephalanthus occidentalis	Button willow thickets	Shrub	G5	S2
Chamaecyparis lawsoniana	Port Orford cedar forest and woodland	Tree	G3	S3.1
Chrysolepis chrysophylla	Golden chinquapin thickets	Shrub	G2	S2
Chrysolepis sempervirens	Bush chinquapin chaparral	Shrub	G4	S3.3
Corylus cornuta var. californica	Hazelnut scrub	Shrub	G3	S2?
Darlingtonia californica	California pitcher plant fens	Herb	G4?	S3

Deschampsia cespitosa - Hordeum brachyantherum - Danthonia californica	Coastal tufted hair grass - Meadow barley - California oatgrass wet meadow	Herb	GNR	S3
Equisetum (arvense, variegatum, hyemale)	Field horsetail - scouringrush horsetail - variegated scouringrush wet meadow	Herb	GNR	S3
Eriophyllum staechadifolium - Erigeron glaucus - Eriogonum latifolium	Seaside woolly-sunflower - seaside daisy - buckwheat patches	Herb	G3	S3
Festuca idahoensis - Danthonia californica	Idaho fescue - California oatgrass grassland	Herb	GNR	S3
Frangula californica - Rhododendron occidentale - Salix breweri	California coffee berry - western azalea scrub - Brewer's willow	Shrub	G3	S3
Frankenia salina	Alkali heath marsh	Herb	G4	S3
Fraxinus latifolia	Oregon ash groves	Tree	G4	S3.2
Garrya elliptica	Coastal silk tassel scrub	Shrub	G3?	S3?
Glyceria Ã—occidentalis	Northwest manna grass marshes	Herb	G3?	S3?
Grindelia (camporum, stricta)	Gum plant patches	Herb	G2	S2
Hesperocyparis macnabiana	McNab cypress woodland and forest	Tree	G3	S3.2
Hesperocyparis pigmaea	Mendocino pygmy cypress woodland	Tree	G1	S1
Hesperocyparis sargentii	Sargent cypress woodland	Tree	G3	S3.2
Heterotheca (oregona, sessiliflora)	Goldenaster patches	Herb	G3	S3
Hydrocotyle (ranunculoides, umbellata)	Mats of floating pennywort	Herb	G4	S3?
Isoetes (bolanderi, echinospora, howellii, nuttallii, occidentalis)	Quillwort beds	Herb	G3	S3?
Juglans hindsii and Hybrids	Hindsâ€™s walnut and related stands	Tree	G1	S1.1
Juncus lescurii	Salt rush swales	Herb	G3	S2?
Juncus (oxymeris, xiphioides)	Iris-leaf rush seeps	Herb	G2?	S2?
Leymus cinereus - Leymus triticoides	Ashy ryegrass - creeping ryegrass turfs	Herb	G3	S3
Leymus mollis	Sea lyme grass patches	Herb	G4	S2
Lupinus chamissonis - Ericameria ericoides	Silver dune lupine - mock heather scrub	Shrub	G3	S3
Morella californica	Wax myrtle scrub	Shrub	G3	S3
Nassella spp. - Melica spp.	Needle grass - Melic grass grassland	Herb	G3	S3
Notholithocarpus densiflorus	Tanoak forest	Tree	G4	S3.2
Nuphar lutea	Yellow pond-lily mats	Herb	G5	S3?
Oenanthe sarmentosa	Water-parsley marsh	Herb	G4	S2?
Picea sitchensis	Sitka spruce forest and woodland	Tree	G5	S2
Pinus balfouriana	Foxtail pine woodland	Tree	G3	S3
Pinus contorta ssp. contorta	Beach pine forest and woodland	Tree	G5	S3
Pinus muricata - Pinus radiata	Bishop pine - Monterey pine forest and woodland	Tree	G3	S3.2
Populus fremontii - Fraxinus velutina - Salix gooddingii	Fremont cottonwood forest and woodland	Tree	G4	S3.2
Populus trichocarpa	Black cottonwood forest and woodland	Tree	G5	S3
Pseudotsuga menziesii - Calocedrus decurrens	Douglas fir - incense cedar forest and woodland	Tree	G3	S3

Pseudotsuga menziesii - Notholithocarpus densiflorus	Douglas fir - tanoak forest and woodland	Tree	G3	S3
Quercus garryana (tree)	Oregon white oak woodland and forest	Tree	G4	S3
Quercus lobata	Valley oak woodland and forest	Tree	G3	S3
Quercus parvula var. shrevei	Shreve oak forests	Tree	G2	S2
Quercus wislizeni - Quercus chrysolepis (shrub)	Canyon live oak - Interior live oak chaparral	Shrub	G4	S3
Rhododendron columbianum	Western Labrador-tea thickets	Shrub	G4	S2?
Rubus (parviflorus, spectabilis, ursinus)	Coastal brambles	Shrub	G4	S3
Ruppia (cirrhosa, maritima)	Ditch-grass or widgeon-grass mats	Herb	G4?	S2
Salix gooddingii - Salix laevigata	Goodding's willow - red willow riparian woodland and forest	Tree	G4	S3
Salix hookeriana	Coastal dune willow thickets	Shrub	G4	S3
Salix lucida ssp. lasiandra	Shining willow groves	Tree	G4	S3.2
Salix sitchensis	Sitka willow thickets	Shrub	G4	S3?
Sarcocornia pacifica (Salicornia depressa)	Pickleweed mats	Herb	G4	S3
Schoenoplectus (acutus, californicus)	Hardstem and California bulrush marshes	Herb	GNR	S3
Schoenoplectus americanus	American bulrush marsh	Herb	G5	S3.2
Scirpus microcarpus	Small-fruited bulrush marsh	Herb	G4	S2
Selaginella (bigelovii, wallacei)	Bushy spikemoss mats	Herb	G4	S3
Sequoia sempervirens	Redwood forest and woodland	Tree	G3	S3.2
Sparganium (angustifolium)	Mats of bur-reed leaves	Herb	G4	S3?
Spartina foliosa	California cordgrass marsh	Herb	G3	S3.2
Stuckenia (pectinata) - Potamogeton spp.	Pondweed mats	Herb	G3	S3?
Torreyochloa pallida	Floating mats of weak manna grass	Herb	G3	S3?
Trifolium variegatum	White-tip clover swales	Herb	G3?	S3?
Tsuga heterophylla	Western hemlock forest	Tree	G5	S2
Umbellularia californica	California bay forest and woodland	Tree	G4	S3
Vaccinium uliginosum	Bog blueberry wet meadows	Shrub	G4	S3
Vitis arizonica - Vitis girdiana	Wild grape shrubland	Shrub	G3	S3
Zostera (marina, pacifica) Pacific Aquatic	Eelgrass beds	Herb	GNR	S3

Leopardo Wildlife
Associates
leowild@prodigy.net

May 5, 2019

Initial Study for the MDF Enterprises Cannabis Cultivation Project

1. INTRODUCTION

The MDF Enterprises Cannabis Cultivation Project, or MDF Project is located approximately 5 miles east of Bridgeville, in Larabee Valley, Humboldt County. Involving previously permitted operations, as well as proposed new cultivation on a 31-acre parcel (APN 210-250-022) owned by Stephen Gunn, it entails five Zoning Clearance Certificates (ZCCs) in a non-forested area. This project totals 90,000 square feet (sq. ft.), including Retirement, Remediation and Relocation (RRR) from ownerships less suitable for cannabis cultivation, prompting concerns by the Humboldt County Planning and Building Department (HCPBD) Cannabis Services Division in an April 9, 2019 letter:

> *"The amount of cultivation proposed on the property was not anticipated or considered in the Commercial Medical Marijuana Land Use Ordinance Mitigated Negative Declaration adopted pursuant to the California Environmental Quality Act (CEQA). Because of this you will need to submit a CEQA Initial Study prepared by a qualified professional that evaluates the potential environmental impacts associated with the proposal."*

As such, Mr. Gunn requested that I prepare an Initial Study (IS) that addresses environmental impacts likely associated with the proposed cannabis cultivation activities in accordance to due process. Having consulted on northern California forest-wildlife matters since 1990, I specialize in biological investigations for protected and sensitive species in compliance with State and Federal law. A qualifying "Spotted Owl Expert" (SOE), my resume also demonstrates extensive knowledge of environmental regulations and policy.

This report focuses on potential impacts of proposed commercial agricultural activities, pursuant to California Environmental Quality Act (CEQA) statute (Public Resources Code Section 21000 and following), the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 and following), published court decisions interpreting CEQA, and locally adopted CEQA procedures. In order to streamline this investigation, it also incorporates and builds upon (tiers) previously approved environmental documentation.

Specifically, this assessment references Water Resources Protection Plan (WRPP) prepared for MDF Enterprises, Inc. by Timberland Resource Consultants (TRC), as well as a its Cultivation, Operations, and Security Plan, and Notification of Lake or Streambed Alteration (1600) permit with the California Department of Fish and Wildlife (CDFW).

Furthermore, proposed cultivation activities have been addressed both as per HCPBD general zoning standards for erecting greenhouses on prime agricultural land, and according to the final Environmental Impact Report (EIR) for zoning regulations known as the Commercial Cannabis Land Use Ordinance (CCLUO). Also referred to as Version 2.0, in accordance to Mitigation Monitoring and Reporting Program (MMRP) for new projects put forth in Exhibit B of the CCLUO, this report summaries the biological reconnaissance survey I conducted for this project on April 10, 2019.

2. PROJECT DESCRIPTION

Zoned as Agricultural Exclusive (AE), proposed mixed light cultivation on this 31-acre ownership involves five different ZCCs totaling 90,000 sq. ft. ZCC #12091 entails 10,000 sq. ft. approved by the County, of which 5,500 sq. ft. will be new cultivation. Transferred from less suitable properties, ZCC #12093 covers 20,000 sq. ft. of approved RRR, and ZCC #12095, another 20,000 sq. ft. still pending approval. Lastly, #12253 and #12288 both involve 20,000 sq. ft. of proposed RRR cultivation each.

Associated with one "off-the-grid" rural residence, as well as a pump shed and freestanding workshop, Mr. Gunn is in the process of bringing electrical utilities to this address. Although grading will not take place, establishing greenhouse structures and other project-related improvements may involve removal of individual small pine trees. Greenhouses will be covered to prevent light pollution; however, constructed without an improved floor or footpath, proposed commercial cannabis cultivation will take place directly on the ground.

Water for proposed cannabis cultivation will come from two permitted wells, currently also used as a source of domestic water. Kept onsite in plastic tanks, in order to accommodate expanding operations, water tank storage capacity will be increased from 40,000 to 70,000 gallons. However, a pond will eventually be constructed, as shown on the site plan filed with the County. Acting as a rain catchment storage area, this reservoir will hold approximately one and a half-million gallons.

3. ENVIRONMENTAL SETTING

More than 32 miles from the Pacific Ocean, at an elevation of approximately 2,470 feet, proposed cannabis cultivation is situated on upland pastureland in central Larabee Valley. According to the WRPP:

> *The legal description of the property is the Southeast ¼ of Section 23, Township 1N, Range 3E, H.B.&M. There are two Class II watercourses located on the property that are tributary to Butte Creek, then the Van Duzen River, which is a tributary to the Eel River."*

Operations will be clustered on level pasturelands within 1,000 of a residence. Pictures provided in the preliminary 1600 permit shows greenhouses and outdoor gardens used to cultivate cannabis in 2018. However, according to this document:

> *"...there are no sites located on the property that are jurisdictional to CDFW pre the California Fish and Game Code Section 1600. TRC observed no watercourse crossings, surface diversions, and/or potential California Fish and Game Code Section 5650 violations. The cultivation sites are located approximately 180+ feet from any watercourse."*

Although located within the range of the northern spotted owl (NSO) *(Strix occidentalis caurina),* according to the California Natural Diversity Data Base (CNDDB), the closest NSO Activity Center (AC), HUM0178, is about 1.8 miles to the east. Intensively grazed for decades, according to "A GUIDE TO WILDLIFE HABITATS OF CALIFORNIA" (Mayer and Laudenslayer 1988), proposed operations will be conducted in Perennial Grassland. However, Closed-Cone Pine-Cypress habitat exists nearby. Likely planted as a windbreak about thirty years ago, Monterey Pine *(Pinus radiata*) trees introduced to this ownership cannot be considered as suitable spotted owl habitat.

Nonetheless, my biological reconnaissance survey found the noise level from generators well below the 60 decibel (dB) threshold for disturbance established by the USFWS for the NSO. Confirming the absence of wetlands, invasive exotic plants and/or other sensitive habitats, in covering the entire development area and adjacent vegetation, I also searched for signs of nesting raptors, Sonoma Tree Vole (*Arborimus pomo*) and American badger (*Taxidea taxus).*

4. REGULATORY SETTING

Proposition 64 (the California Marijuana Legalization Initiative) gives each municipality the right to make their own rules. As such, the HCPBD began accepting applications for projects in the Inland Zone after the Commercial Medical Marijuana Land Use Ordinance (CMMLUO) was adopted by the Board of Supervisors on February 26, 2016. Accordingly:

> *"It is intended to address the County of Humboldt's prerogative to license, permit, and control commercial cultivation, processing, manufacturing and distribution of cannabis for medical marijuana as set forth in the MMRSA, including, but not limited to the provisions of Business and Professions Code Sections 19315, 19316, 19320, 19322, 19332, and 19360 and Health and Safety Code Section 11362.777, in conjunction with state licensing requirements, in order to protect the public health, safety, and welfare of the residents of the County of Humboldt, and to reduce or eliminate any adverse environmental effects of existing commercial cannabis cultivation operations in the County of Humboldt, and to prevent adverse environmental effects of any new commercial cannabis activities which may be permitted in the future in accordance with this Section and state law."*

The Commercial Cannabis Land Use Ordinance (CCLUO), as revised on January 11, 2018, limits the maximum allowable cultivation area for outdoor and/or mixed light cultivation to the size of the existing cultivation area prior to January 1, 2016. As per Section 314-55.4.9, Table of Humboldt County Commercial Cannabis Cultivation Permit Types – Inland Zone, the maximum area for an existing cultivation project, on a single parcel ten acres or larger,

is 22,000 sq. ft. for mixed-light and 43,560 sq. ft. for outdoor cultivation. However, the CCLUO also provides a mechanism for retirement, remediation, and relocating pre-existing cultivation from environmentally unsuitable sites. According to 55.4.6.5.9:

> *"More than one RRR Site Zoning Clearance Certificate may be granted on Relocation Site parcels of ten (10) acres or larger, provided that the cumulative total cultivation area for all commercial cannabis cultivation Zoning Clearance Certificates issued for that parcel does not exceed twenty percent (20%) of the area of the Relocation Site parcel. If the Relocation Site has Prime Agricultural Soils on that parcel, the area utilized for cannabis cultivation on Prime Agricultural Soils shall not exceed twenty percent (20%) of the area of Prime Agricultural Soils on that parcel."*

With a combined total footprint of about two acres, the cumulative cultivation size for this 31-acre "Relocation Site" is about seven percent, which is not only well within the CCLUO's guidelines for RRR projects, but also compliant with the Humboldt County Code Zoning Regulations for Permitted Agricultural Accessory Structures (§313-69.1.5.2):

> *"Greenhouses which do not result in lot coverage exceeding five acres (5a) on lots twenty acres (20a) or larger in size, or exceeding 25% of the lot coverage for lots less than twenty acres (20a) in size, either individually or collectively, with or without a perimeter foundation, and without an improved floor or footpath which will preclude the agricultural use of the underlying soil."*

Nevertheless, because of its size, HCPBD's Cannabis Services Division has requested that the permittee prepare an IS. Consequently, the potential environmental impacts of proposed cannabis cultivation have been addressed in accordance to the Mitigation Monitoring and Reporting Program (MMRP) for new projects put forth in Exhibit B of CCLUO, as amended on May 8, 2018.

Outlined in Performance Standards for Biological Resource Protection (Section 313-55.4.12.1.10 and 314-55.4.12.1.10) of the CCLUO, in addition to a Pre-approval biological reconnaissance surveys, as per MMRP Mitigation Measure (MM) - #3.4-1a, new cannabis project in Humboldt County may also require the following technical studies:

- *Special-status amphibian survey and relocation/buffers - MM #3.4-1b*
- *Western pond turtle surveys and relocation/buffers - MM #3.4-1c*
- *Nesting raptor surveys and relocation/buffers - MM #3.4-d*
- *Northern spotted owl surveys - MM #3.4-e*
- *Special-status nesting bird surveys/buffers - MM #3.4-1f*
- *Marbled murrelet habitat suitability surveys/buffers - #3.4-1g*
- *Generator Noise Reduction - MM #3.4-1h*
- *American badger surveys and buffers - MM #3.4-1i*
- *Fisher and Humboldt marten surveys and den site preservation/buffer - MM #3.4-1j*
- *Bat Survey and Buffers – MM #3.4-1k*
- *Vole Surveys and relocation/buffers – MM #3.4-1l*
- *Special-status plants surveys – MM #3.4-3a*

- *Invasive plant species removal and management – MM #3.4-3b*
- *Protection of sensitive natural communities, riparian habitat, wetland vegetation – MM #3.4-4*
- *Protection of Waters of the United States. – MM #3.4-5*
- *Retention of Fisher and Humboldt marten habitat features – MM #3.4-6b*

Because the CCLUO intends for these technical studies to be used in subsequent environmental analysis, potential impacts to sensitive biological resources have been addressed according to the above performance standards. However, given the CEQA obligation to mitigate impacts during specific project review, determining the potential environmental significance of this project also rely on standards provided under the 1973 Z'berg-Nejedly Forest Practice Act (Public Resources Code Section 4551 et seq.). Thereto referred to as the California Forest Practice Rules (FPRs), these rules provide firmly established and consistent thresholds of significance for sensitive biological resources that are functionally equivalent to CEQA.

Other relevant environmental laws include the California Endangered Species Act (CESA), the Federal Clean Water Act (CWA), the Bald and Golden Eagle Protection Act, as well as the California Fish and Game Code. However, while the USFWS and the National Marine Fisheries Service (NMFS) have authority over federally listed species, implementing CESA is the responsibility of CDFW. Also authorized to comment and make recommendations on CEQA projects; however, as Lead Agency, permitting legal cannabis cultivation in a manner consistent with CEQA and the California Administrative Procedure Act (APA) is ultimately a Humboldt County responsibility.

5. BIOLOGICAL COMMUNITIES

A literature review as per CDFW's List of Special Animals (2018) was conducted to identify sensitive floral and faunal communities likely impacted by the proposed cannabis cultivation. Additionally, a query of California's Natural Diversity Data Base (CNDDB) was carried out for the area within 1.3 miles of the project. Compatible with the assessment area for evaluating impacts on spotted owls, although there are no known NSOs, the CNDDB indicates presence of American peregrine falcon *(Falco peregrinus anatum),* foothills yellow-legged frogs (*Rana boylii),* and summer-run steelhead trout *(Oncorhynchus mykiss irideus).* Special status plants in this assessment area include Howell's montia *(Montia howellii)*, Oregon goldthread *(Coptis laciniate),* Pacific gilia *(Gilia capitata ssp. pacifica)* and Tracy's sanicle *(Sanicula tracyi).*

On agricultural pasture lands, more than 180' from watercourses, this project is located far enough from riparian habitat to preclude harmful effects on anadromous species and Willow Flycatchers *(Empidonax traillii).* However, in accordance to the CCLUO's MMRP, a more in-depth assessment of special status floral and faunal communities potentially impacted by proposed cannabis cultivation has been conducted in terms of ecological management guilds.

Consequently, MMs #3.4-1b, #3.4-1c, #3.4-4 and #3.4-5 have been lumped together and addressed as potential impacts to Aquatic/Wet Site Species, #3.4-d as potential impacts to Bald Eagle, Osprey and Forest Raptor Guild Species, #3.4-e and #3.4-1h as Northern Spotted Owl and Late Mature Forest Guild Species. Furthermore, #3.4-1f as Special-status

Nesting Birds, #3.4-1i, #3.4-1j, #3.4-1k, #3.4-1l and #3.4-6b as Forest Mustelids and Other Small Mammals. Lastly, #3.4-3a, #3.4-3b and #3.4-4 have been addressed as Special-status Plants and Exotic Invasive Species.

6. DISCUSSION OF ENVIRONMENTAL IMPACTS

Article 5 of the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Sections 15000-15387) provide rules for "Preliminary Review of Project and Conduct of Initial Study". Concerned with present plant or animal communities threatened by local elimination, in jeopardy of experiencing substantial habitat reduction, or dropping below self-sustaining levels as a result of proposed project [§15065(a)(1)], before empowering a lead agency to authorize additional mitigations or alternatives, CEQA requires that a decision-making body provide substantial evidence of significant environmental effects [§15126.4 (a)(3)].

To the best extent possible, such arguments should contain an element of Forecasting (§15144), as well as a degree of Specificity (§15146) and Technical Detail (§15147). Limited to activities which are within the agency's area of expertise [§15096 (d)], such comments should be written in a manner that is meaningful and useful to the decision-making body and public [§21003(b)].

> *"Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence"* [§21080(e)(2)].

Consequently, biological resources potentially impacted by proposed cannabis cultivation have been discussed with emphasis on CEQA significance, starting with species listed under the ESA, followed by those considered under the CESA, and lastly, non-listed sensitive species. Although potential significant effects to animals with large territories were considered inside 1.3 miles, impacts to species with smaller ranges were evaluated within the appropriate distance from the action area, as specified by the MMRP.

As directed in #3.4-1a, this reconnaissance survey addresses habitat for special-status amphibians within 400' (#3.4-1b). There is likely no western pond turtle (*Emys marmorata)* habitat within 200', but potential impacts to nesting raptors has been addressed within 500' (#3.4-1d), and impacts to special-status nesting birds within 100' (#3.4-1f). Although suitable habitat for fisher and Humboldt marten does not occur, the potential cultivation development areas were inspected for badgers (#3.4-1k). Detrimental impacts to special-status bats were considered within 400' (#3.4-1k), and within 200' for special-status voles (#3.4-1l). Special-status plants and exotic invasive species were considered onsite.

Addressed in order of potential significance, environmental impacts have been discussed for Northern Spotted Owl and Late Mature Forest Species, Bald Eagle, Osprey and Forest Raptors, Special-status Nesting Birds, Aquatic/Wet Site Species, Forest Mustelids and Other Small Mammals, and Special-status Plants and Exotic Invasive Species. Parameters used to appraise potential CEQA significance included; (1) occurrence and distribution of

the species in relation to the project area, (2) species sensitivity to disturbance, (3) existing baseline conditions and population size, and (4) the species legal status. A species would be dropped from further consideration, if the project area was found to occur outside its range, or vital habitat requirements were absent.

Northern Spotted Owl and Late Mature Forest Guild Species

Initially believed to be old growth dependent, NSOs were later found to be common in younger forest types of northern California (USDA 1994). However, rather than habitat encroachment, competition from the closely related, exotic and invasive barred owl *(Strix varia)* is now regarded as the largest threat to the California NSO population (USFWS 2011). Although they share an affinity for mature forest with other sensitive species dependent on the larger, more decadent trees, downed woody debris, and lower ambient temperatures, such conditions do not exist in association with this project. Consequently, impacts to these guild species have been dismissed as adjacent pine stand is unsuitable for NSOs, and there are no NSOs within 1.3 miles of this project.

Bald Eagle, Osprey and Forest Raptor Guild

Bald eagles (*Haliaeetus leucocephalus*) and ospreys (*Pandion haliaetus*) are fully protected, mainly fish-eating birds known to nest in large trees, nearby streams and rivers. Occupying the same niche as great blue herons (*Ardea Herodias*), although these birds are regularly observed in association with higher order streams, the CNDDB does not record them nesting within 1.3 miles of this project. Although peregrine falcon is reported inside 1.3 miles, given that this project does not involve habitat removal, or suitable nesting cliffs, it can reasonably be concluded that the proposed cannabis cultivation will not impact bald eagles, ospreys, or falcons. Consequently, pre-construction surveys and/or monitoring for these species is not recommended, as proposed cannabis cultivation is unlikely to affect nesting forest raptors and/or herons within 500' of this project.

Special-Status Nesting Birds

In addition to the little willow flycatcher, the MMRP (#3.4-1f) identifies bank swallow *(Riparia riparia),* tricolored blackbird (*Agelaius tricolor*), western yellow-billed cuckoo *(Coccyzus americanus occidentalis)* and western snowy plover (*Charadrius nivosus nivosus*) as Humboldt County special-status birds potentially impacted by commercial cannabis development. Although this ownership does not contain habitat for the above-mentioned special status species, if construction, grading, vegetation removal, or other project-related improvements are necessary during the migratory bird nesting season (February 1 through August 15), a focused survey for native nesting birds shall be conducted by a qualified biologist within 100'. Timed no more than seven days prior to the beginning of project-related activities, if a nest is found, the Permittee shall consult with CDFW regarding appropriate actions to comply with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code.

Aquatic/Wet Site Guild

A candidate species under the CESA, foothills yellow-legged frogs have been recorded in nearby tributaries to Butte Creek and the CNDDB also reports summer-run steelhead trout at the confluence with Van Duzen River. Grouped together based on affinity for water, wet areas and riparian habitat, although special status amphibians may occur in two creeks located at the edge of this ownership, these Class II watercourses are likely not habitat for western pond turtles *(Actinemys marmorata marmorata).* My reconnaissance survey observed no special-status amphibians in association with proposed development areas.

Given that this project is more than 180' from potential habitat, impacts to special-status fish, amphibian and aquatic reptile species can reasonably be considered as mitigated by 1600 permitting and the WRPP. Nevertheless, additional measures for reservoirs commonly requested by CDFW include invasive species management, such as annual survey for American bullfrog (*Rana catesbeiana)*, and draining the pond once a year, if bullfrogs are observed.

Forest Mustelids and Other Small Mammals

This project is too far inland to constitute suitable white-footed vole *(Arborimus albipes)* habitat, and outside the geographic range of the Humboldt marten (*Martes americana humboldtensis)*, although fishers are regularly observed in this region, these open pasturelands do not provide key habitat for mustelids. Within the range of American badgers (*Taxidea taxus)* and Sonoma Tree Vole (*Arborimus pomo*), pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat *(Corynorhinus townsendii)* are also special-status bats with ranges coinciding with this project.

As this project does not involve substantial habitat changes, it can reasonably be concluded that it will not impact special-status mammals. Having surveyed for signs of sensitive wildlife, suitable Townsend's big-eared bat roosting habitat or suitable bat nesting snags does not occur within 400'. No tree voles where observed within 200' and I did not observe potential badger dens in the development areas. However, prior to establishing additional cultivation areas, I recommend a pre-construction survey to assure the continued absence of badgers in development areas. Furthermore, the use monofilament netting should be avoided to reduce the risk of ensnaring wildlife, and installation of pond exits ramps to prevent wildlife entrapment is also advised.

Special-Status Plants and Exotic Invasive Species

Considered threatened by the California Native Plant Society (CNPS), Pacific gilia *(Gilia capitata ssp. pacifica)* has a California Rare Plant Rank of 1B, and is protected under State law. As per the CNPS:

> *"Plants with a California Rare Plant Rank of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. California Rare Plant Rank 1B plants constitute the majority of taxa in the CNPS Inventory, with more than 1,000 plants assigned to this category of rarity."*

The Howell's montia *(Montia howellii)* is similarly protected, but more common beyond the boundaries of California, the CNPS considers them as Rank 2B. However, according to the CNPS, all California Rare Plant Rank 1B and 2B species meet the definitions of the CESA and the California Fish and Game Code and are eligible for state listing:

> *"Impacts to these species or their habitat must be analyzed during preparation of environmental documents relating to CEQA, or those considered to be functionally equivalent to CEQA, as they meet the definition of Rare or Endangered under CEQA Guidelines §15125; (c) and/or §15380."*

Nevertheless, because this project does not contain suitable habitat for listed plants, and does not involve substantial ground disturbance, potential significant impacts to sensitive botanical communities can reasonably be considered as mitigated. Having inspected this project's development areas, I did not observe plant species classified as invasive by the California Invasive Plant Council. Nevertheless, appropriately timed preconstruction surveys are recommended to detect sensitive botanical species in proposed new cannabis cultivation areas.

7. DISCUSSION OF SIGNIFICANT ENVIRONMENTAL IMPACTS

A determination of the significance of environmental effects caused by a project calls for careful judgment on the part of the public agencies involved. However, not only does CEQA require that potentially harmful impacts be discussed with an emphasis that is in proportion to their severity and probability of occurrence (§15143), those impacts must also be judged against existing baseline conditions. According to the CCLUO, Exhibit A – FINDINGS AND STATEMENT OF OVERIDING CONSIDERATIONS:

> *"The EIR adopts as its baseline for analysis of impacts the existing environmental conditions that include the legacy of a half century of unregulated cannabis cultivation in remote and environmentally sensitive areas of Humboldt County that unquestionable caused harmful environmental impacts that are documented in the EIR..."*

The importance of factoring in current conditions when conducting "take" analysis is also indicated in the Section 7 USFWS Consultation Handbook. Limiting consideration to sites with a reasonable expectation of occupancy, whereas the ESA prohibits the incidental taking of an individual without an explicit permit, it is important to consider that CESA differs from the Federal equivalent in ways often not acknowledged by State agencies and stakeholders.

For whereas the CESA applies both to formally listed and candidate species, it diverges from the ESA in that its definition of "take" is far more limited (Dwyer and Murphy 1995). Restricted to "*Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill*", the CESA has no equivalent to "*harm*" or "*harass*". The California Fish and Game Code also gives CDFW explicit authority to grant incidental take. In other words, incidental take (disturbance) of State listed species is more permissive, providing that it involves an otherwise lawful and fully mitigated activity (Kern 1999).

Nevertheless, for the purposes of this biological assessment, potential noise disturbance to special status species resulting from the project has been assessed as per **"Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California (USFWS 2006)"**.

Accordingly, disturbance of this Federally listed species may reach the level of "take" when at least one of the following conditions are met:

•*Project-generated sound exceeds ambient nesting conditions by 20-25 decibels (dB)*

•*Project-generated sound, when added to existing ambient conditions, exceeds 90 dB*

•*Human activities occur within a visual line-of-sight distance of 40 m or less from a nest*

Compliant with measures to reduce generator noise and light pollution, in addition to preconstruction surveys to prevent incidental impacts to badgers, ground nesting birds, and protected plants, special measures recommended for the proposed reservoir include invasive species management, such as annual survey for American bullfrog (*Rana catesbeiana)*, and draining the pond once a year, if bullfrogs are observed. Moreover, the use of monofilament netting shall be avoided, and pond exits ramps should be installed to prevent wildlife entrapment.

In conclusion, consistent with HCPBD's zoning regulation for erecting greenhouses, this IS found no plant or animal communities potentially impacted by proposed cannabis cultivation in manner that would be environmentally significant. Held to a higher standard than other legally permitted land uses, implementation the CCLUO has also resulted in severely reducing the harmful effects of illegal growing. Moreover, as other States legalize cultivation, and wholesale cannabis prices continue to fall, cannabis cultivation is likely to gradually decrease in Humboldt County, further alleviating potentially harmful cumulative environmental impacts.

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APPENDIX G:
WETLAND DELINEATION SURVEY

Aquatic Resource Delineation

APN 210-250-022-000

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1.0 Introduction

This document discloses and discusses the results of an aquatic resource delineation conducted on APN 210-250-022-000 in Humboldt County, California. The purpose of this report is to assess the project parcel for any potential wetland features so that protections may be accurately applied if present.

Location

The study area is located off State Route Highway 36 in the Larabee Valley, approximately 5 aerial miles northwest of Dinsmore, California. The study area occurs in the SE ¼ of Section 23, T1N, R4E, Humboldt County in the Larabee Valley, CA 7.5' USGS Quad.

2.0 Definitions

Waters of the United States

Under Section 404 of the Clean Water Act the U.S. Army Corps of Engineers regulate "Waters of the United States" as defined in the Code of Federal Regulations as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water mark, and herein referred to as non-wetland waters. Non-wetland waters, for example, generally include lakes, rivers, and streams.

Section 404 of the CWA protects wetlands federally. In 1989 George H.W. Bush implemented the national "No-net Loss of Wetlands" policy which either avoids the filling of wetlands or mitigates the destruction and/or degradation of wetlands. U.S. Army Corps of Engineers defines wetlands as "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. Wetlands generally include swamps, marshes, bogs, and similar areas."

Waters of the State

Although very similar, the term "Waters of the State" is defined by the Porter-Cologne Water Quality Control Act (401) as "any surface water or groundwater, including saline waters, within the boundaries of the state." The State Water Resources Control Board (SWRCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. SWRCB jurisdiction includes wetlands and waters that may not be regulated by the Corps under Section 404.

Until recently, Waters of the State did not include specific language regarding wetlands and any potential deviation from federal regulations. Resolution No. 2019-0015 solidified SWRCB state protections for wetlands along with a state definition. The SWRCB defines wetlands as "An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation." Per Section II.3.c. of Procedures for Discharge of Dredged or Fill Material to Waters of the State; the jurisdiction of artificial wetlands does not include incidental wetlands that have resulted from human activity subject to ongoing maintenance (e.g. inboard ditches, landing surfaces, road surfaces). Assuming these features are not an alteration of pre-existing waters of the state, they do not receive protection under Resolution No. 2019-0015.

3.0 Methods

Data Collection

Sample points within the study area were delineated using standard methods defined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (U.S. Army Corps of Engineers 2010) and the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987).

Field work and data collection was conducted on June 30, 2020. Five sample points were assessed for the three wetland parameters: wetland hydrology, hydrophytic vegetation, and hydric soils. All sample points were conducted on the flat riparian terrace on which the property is located.

4.0 Environmental Setting

Topography

The property containing the study area is located along the lower slopes of Larabee Valley. The topography at this location is relatively flat, ranging from 2-5% at the base of the drainage. Surface water on property drains NE into an unnamed intermittent watercourse that eventually flows into Little Van Duzen River.

Vegetation

The study area occurs within Annual Grassland habitat. Planted pine trees are present on-site but are not considered a natural feature. This habitat is dominated by naturalized nonnative annual grasses, with other graminoids and forbs present in small proportions. Individual or small stands of trees may be present but occupy less than 10% of the area. Riparian areas display dense willow communities and the occasional hydrophytic plant.

Soils

The project parcel contains multiple soil types, however sample points occurred within one soil type. (U.S. Department of Agriculture, Natural Resources Conservation, 2016):

- 1001 – Frostvalley, 0 to 2% slopes. This soil type's parent material consists of alluvium derived from metasedimentary rock. Typical soil profiles are dominated by loam textures with varying degrees of gravel present.

Hydrology

Surface hydrology on property is sourced from both direct and indirect rainfall. No evidence of percolating groundwater was observed on-site. Precipitation on-site drains in lateral directions to the unnamed watercourses that border the property on the east and west. Precipitation in the watershed upslope of the property flows within intermittent watercourses along the east and west boundaries. Although the winter has been relatively dry (See AgACIS Precipitation Accumulation Graph), precipitation accumulation for 2020 falls within the normal ranges.

5.0 Results and Discussion

No wetland features were delineated on APN 210-250-022-000. Sample points (SP) 1 and 2 met hydrophytic vegetation because of facultative species. SP 3 and 4 contained upland plant communities. SP5 was the only location on property that contained obligate species and met hydrophytic vegetation. No SP met hydric soils. Soils consisted of brown colors (10YR3/3 and 4/3) with sandy loam textures. No redox features were observed in any of the sample points. SP5 did contain dark colored soils (10YR2/1) but contained no evidence of anaerobic processes. Wetland hydrology was only met at SP5. All sample points met the secondary indicator Geomorphic Position (D2), given the flat topography. SP1-4 did not meet any other indicators of wetland hydrology. SP5 did pass the FAC Neutral test, meeting two secondary indicators of wetland hydrology.

List of Appendices

1) General Location Map
2) Aquatic Resource Map
3) Site Photographs
4) AgACIS Rainfall Accumulation Graph
5) NRCS Web Soil Survey Map
6) National Wetland Inventory Map
7) Wetland Delineation Data Sheets (Western Mountain, Valleys, and Coast Region)

6.0 References

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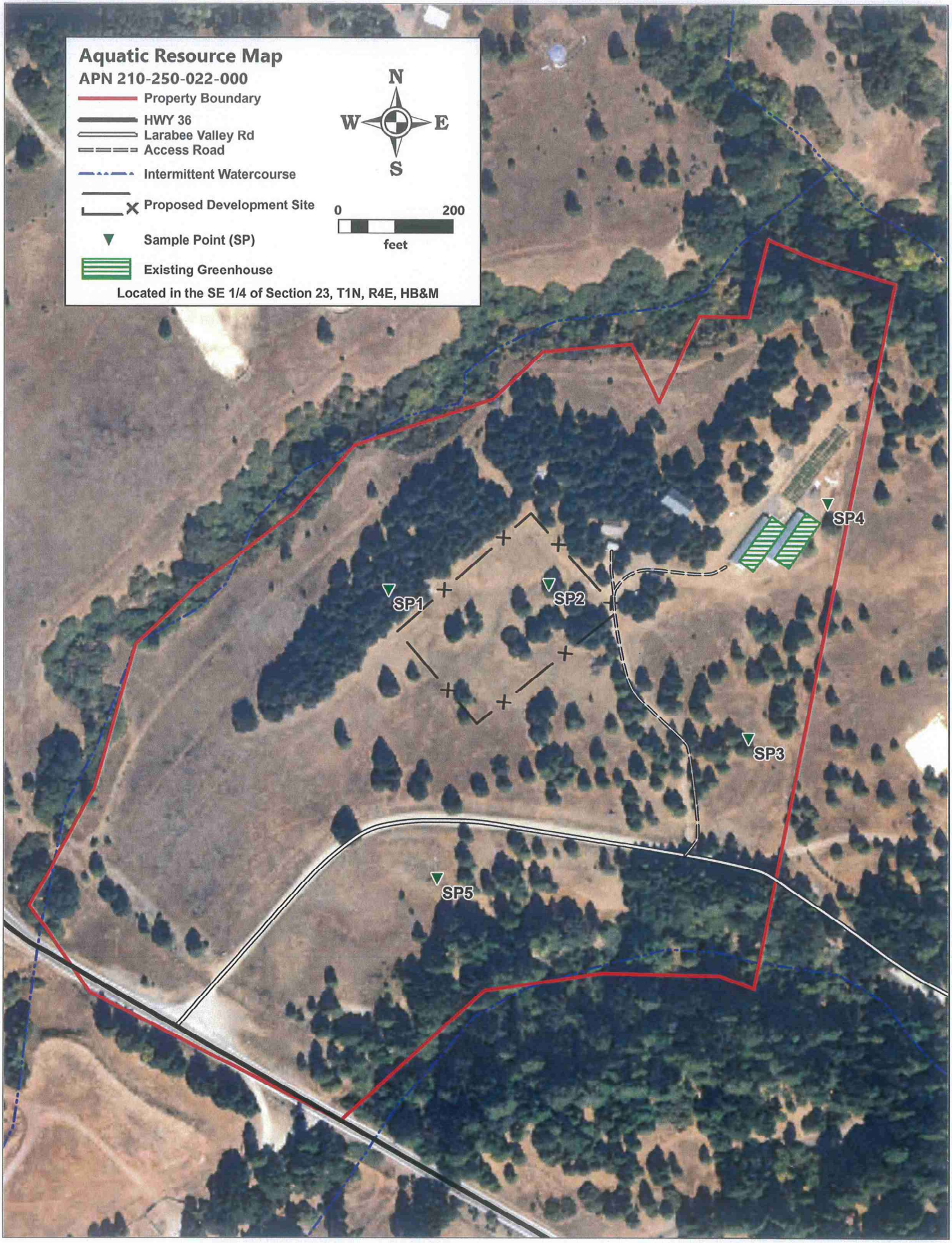
General Location Map
APN 210-250-022-000
Property Boundary
Located in the SE 1/4 of Section 23, T1N, R4E, HB&M
NORTH
0
2,000
feet
Parabel
Valley
Mule
Creek
Spring
Gravel Pit
Borrow Pit
TRAIL
JEEP
BM 2513
BM 2472
BM 2355
Crazy Spring
Van
13
14
15
22
23
24
25
26
27
34
35
36


Aquatic Resource Map
APN 210-250-022-000
Property Boundary
HWY 36
Larabee Valley Rd
Access Road
Intermittent Watercourse
Proposed Development Site
Sample Point (SP)
Existing Greenhouse
Located in the SE 1/4 of Section 23, T1N, R4E, HB&M
N
W
E
S
0
200
feet
SP1
SP2
SP3
SP4
SP5

Appendix 3 – Site Photographs

Photo #1: Drone photograph of the project parcel. Photo date: 06/30/2020.

Appendix 3 – Site Photographs

Photo #2: Picture of SP1. Photo date: 06/30/20

Appendix 3 – Site Photographs

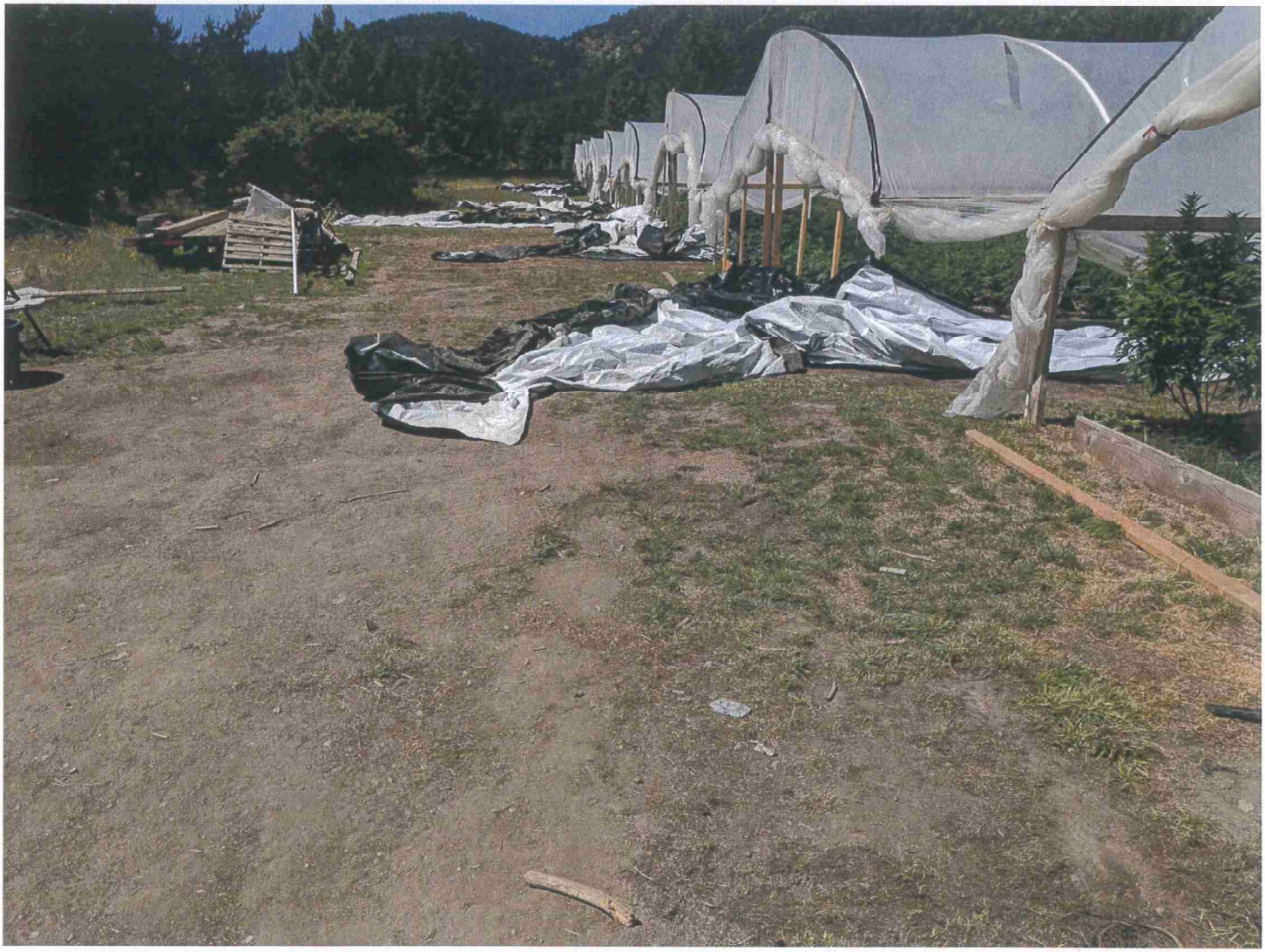


Photo #3: Picture of SP2. Photo date: 06/30/20

Appendix 3 – Site Photographs

Photo #4: Picture of SP3. Photo date: 06/30/20

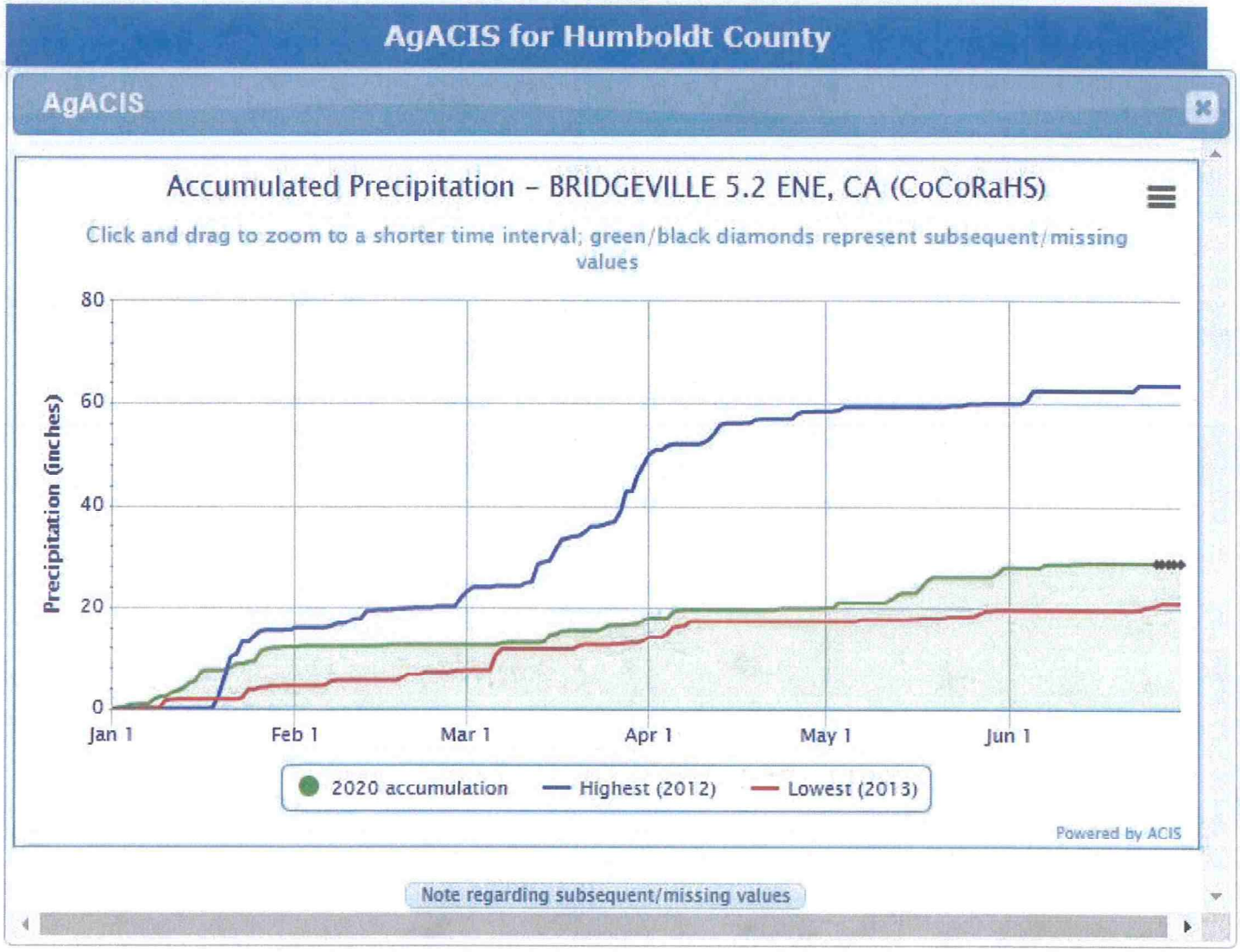
Appendix 3 – Site Photographs

Photo #5: Picture of SP4. Photo date: 06/30/20

Appendix 3 – Site Photographs

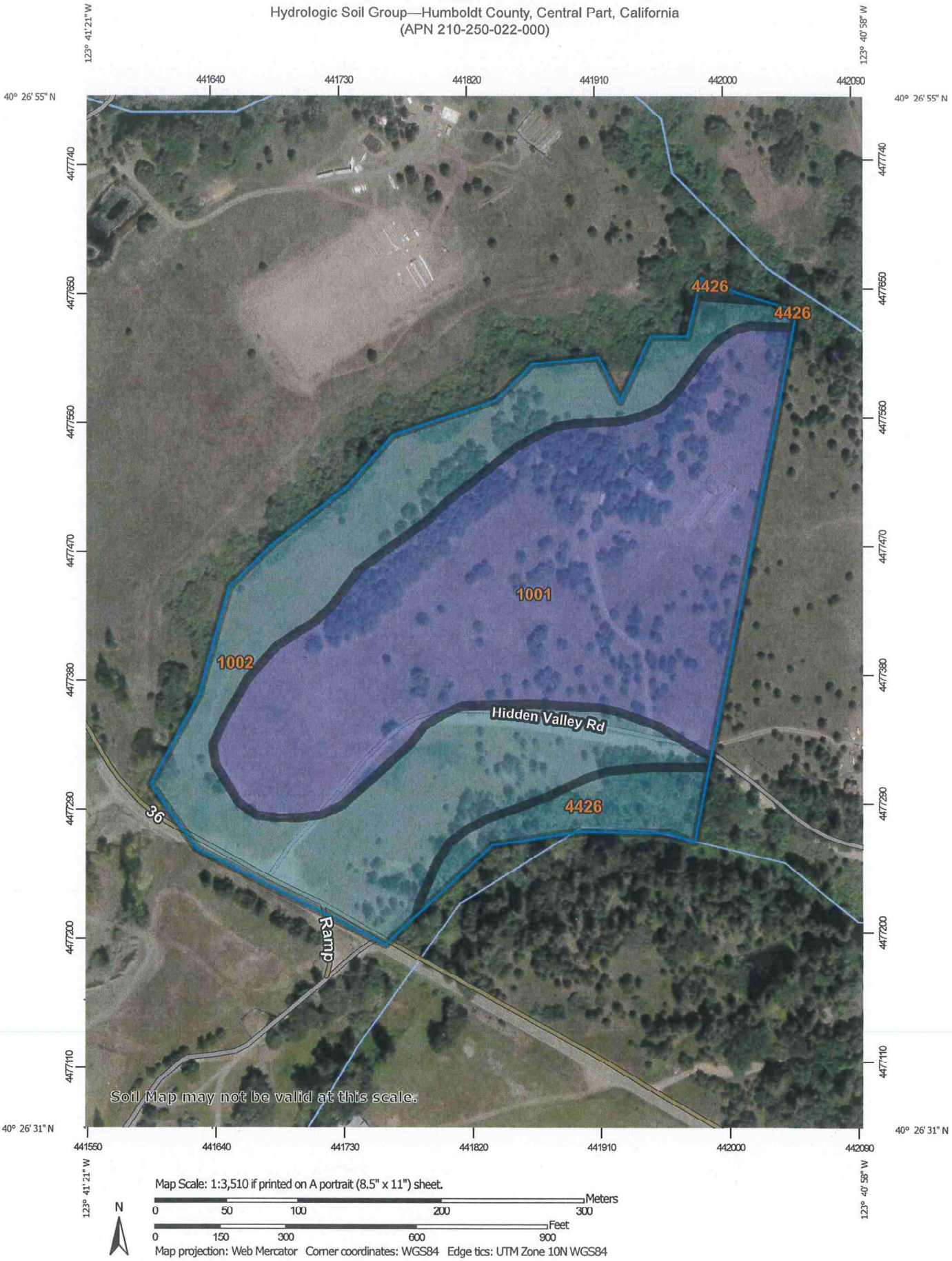
Photo #6: Picture of SP5. Photo date: 06/30/20

Appendix 4 – Rainfall Data



Precipitation accumulation data for a rain gauge in Bridgeville, California.
Sourced: Applied Climate Information Center (ACIS) – NOAA Regional Climate Center. http://agacis.rcc-acis.org/
Date Sourced: 06/30/2020

Hydrologic Soil Group—Humboldt County, Central Part, California
(APN 210-250-022-000)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Central Part, California
Survey Area Data: Version 5, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2014—Nov 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1001	Frostvalley, 0 to 2 percent slopes	B	16.4	54.9%
1002	Frostvalley-Mulecreek complex, 2 to 9 percent slopes	C	11.8	39.3%
4426	Pasturerock-Coyoterock-Maneze complex, 15 to 50 percent slopes, dry	C	1.7	5.8%
Totals for Area of Interest			**30.0**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

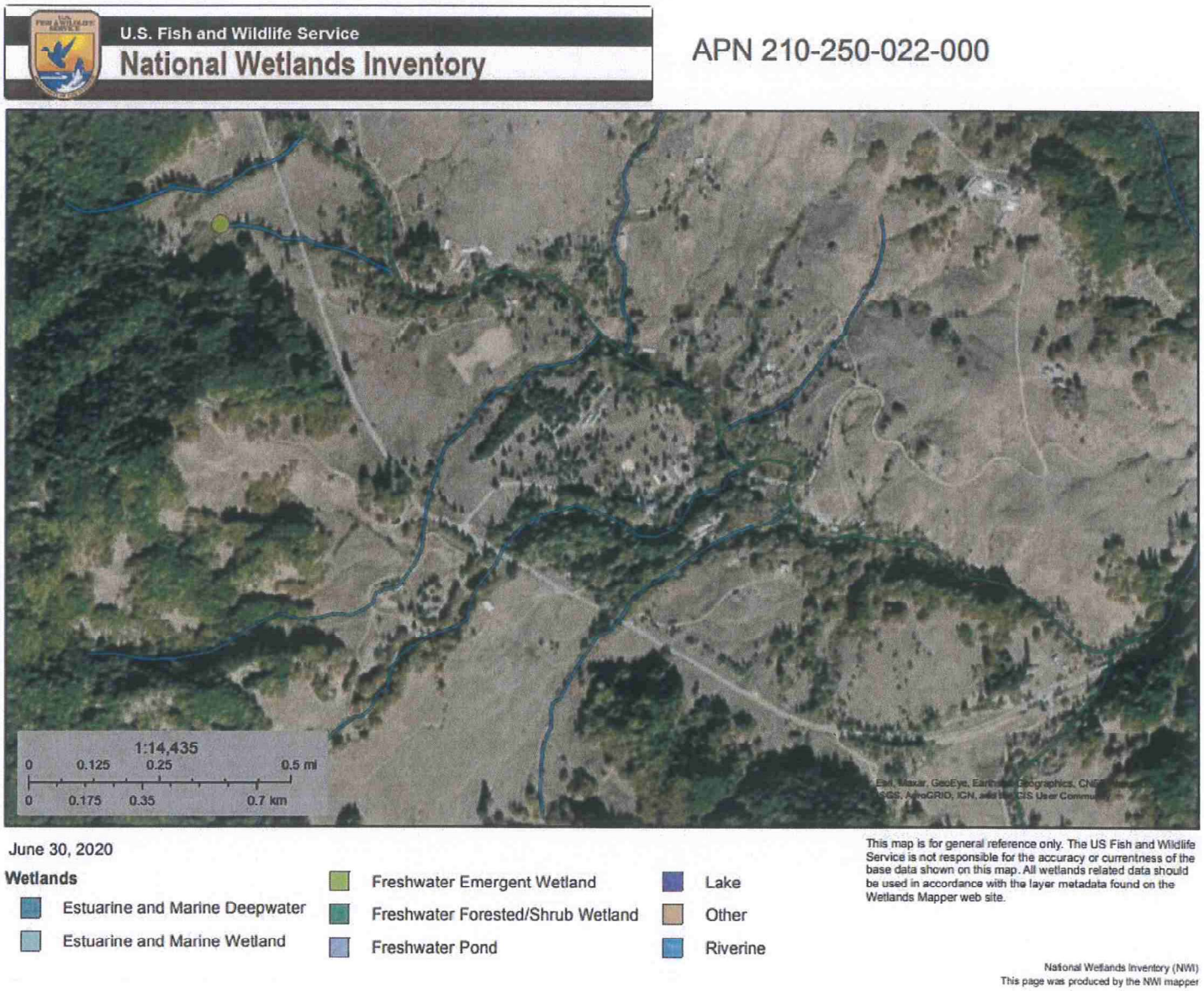
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix 6 – National Wetland Inventory



Data Sourced: National Wetland Inventory Wetlands Mapper. https://www.fws.gov/wetlands/data/mapper.html

Appendix 7 – Wetland Delineation Data Sheets
(Western Mountains, Valleys, and Coast Region)

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

Project/Site: Gunn Delineation City/County: HUM Sampling Date: 06/30/20

Applicant/Owner: Stephen Gunn State: CA Sampling Point: SP1

Investigator(s): Jack Henry Section, Township, Range: SE¼ 23, T1N, R4E, HB&M

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 2

Subregion (LRR): A Lat: 40.44587 Long: -123.68648 Datum: NAD83

Soil Map Unit Name: 1001 NWI classification: N/A

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

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

Are Vegetation No, Soil No, or Hydrology No 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 X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks: SP located in planted grove of pinus contorta.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus contorta	90	D	FAC
2. Pinus ponderosa	2	–	FACU
3.			
4.			
	92	= Total Cover	

Sapling/Shrub Stratum (Plot size: r = 15')			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: r = 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		= Total Cover	

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 95%

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks: Planted lodgepole pines, probably as a wind break. This species is not native to this area of Humboldt

SOIL

Sampling Point: SP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12"	10YR 4/3	100%					Sandy/Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Colors not indicative of anerobic processes

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)
- X 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 X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Failed FAC Neutral

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

Project/Site: Gunn Delineation City/County: HUM Sampling Date: 06/30/20
Applicant/Owner: Stephen Gunn State: CA Sampling Point: SP2
Investigator(s): J. Henry Section, Township, Range: SE¼ 23, T1N, R4E, HBAM
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): A Lat: 40.44591 Long: -123.68548 Datum: NAD83
Soil Map Unit Name: 1001 NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No 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 X No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks: Sampled in project area. No veg present at time of sampling. Veg community likely reflects SP3 and SP4 Veg.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Alopecurus pratensis	?	?	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	____ = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 95%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: Small green bunches dispersed on bare earth. Likely alopecurus pratensis. Giving hydrophytic because of disturbed veg.

SOIL

Sampling Point: SP2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 3/3	100					Sandy Gravelly Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X 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 X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No FAC Neutral, but unlikely to pass given that veg on-site is FAC and upland species.

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

Project/Site: Gunn Delineation City/County: Wlm Sampling Date: 06/30/20
Applicant/Owner: Stephen Gunn State: CA Sampling Point: SP3
Investigator(s): J. Henry Section, Township, Range: SE¼ 23, T1N, R4E, WBEM
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): A Lat: 40.44518 Long: -123.68423 Datum: NAD83
Soil Map Unit Name: 1001 NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No 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 X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks: Sampled in foxtail meadow where pond is proposed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus ponderosa	15%	D	FACU
2.			
3.			
4.			
	15	= Total Cover	

Sapling/Shrub Stratum (Plot size: r=15')			
1.			
2.			
3.			
4.			
5.			
	____	= Total Cover	

Herb Stratum (Plot size: r=5')			
1. Alopecurus pratensis	70	D	FAC
2. Hypochaeris glabra	5	–	UPL
3. Poa pratensis	10	–	FAC
4. Rumex acetosella	5	–	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90	= Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	= Total Cover	

% Bare Ground in Herb Stratum 5%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Native uplands intermixed with nonnative annuals

SOIL

Sampling Point: SP3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14"	10YR 4/3	100						Sandy Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X 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 X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Failed FAC Neutral

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

Project/Site: Gunn Delineation City/County: HUM Sampling Date: 06/30/20

Applicant/Owner: Stephen Gunn State: CA Sampling Point: SP4

Investigator(s): J. Henry Section, Township, Range: SE1/4 23, T1N, R4E, HB&M

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 2

Subregion (LRR): A Lat: 40.44631 Long: -123.68385 Datum: NAD83

Soil Map Unit Name: 1001 NWI classification: N/A

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

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

Are Vegetation No, Soil No, or Hydrology No 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 X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: Sampled area near nursery greenhouses.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Alopecurus pratensis	60	D	FAC
2. Rumex acetosella	40	D	FACU
3. Hypochaeris radicata	30	–	FACU
4. Lupinus bicolor	15	–	UPL
5. Aira caryophylla	15	–	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	80/32 160 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10%

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: SP4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12"	10YR 4/3	100					Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X 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 X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Failed FAC Neutral

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

Project/Site: Gunn Delineation City/County: HUM Sampling Date: 06/30/20
Applicant/Owner: Stephen Gunn State: CA Sampling Point: SP5
Investigator(s): J. Henry Section, Township, Range: SE¼ 23, T1N, R4E, HB&M
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): A Lat: 40.44451 Long: -123.68616 Datum: NAD83
Soil Map Unit Name: 1001 NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No, Soil No, or Hydrology No 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 X No ____	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes X No ____	

Remarks: Sampled in potentially hydrophytic vegetation over 300' from development.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: r = 5')			
1. Carex densa	40	D	OBL
2. Dipsacus fullonum	30	D	FAC
3. Alopecurus pratensis	10	–	FAC
4. Holcus lanatus	8	–	FAC
5. Poa pratensis	2	–	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 20%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
✓ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: Nonnative grasses with about 40 sq. ft. of carex densa in lowest point

SOIL

Sampling Point: SPS

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20"	10YR 2/1	100					Silty Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Dark soils but no redox features observed.

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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Passes FAC Neutral 1:0