Biological Resources Assessment
3050 Big Valley Road
Kelseyville, Lake County, California

Prepared For:

Green Handle Farms LLC
3050 Big Valley Road
Kelseyville, California

Prepared by:

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Environmental Scientist
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Mill Valley, California 94941
415-389-9199

February 11, 2021

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EXECUTIVE SUMMARY

This report presents the results of a biological resources assessment conducted for property located at 3050 Big Valley Road in Kelseyville, Lake County, California. The property is listed on Assessor Parcels 007-029-02, 007-029-10, and 007-029-12 approximately 1.5 miles northwest of downtown Kelseyville and is located on Section 10 of the Kelseyville U.S.G.S. topographic map.

The purpose of the assessment is to identify special-status plant and wildlife species and sensitive habitats (including wetlands) that have the potential to occur on or in the vicinity of the study area to determine if the existing and proposed commercial cannabis operation at the site could potentially affect these resources. Based on information and data collected for the analysis, appropriate mitigation measures designed to minimize and/or avoid potential biological resource impacts are provided.

The property is accessed via a private drive on the north side of Big Valley Road. The proposed outdoor grow area occurs to the west of the driveway in a field that has a history of being farmed for hay. The proposed grows include type 1B mixed light with a cultivation area of 2,500 square feet and a canopy area of 8,775 adjacent to a 3B mixed light cultivation area of 58,122 square feet and a canopy area of 22,000 square feet.

No potential wetlands were identified on the site in Section 3.0. The project site provides potential habitat for nesting birds and potential dispersal habitat for western pond turtle as described in Section 4.1. The potential for rare plants to occur is extremely low due intensive disturbance from farming as described in Section 4.2.

There is no critical habitat for plants or animals within the Study Area.

1.0 INTRODUCTION

This report presents the results of a biological resources assessment conducted for property located at 3050 Big Valley Road in Kelseyville, Lake County, California. The property is listed on Assessor Parcels 007-029-02, 007-029-10, and 007-029-12 approximately 1.5 miles northwest of downtown Kelseyville and is located on Section 10 of the Kelseyville U.S.G.S. topographic map (Figure 1).

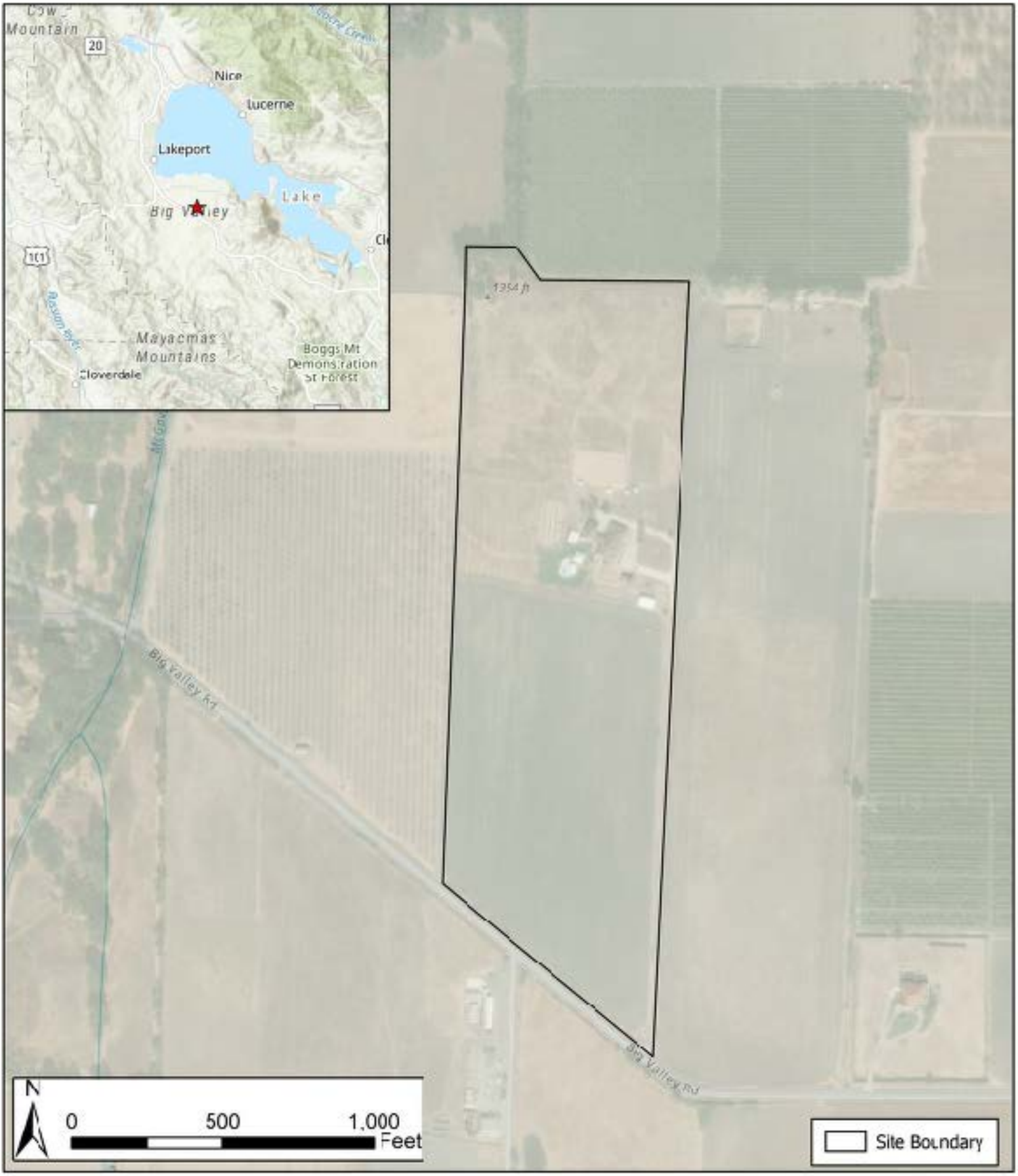
The purpose of the assessment is to identify special-status plant and wildlife species and sensitive habitats (including wetlands) that have the potential to occur on or in the vicinity of the study area to determine if the existing and proposed commercial cannabis operation at the site could potentially affect these resources. Based on information and data collected for the analysis, appropriate mitigation measures designed to minimize and/or avoid potential biological resource impacts are provided.

The property is accessed via a private drive on the north side of Big Valley Road. The proposed outdoor grow area occurs to the west of the driveway in a field that has a history of being farmed for hay. The proposed grows include type 1B mixed light with a cultivation area of 2,500 square feet and a canopy area of 8,775 adjacent to a 3B mixed light cultivation area of 58,122 square feet and a canopy area of 22,000 square feet (Sheets 1-7).

A description of each of area is provided below followed by the results of the assessment.

2.0 SITE DESCRIPTION

The proposed cultivation area occurs within an existing agricultural field which was recently planted with hay. The site has been intensively farmed since at least 1983 as evidenced by reviewing Google Earth and historic aerials on-line (www.historic aeraisl.com). The site is relatively flat with surrounding land uses agricultural. McGraugh Slough occurs approximately 1/3 mile to the west and Kelsey Creek approximately 0.6 miles to the east. Clear Lake is located about 2.3 miles due north.



2246 Camino Ramon
San Ramon, CA 94583

Figure 1: Site Map
3050 Big Valley Rd.
Kelseyville, California

CULTIVATION SITE EXHIBIT FOR
GREEN HANDLE FARMS, LLC
3050 BIG VALLEY RD KELSEYVILLE, CA 95451
APN: 008-037-01, 008-035-14

PROJECT INFORMATION

PROJECT ADDRESS:	3050 BIG VALLEY RD KELSEYVILLE, CA 95451
OWNER/DEVELOPER:	GARTH MARKSON 1784 PETERSON POND LN REDWOOD VALLEY, CA 95470 (310) 429-7354 GARTHMARKSON@GMAIL.COM
CIVIL ENGINEER:	ANDREW S. WILLIS, P.E. BC ENGINEERING GROUP, INC. 418 B STREET, THIRD FLOOR SANTA ROSA, CA 95401 (707) 542-4321 AW@BCENGINEERINGGROUP.COM
SURVEYOR:	NA
AREA:	28.89 ACRES

SHEET INDEX

C1.0	PROJECT INFORMATION
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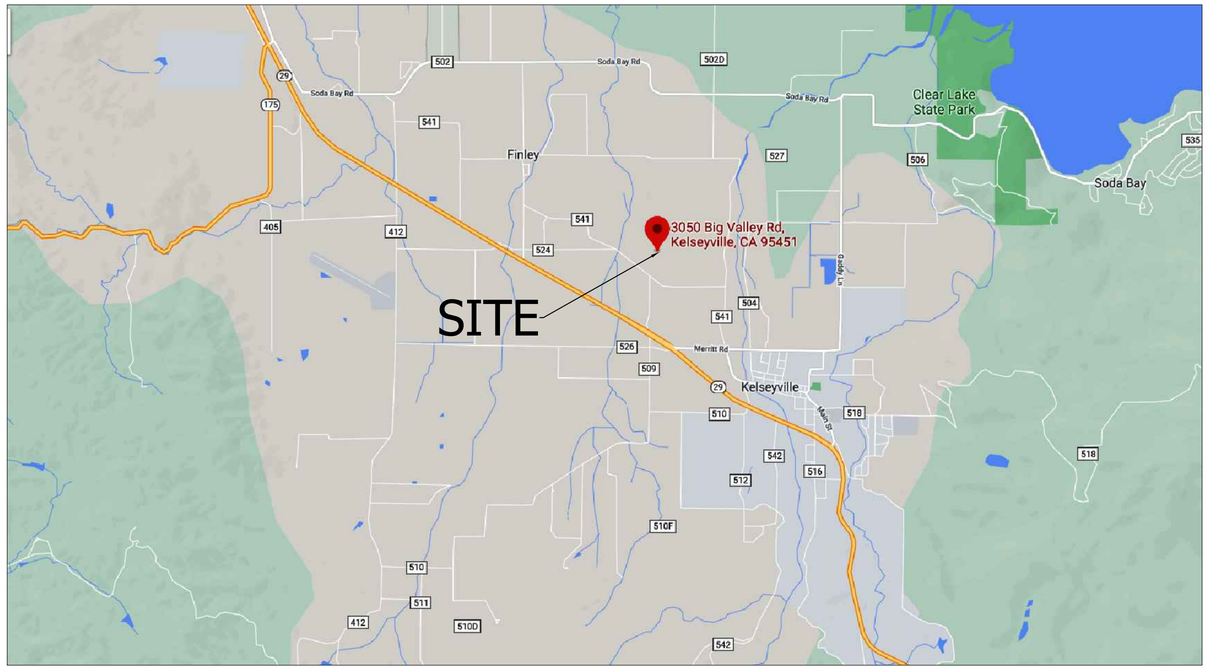
C1.2	EXISTING CONDITIONS
C1.3	PROPOSED CONDITIONS
C1.4	CANNABIS CULTIVATION SITE
C1.5	CANNABIS RELATED BUILDING LAYOUTS
C1.6	SECURITY PLAN

PURPOSE STATEMENT

THE PURPOSE OF THIS PROJECT IS TO SUPPORT OBTAINING A COMMERCIAL CANNABIS USE PERMIT FOR 22,000 SF OF COMMERCIAL MIXED LIGHT CANNABIS CULTIVATION IN THE COUNTY OF LAKE

PROJECT SITE INFORMATION

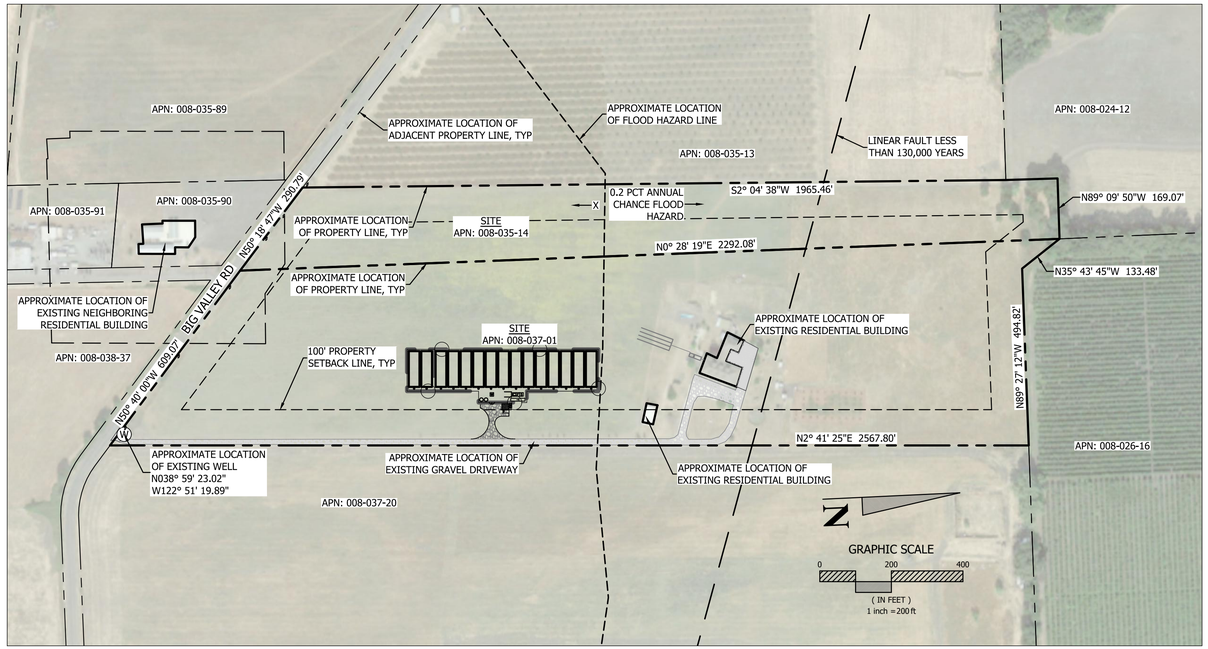
FEMA DESIGNATION ZONE	X & 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
BASE FLOOD ELEVATION	1350'
CULTIVATION AREA ELEVATION	1354' TO 1355'
FLOOD PROOFING REQUIRED	NO
STATE FARMLAND	FARMLAND OF LOCAL IMPORTANCE
ZONING	A - AGRICULTURE



LOCATION MAP
NTS

LEGEND

EXISTING	PROPOSED	DEFINITION
		PROPERTY LINE
		ROAD CENTERLINE
E	E	ELECTRICAL (UNDERGROUND)
OHW	OHW	ELECTRICAL (OVERHEAD WIRE)
GAS	GAS	GAS LINE
		GATE VALVE
		HYDRANT
		PIPE CAP
		POINT OF COORDINATION
SS		SANITARY SEWER PIPE
		STORM WATER DRAIN PIPE
		STREET LIGHT
		SUB-DRAIN
W		WATER LINE
		BUILDING OVERHEAD
		DAYLIGHT LINE
		DRAINAGE SWALE FLOW LINE
		EDGE OF PAVEMENT
X		FENCE
		FEATURE TO BE REMOVED
		FIBER ROLL
		GRADE BREAK
		LIMITS OF DISTURBANCE
		RETAINING WALL
		ROADSIDE SIGN
		SAWCUT
		TREE TO BE REMOVED
		CONCRETE
		ROCK DISSIPATER/RIP RAP



PARCEL EXHIBIT
SCALE: 1"=200'

ABBREVIATIONS

&	AND	HP	HIGH POINT
@	AT	HT	HEIGHT
℄	CENTERLINE	ID	INSIDE DIAMETER
°	DEGREE	IG	INVERT GRADE
Ø	DIAMETER	IN	INCH
#	NUMBER	INT	INTERIOR
//	PARALLEL	INV	INVERT
%	PERCENT	IJ	"I" JOIST
⊥	PERPENDICULAR	JST	JOIST
℗	PROPERTY LINE/ PLATE	JT	JOINT TRENCH
±	PLUS OR MINUS	L	LENGTH
AB	AGGREGATE BASE	LAT	LATERAL
AC	ASPHALT CONCRETE	LF	LINEAL FOOT
AD	AREA DRAIN	LGW	LIMITS OF GRADING WORK
ADDL	ADDITIONAL	MAX	MAXIMUM
AFF	ABOVE FINISHED FLOOR	ME	MATCH EXISTING
AG	AGGREGATE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
ANCH	ANCHOR	MO	MASONRY OPENING
APN	ASSESSOR'S PARCEL NUMBER	MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
APPROX	APPROXIMATE	(N)	NEW
ARCH	ARCHITECT / ARCHITECTURAL	NTS	NOT TO SCALE
AVG	AVERAGE	OC	ON CENTER
BC	BEGIN CURVE	OD	OUTSIDE DIAMETER OF OUTSIDE FACE
BD	BOARD	OH	OVERHEAD
BFF	BELOW FINISHED FLOOR	OPNG	OPENING
BLDG	BUILDING	OPP	OPPOSITE
BLK	BLOCK	ORIG	ORIGINAL
BLKG	BLOCKING	PCC	POINT OF COMPOUND CURVE
BM	BENCHMARK	PL	PROPERTY LINE
BOF	BOTTOM OF FOOTING	POC	POINT OF CURVATURE
BOT	BOTTOM	PRC	POINT OF RETURN CURVE
BRG	BEARING	PUE	PUBLIC UTILITY EASEMENT
BSL	BUILDING SETBACK LINE	PVC	POLYVINYLCLORIDE
BT	BEGIN TRANSITION	PVMT	PAVEMENT
BTWN	BETWEEN	R or RAD	RADIUS
BW	BOTTOM OF WALL	RC	RELATIVE COMPACTION
CIP	CAST IN PLACE	REF	REFERENCE
CB	CATCH BASIN	REINF	REINFORCING
CL	CENTERLINE	REQD	REQUIRED
CLR	CLEAR	RFTR	RAFTER
CMU	CONCRETE MASONRY UNIT	RO	ROUGH OPENING
CONC	CONCRETE	ROW	RIGHT OF WAY
CONN	CONNECTION	RT	RIGHT
CONST	CONSTRUCTION	RWD	REDWOOD
CONT	CONTINUOUS	S	SLOPE
CPP	CORRUGATED PLASTIC PIPE	SAD	SEE ARCHITECTURAL DRAWINGS
CTR	CENTER	SB	SOLID BLOCK
CY	CUBIC YARD	SC	SPIRAL CURVE
D	DEPTH	SCD	SEE CIVIL DRAWINGS
DBL	DOUBLE	SCH	SCHEDULE
DI	DROP INLET	SD	STORM DRAIN
DIA	DIAMETER	SDCO	STORM DRAIN CLEANOUT
DIAG	DIAGONAL	SDMH	STORM DRAIN MANHOLE
DIM	DIMENSION	SED	SEE ELECTRICAL DRAWINGS
DIST	DISTANCE	SF	SQUARE FEET
DL	DAYLIGHT	SG	SUBGRADE
DN	DOWN	SHT	SHEET
DWG	DRAWING	SHTG	SHEATHING
EA	EACH	SIM	SIMILAR
EC	END CURVE	SLAD	SEE LANDSCAPE ARCHITECTS' DRAWINGS
EE	EACH END	SMD	SEE MECHANICAL DRAWINGS
EF	EACH FACE	SO	SIDE OPENING
EG	EXISTING GROUND	SPEC	SPECIFICATION
EL or ELEV	ELEVATION	SPD	SEE PLUMBING DRAWINGS
ELEC	ELECTRICAL	SQ	SQUARE
EN	EDGE NAILING	SS	SANITARY SEWER
EP	EDGE OF PAVEMENT	SSCO	SANITARY SEWER CLEANOUT
EQPT	EQUIPMENT	SSMH	SANITARY SEWER MANHOLE
EQ	EQUAL	STA	STATION
ES	EACH SIDE	STD	STANDARD
ESMT	EASEMENT	STRUC	STRUCTURAL
ET	END TRANSITION	SWE	SIDEWALK EASEMENT
EW	EACH WAY	SYM	SYMMETRICAL
EX or (E)	EXISTING	T&B	TOP AND BOTTOM
EXC	EXCAVATION / EXCAVATE	TB	TOP OF BANK
EXT	EXTERIOR	TC	TOP OF CONCRETE
FC	FACE OF CURB	TCC	TOP OF CONCRETE CURB
FD	FLOOR DRAIN	TD	TRENCH DRAIN
FDN	FOUNDATION	TG	TOP OF GRATE
FF	FINISH FLOOR	THK	THICK
FG	FINISH GRADE	TOF	TOP OF FOOTING
FIN	FINISH	TOS	TOP OF STEEL / TOP OF STRUCTURE
FL	FLOWLINE	TOT	TOTAL
FLR	FLOOR	TP	TOP OF PAVEMENT
FO	FACE OF	TW	TOP OF WALL
FOW	FACE OF WALL	TYP	TYPICAL
FS	FINISHED SURFACE	UNO	UNLESS NOTED OTHERWISE
FT	FOOT / FEET	VC	VERTICAL CURVE
GB	GRADE BREAK OR GRAVEL BASIN	VERT	VERTICAL
GR	GRATE	VIF	VERIFY IN FIELD
GRD	GRADE	W	WATER / WIDTH
GRND	GROUND	W/	WITH
HDPE	HIGH DENSITY POLYETHYLENE	W/O	WITHOUT
HDR	HEADER	YD, YDS	YARD, YARDS
HORIZ	HORIZONTAL	Z	DITCH SIDE SLOPE

NOT FOR CONSTRUCTION

REV.	DESCRIPTION	BY	DATE

BC ENGINEERING GROUP, INC.
CIVIL ENGINEERING & LAND PLANNING
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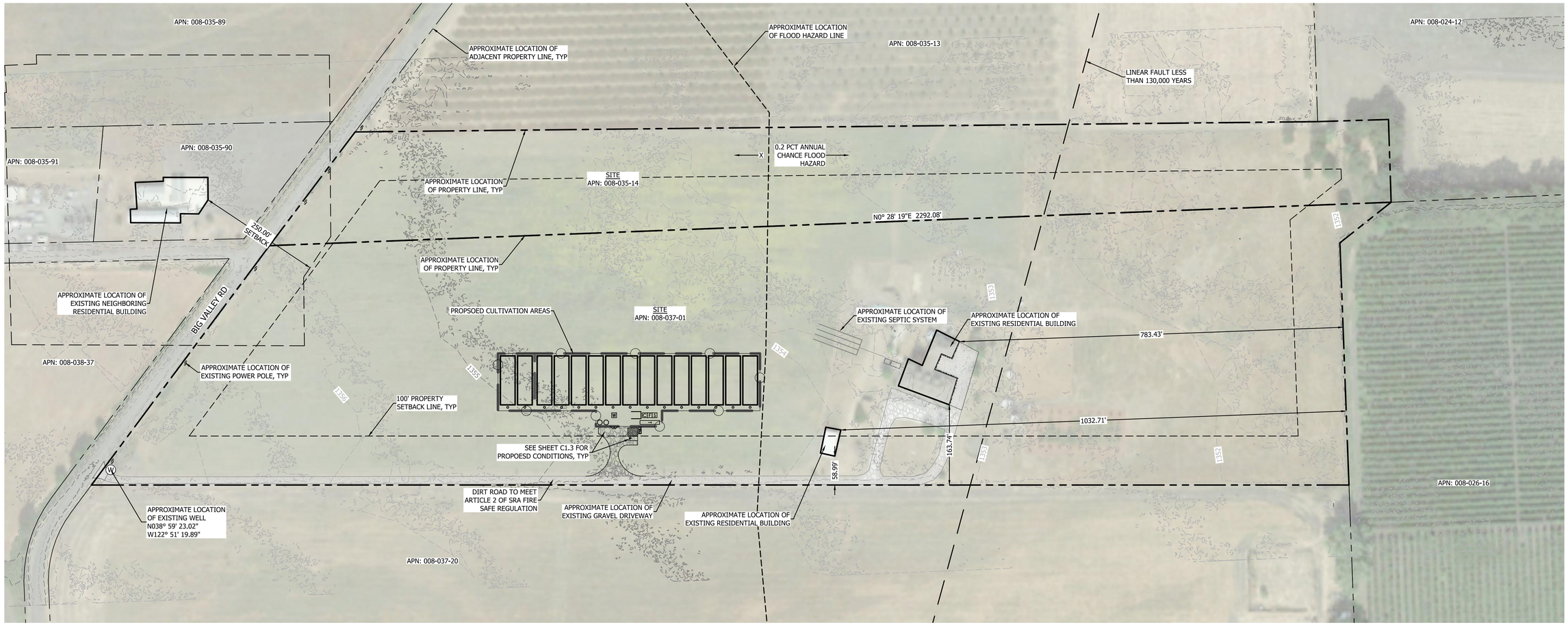
Phone: 707.542.4321
SANTA ROSA OFFICE:
418 B Street, Third Floor, Santa Rosa CA 95401
UKIAH OFFICE:
603 S. State Street, Ukiah CA 95482

GREEN HANDLE FARMS, LLC
PROJECT INFORMATION
GARTH MARKSON
3050 BIG VALLEY RD
KELSEYVILLE, CA 95451

Date:	1/20/2021
Job:	2042-20
Drawn:	TSL
Scale:	AS SHOWN
APN:	008-037-01, 008-035-14
Permit #:	
Sheet:	C1.0 1 of 7



SURROUNDING AREA AERIAL
SCALE: 1"=100'

GRAPHIC SCALE
0 100 200
(IN FEET)
1 inch = 100 ft

NOTES

1. PROPERTY LINES, EASEMENTS, AND TOPOGRAPHIC INFORMATION IS APPROXIMATE AND WAS OBTAINED FROM PUBLICLY AVAILABLE INFORMATION.
2. THERE IS NO PUBLIC OR PRIVATE SCHOOL, GRADES 1 THROUGH 12, DEVELOPED PARK CONTAINING PLAYGROUND EQUIPMENT, DRUG OR ALCOHOL REHABILITATION FACILITY, LICENSED CHILD CARE FACILITY OR NURSERY SCHOOL, OR CHURCH OR YOUTH-ORIENTED FACILITY CATERING TO OR PROVIDING SERVICES PRIMARILY INTENDED FOR MINORS WITHIN 1,250 FEET OF THE PROPERTY.
3. LOCATION MAP IS LOCATED ON SHEET 1.0
4. FOR PARCEL BOUNDARIES AND ADJACENT PARCEL BOUNDARIES, SEE SHEET C1.0

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GREEN HANDLE FARMS, LLC
SURROUNDING AREA AERIAL

GARTH MARKSON
3050 BIG VALLEY RD
KELSEYVILLE, CA 95451

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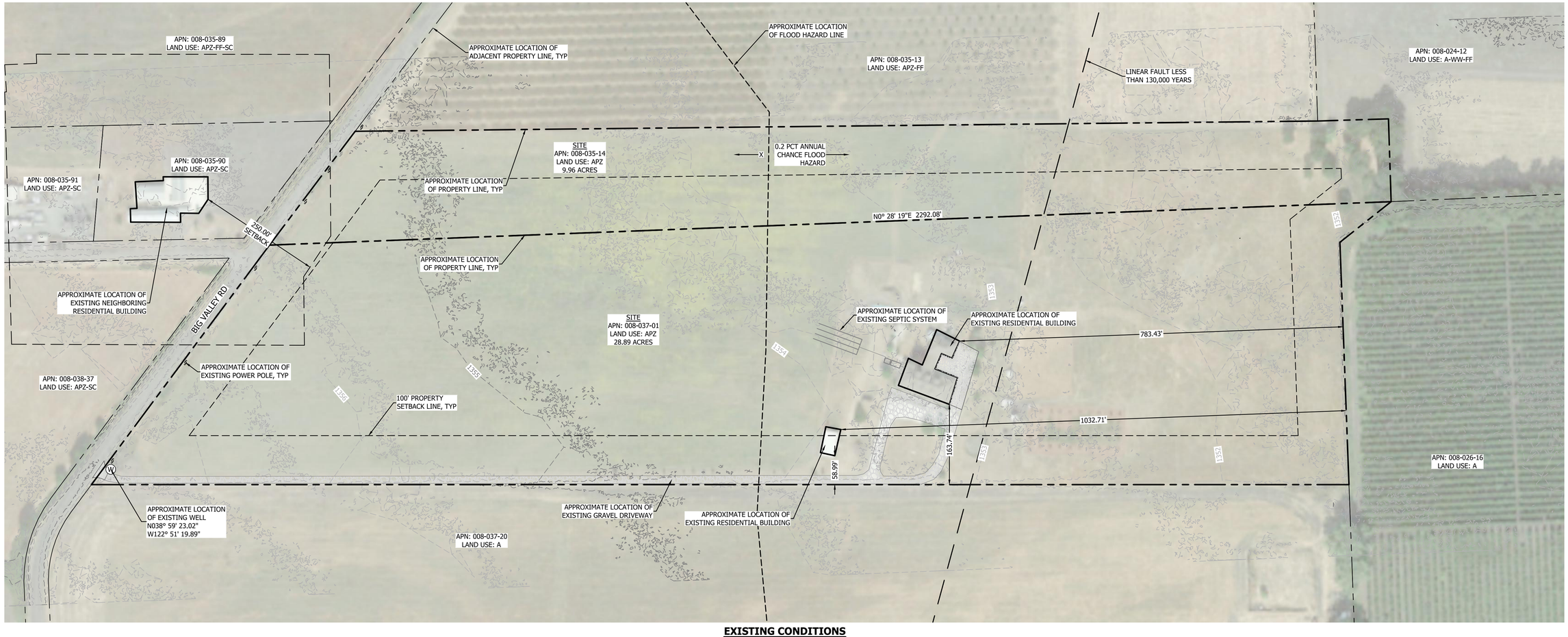

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GRAPHIC SCALE
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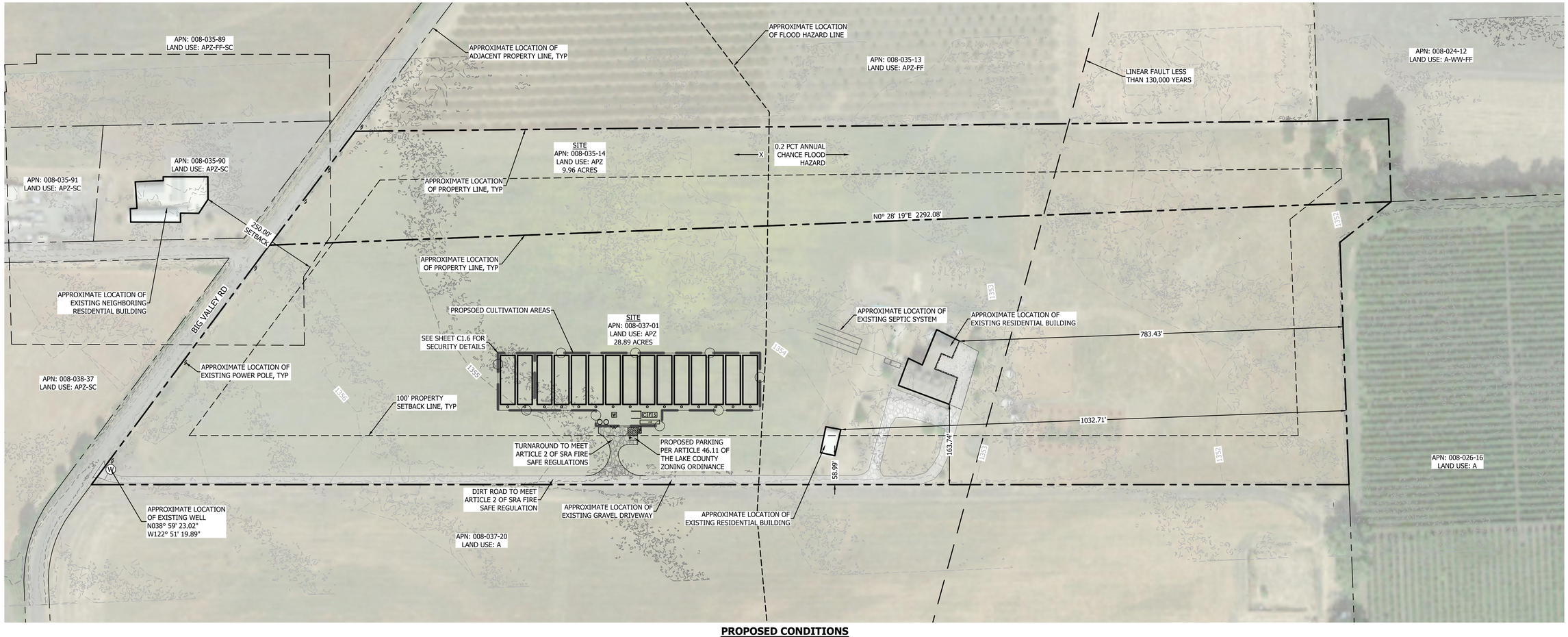

PROPOSED CONDITIONS
SCALE: 1"=100'

GRAPHIC SCALE
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PROPOSED CONDITIONS

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3050 BIG VALLEY RD
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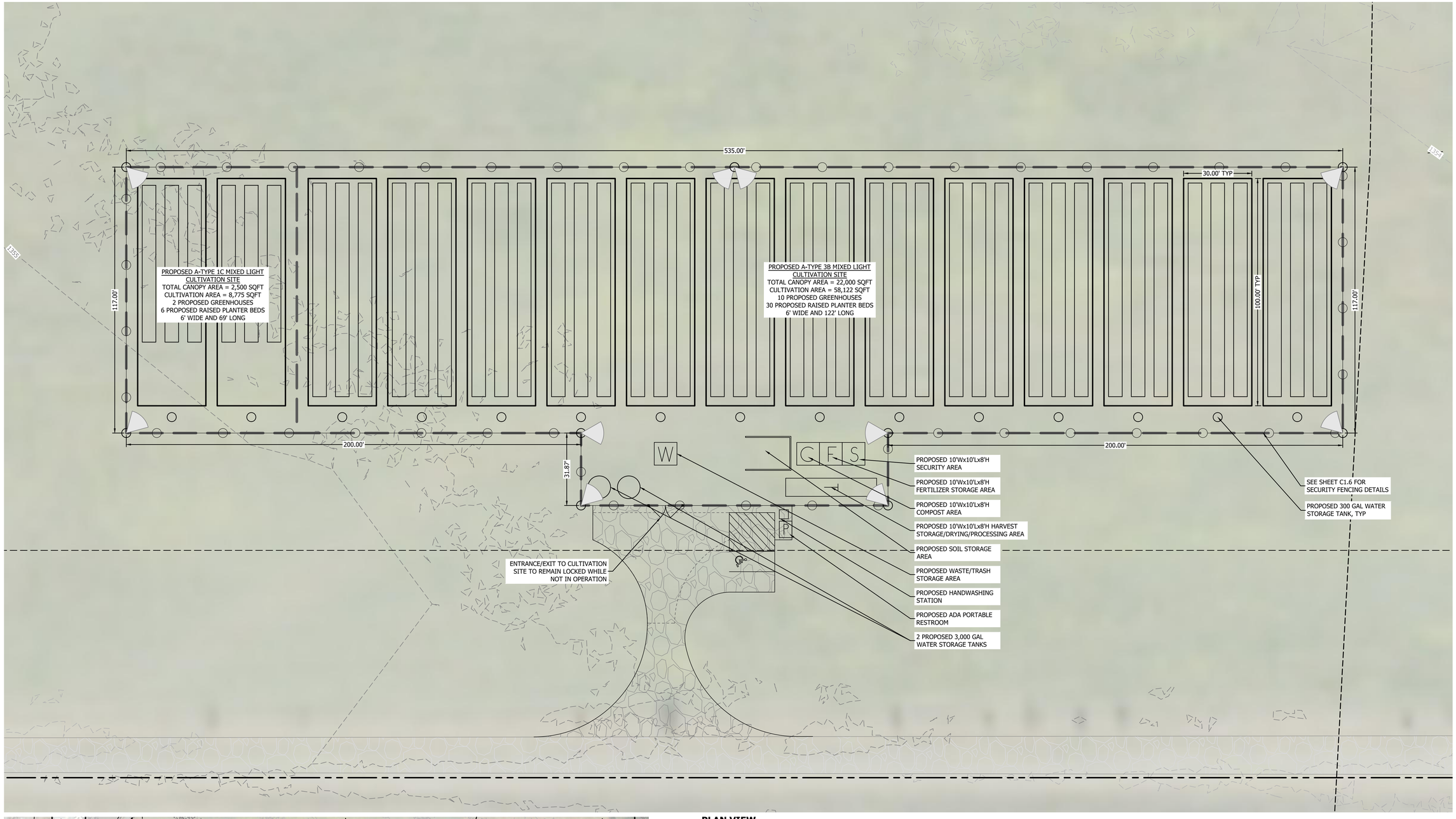

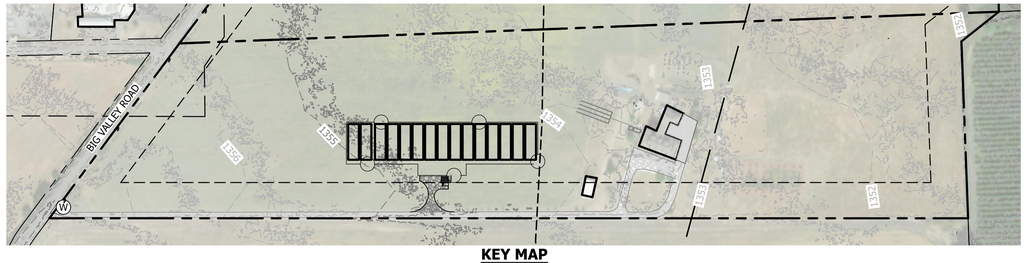

KEY MAP
SCALE: 1"=200'

PLAN VIEW
SCALE: 1"=100'

GRAPHIC SCALE
0 200 400
(IN FEET)
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CULTIVATION LEGEND

FENCE

CULTIVATION AREA

NOTES

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3. FOR PARCEL BOUNDARIES AND ADJACENT PARCEL BOUNDARIES, SEE SHEET C1.0
4. STRAW WATTLES WILL BE PLACED AROUND CULTIVATION SITE TO PREVENT STORMWATER RUNOFF
5. THE ENTIRE CULTIVATION SITE WILL BE SEEDED TO STABILIZE THE SOIL

GRAPHIC SCALE
0 20 40
(IN FEET)
1 inch = 20 ft

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GREEN HANDLE FARMS, LLC
CANNABIS CULTIVATION SITE

GARTH MARKSON
3050 BIG VALLEY RD
KELSEYVILLE, CA 95451

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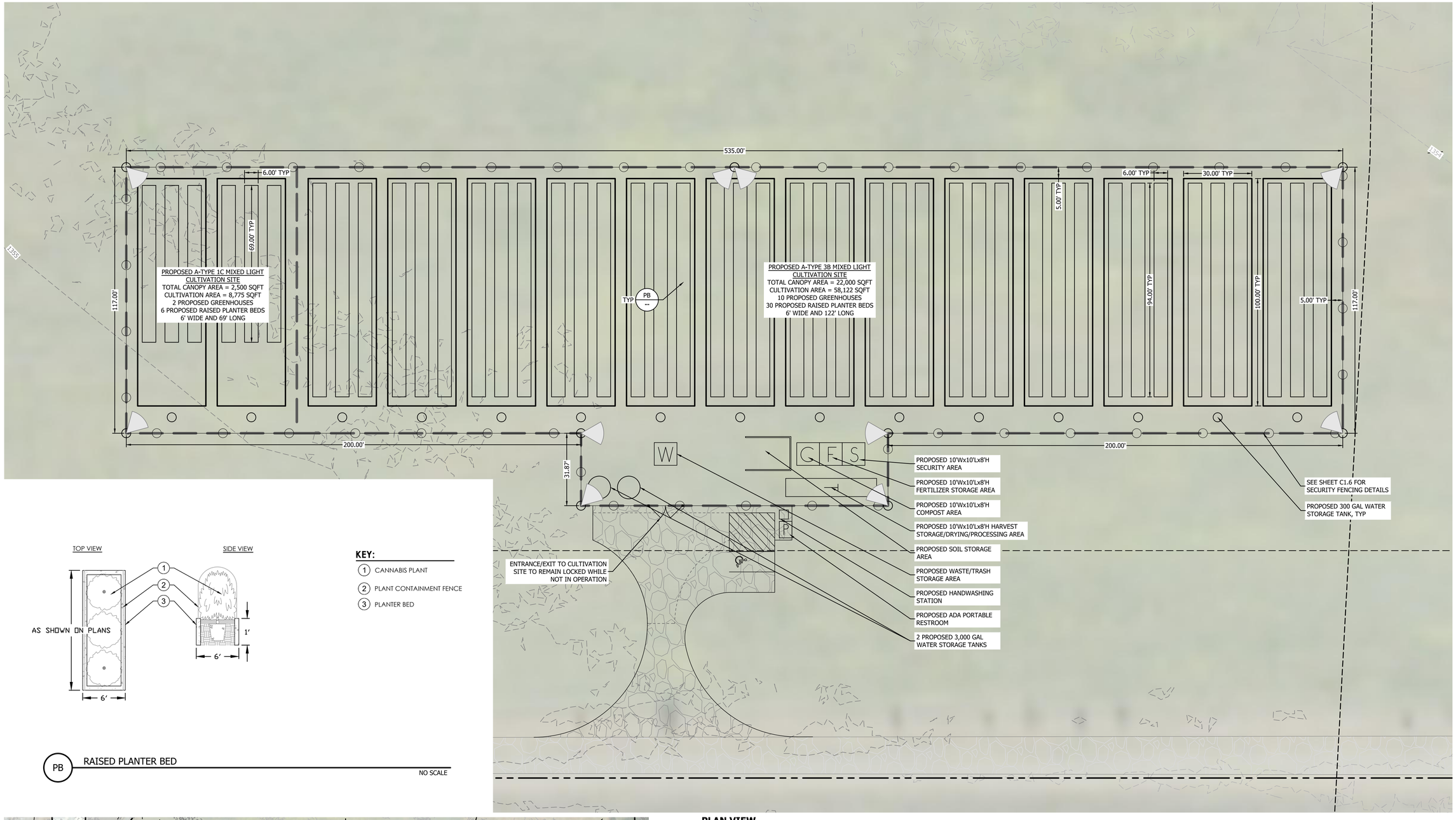


TOP VIEW

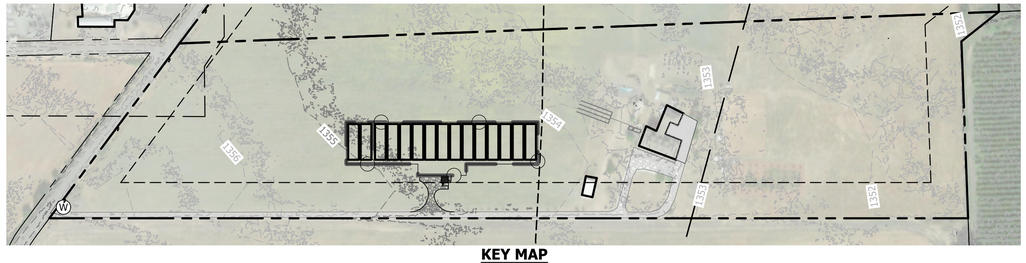
SIDE VIEW

KEY:

1. CANNABIS PLANT
2. PLANT CONTAINMENT FENCE
3. PLANTER BED

PB — RAISED PLANTER BED

NO SCALE



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CULTIVATION LEGEND

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GREEN HANDLE FARMS, LLC
CANNABIS RELATED BUILDING LAYOUTS

GARTH MARKSON
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KELSEYVILLE, CA 95451

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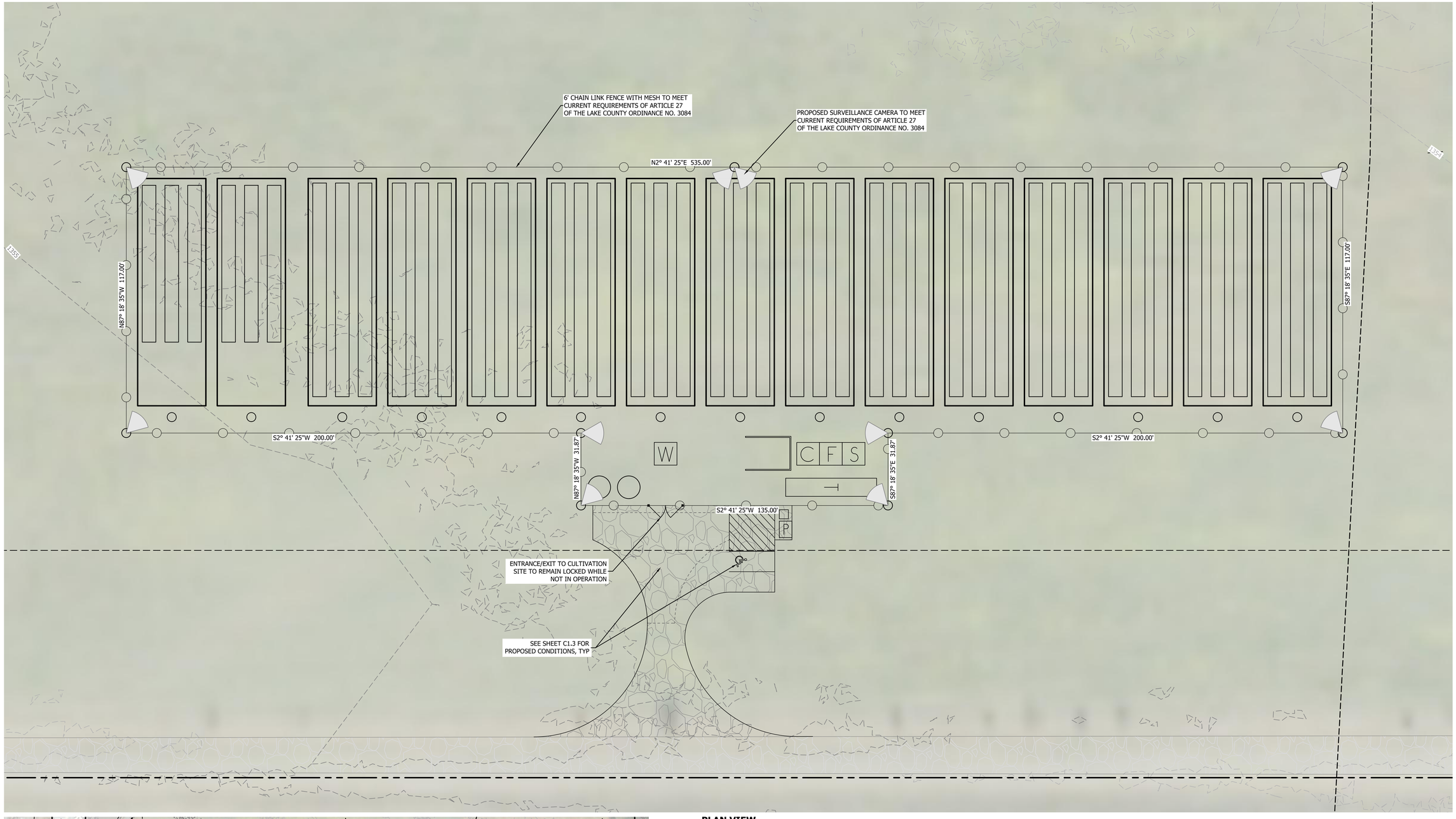

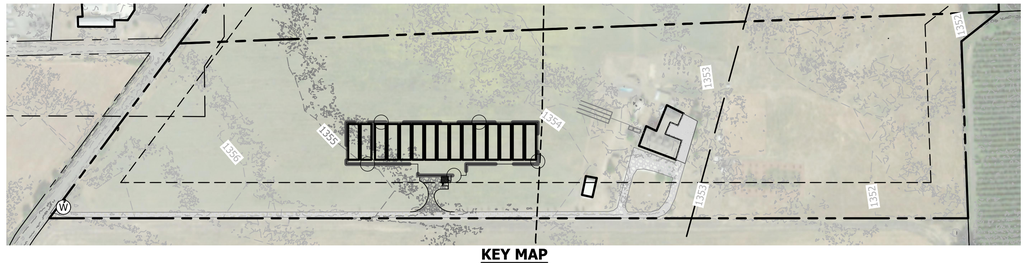

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4. LIGHTS WILL BE PLACE TAT ALL ENTRY POINTS TO THE CULTIVATION SITE AND ALSO AT THE ENTRY GATE OF THE PROPERTY
5. THE SECURITY CAMERAS ARE TO BE WEATHERPROOF CAMERAS FEATURING 1080P. THE SECURITY CAMERAS WILL CAPTURE EVERY PART OF THE CULTIVATION AREAS.

GRAPHIC SCALE
0 20 40
(IN FEET)
1 inch = 20 ft

NOT FOR CONSTRUCTION

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GREEN HANDLE FARMS, LLC
SECURITY PLAN

GARTH MARKSON
3050 BIG VALLEY RD
KELSEYVILLE, CA 95451

Date:	1/20/2021
Job:	2042-20
Drawn:	TSL
Scale:	AS SHOWN
APN:	008-037-01, 008-035-14
Permit #:	
Sheet:	C1.6
	7 of 7

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3.0 WETLANDS ASSESSMENT

3.1 Corps of Engineers Jurisdictional Criteria Review

Unless exempt from regulation, all proposed discharges of dredged or fill material into waters of the United States require U.S. Army Corps of Engineers (Corps) authorization under Section 404 of the Clean Water Act (33 U.S.C. 1344) and Clean Water Act Section 401 authorization from the Regional Water Quality Control Board (RWQCB). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), wetlands (excluding isolated wetlands for the Corps), and farmed wetlands.

The Corps identifies wetlands using a "multi-parameter approach" which requires positive wetland indicators in three distinct environmental categories: hydrology, soils, and vegetation. The *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West*, which was released in early 2007 and revised in 2008 (version 2.0), is utilized when conducting jurisdictional wetland determinations in areas identified within the boundaries of the Arid West (U.S. Army Corps of Engineers, 2008). The project site falls within the Arid West region and wetlands identified on the site were delineated using that guidance.

On June 22, 2020, the Environmental Protection Agency (EPA) and the Department of the Army's Navigable Waters Protection Rule: Definition of "Waters of the United States" (NWPR) became effective in 49 states and in all US territories. "Waters of the U.S." (WOTUS) are waters such as oceans, rivers, streams, lakes, ponds, and wetlands subject to Corps Regulatory Program jurisdiction under Section 404 of the Clean Water Act (CWA). The San Francisco District will use the NWPR definitions of WOTUS when making permit decisions and providing landowners written determinations of the limits of federal jurisdiction on their property (SPNUSACE, 2020). Under this new rule, jurisdictional features must have a direct surface connection to a navigable water. Certain features previously subject to potential regulation such as farm or roads side ditches, ephemeral streams, and isolated wetlands are excluded under the new rule. It should be noted, the State Water Resources Board in anticipation of this rule has developed its own wetland definition in efforts to maintain jurisdiction over certain wetland features including ephemeral drainages and isolated wetlands.

3.1.1 Potential Wetlands

Section 328.3 of the Federal Code of Regulations defines wetlands as:

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

EPA, 40 CFR 230.3 and CE, 33 CFR 328.3 (b)

The three parameters used to delineate wetlands are the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. According to the Corps Manual, for areas not considered "problem areas" or "atypical situations":

"....[E]vidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland delineation."

Vegetation

Plant species identified are assigned a wetland status according to the U.S. Fish and Wildlife Service list of plant species that occur in wetlands (Reed 1988). This wetland classification system is based on the expected frequency of occurrence in wetlands as follows:

OBL	Always found in wetlands	>99% frequency
FACW	Usually found in wetlands	67-99%
FAC	Equal in wetland or non-wetlands	34-66%
FACU	Usually found in non-wetlands	1-33%
UPL/NL	Upland/Not listed (upland)	<1%

The Corps Manual and Supplements require that a three-step process be conducted to determine if hydrophytic vegetation is present. The first step is the Dominance Test (Indicator 1); the second is the Prevalence Index (Indicator 2); the third is Morphological Adaptations (Indicator 3). The Dominance Test requires the delineator to apply the "50/20 rule". The dominant species are chosen independently from each stratum of the community. In general, dominant species are determined for each vegetation stratum from a sampling plot of an appropriate size surrounding the sample point. Dominants are defined as the most abundant species that individually or collectively account for more than 50 percent of the total vegetative cover in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total cover. If greater than 50 percent of the dominant species has an OBL, FACW, or FAC status, the sample point meets the hydrophytic vegetation criterion.

If the sample point fails the 50/20 rule and both hydric soils and wetland hydrology are not present, then the sample point does not meet the hydrophytic vegetation criterion, unless the site is a problematic wetland situation. However, if the sample point fails Indicator 1, but hydric

soils and wetland hydrology are both present, the delineator must apply the Indicator 2, Prevalence Index. The Indicator 3, Morphological Adaptations, is rarely used in this region.

Hydrology

The Corps jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period sufficient to create anoxic soil conditions during the growing season (a minimum of 14 consecutive days). Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation or oxidized root channels, or secondary indicators such as the FAC-neutral test or the presence of a shallow aquitard. Only one primary indicator is required to meet the wetland hydrology criterion; however, if secondary indicators are used, at least two secondary indicators must be present to conclude that an area has wetland hydrology.

Soils

The Natural Resource Conservation Service (NRCS) defines a hydric soil as follows:

"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part." Federal Register July 13, 1994, U.S. Department of Agriculture, NRCS

Soils formed over long periods under wetland (anaerobic) conditions often possess characteristics that indicate they meet the definition of hydric soils. The supplement provides a list of the hydric soil indicators that are known to occur in region. Soil samples were collected and described according to the methods provided in the supplements. Soil chroma and values were determined using a Munsell soil color chart (Kollmorgen 1975). If any of the soil samples met one or more of the hydric soil indicators described in the supplement hydric soils were determined to be present.

3.1.2 Waters of the U.S. (Other Waters)

"Other waters" or "Waters of the United States" (WUS) other than wetlands are also potentially subject to Corps jurisdiction. WUS subject to Corps jurisdiction include ponds, lakes, rivers, streams (including ephemeral and intermittent streams), and all areas below the High Tide Line (HTL) subject to tidal influence. Jurisdiction in non-tidal areas extends to the ordinary high water mark (OHWM) defined as:

"*...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the*

characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

Federal Register Vol. 51, No. 219, Part 328.3 (e). November 13, 1986

3.2 Central Valley Regional Water Quality Control Board

The Regional Water Quality Control Board regulates waters of the State pursuant to Sections 13260(a)(1) and 13050(e) of the State Water Code, and the Porter Cologne Act. In addition, anyone proposing to conduct a project that requires a federal permit or involves dredge or fill activities that may result in a discharge to U.S. surface waters and/or "Waters of the State" are required to obtain a Clean Water Act (CWA) Section 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) from the Regional Water Quality Control Board, verifying that the project activities will comply with state water quality standards. The most common federal permit for dredge and fill activities is a CWA Section 404 permit issued by the Corps of Engineers (North Coast Regional Water Quality Control Board, 2007). In general, the RWQCB employs similar wetland delineation techniques for identifying wetland areas potentially subject to its regulation.

Section 401 of the CWA grants each state the right to ensure that the State's interests are protected on any federally permitted activity occurring in or adjacent to Waters of the State. In California, the Regional Water Quality Control Boards (Regional Board) are the agency mandated to ensure protection of the State's waters. So if a proposed project requires a U.S. Army Corps of Engineers CWA Section 404 permit, falls under other federal jurisdiction, and has the potential to impact Waters of the State, the Regional Water Quality Control Board will regulate the project and associated activities through a Water Quality Certification determination (Section 401) (North Coast Regional Water Quality Control Board, 2007).

However, if a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a fill discharge to "Waters of the State", the Regional Board has the option to regulate the project under its state authority (Porter-Cologne) in the form of Waste Discharge Requirements or Waiver of Waste Discharge Requirements (North Coast Regional Water Quality Control Board, 2007). Waters of the State include isolated wetlands, which are not regulated by the Corps.

In June 2020, the State of California developed its definition of a wetland to address arid conditions in the west. The definition differs from the federal definition in that a wetland can include only wetlands soil and hydrology and not hydrophytic wetland vegetation. However, if the area does have vegetation, it must include wetland vegetation in order to be classified a wetland.

Proposed cultivation area looking south towards Big Valley Road

3.3 California Department of Fish and Wildlife

Activities that result in the substantial modification of the bed, bank or channel of a stream or lake may require a Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600-1607 of the California Fish and Game Code. On streams, creeks and rivers, the extent of CDFW jurisdiction extends from the top of bank to top of bank or the outer limits of the riparian canopy, whichever is wider.

3.4 Background review

Prior to conducting the on-site wetlands assessment within the study area, various background materials relating to the site were reviewed. These include aerials from Google earth and the Kelseyville U.S.G.S. 7.5-minute quadrangle. No potential wetlands were identified on any of the parcels in the background review. A large stock pond downslope of the existing driveway and southwest of the existing residence was the only potential wetland feature identified in the vicinity of the project area.

Additionally, the Soil Survey of Lake County (web Soil Survey) was reviewed to determine if any of the soils on the project site are mapped as hydric soils. The presence of a hydric soil-mapping unit on a project site suggests the presence of potential wetland habitats and therefore is another tool used in potential wetland identification.

Soils on the site is listed as Clear Lake variant, drained which has a hydric rating on the County and National lists.

3.5 Wetland Assessment and Results

On January 28, 2021 I conducted a wetland delineation on the site. Because the site has been intensively farmed and drained, hydric soil characteristics were not present. Soils were a silty clay loam and friable and dark brown (10 YR 2/2). No ponding or saturation was observed.

4.0 SPECIAL-STATUS SPECIES REGULATORY FRAMEWORK

Special-status plants and animals are legally protected under the State and Federal Endangered Species Acts or other regulations, and species that are considered rare by the scientific community. Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFW special status invertebrates are all considered special status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal.

To obtain up-to-date conservation information U.S. Fish and Wildlife Service (USFWS) species lists were reviewed for federally listed species (including Proposed and Candidate species) and California Department of Fish and Wildlife (CDFW) species lists for State of California listed species were also reviewed. Special-status species also include those with California Rare Plant Rank (CRPR) 1A (Plants Presumed Extinct in California), CRPR 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere), or CRPR 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere), as indicated by the CNPS *Inventory* (CNPS 2021). Impacts to these species must be reviewed under the provisions of the California Environmental Quality Act (CEQA) Guidelines.

Rare plants are defined here to include: (1) all plants that are federal- or state listed as rare, threatened, or endangered, or a candidate for listing; (2) all plants ranked by the California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) as California Rare Plant Rank (CRPR) 1,2, 3, or 4. Locally rare species if present, are also included in this report.

4.1 Special-status Animals

4.1.1 Background Review

The California Department of Fish and Wildlife's Natural Diversity Database (CNDDB) was reviewed (Kelseyville and surrounding quadrangles) to identify special-status species potentially occurring on or in the vicinity of the project site. Species recorded as occurring within a 5-mile radius are illustrated on Figure 2.

4.1.2 Field Reconnaissance

On January 28, 2021 a reconnaissance level survey of the site was conducted. The focus of the survey was to identify whether suitable habitat elements for each of the special status species documented in the surrounding vicinity or in the range of the project site are present on the project site or not and whether the project would have the potential to result in impacts to any of these species and/or their habitats either on- or off-site. Habitat elements examined included the presence of: dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting) habitat.

Located in an intensive agricultural part of Lake County, the project provides foraging habitat for a variety of birds. There is the potential for nesting birds such as mourning dove, killdeer, and other passerines who nest on the ground and grassy areas. Terrestrial species including jack rabbit, coyote, fox, skunks and squirrels may disperse across the site.

4.1.3 Results

Thirteen special-status wildlife species have been documented within five miles of the Project Site (Figure 2). Based on the biological communities present on the project site, the site has the potential to provide potential habitat for nesting birds. Western pond turtle could potentially be found in the portions of McGraugh Slough and Kelsey Lake and disperse on to the site during nesting season. Badger could potentially occur on site although the intensive agricultural use would likely preclude them, and no evidence of badger dens was found during the January 2021 reconnaissance. The remaining species documented in the area are not likely to occur due to absence of suitable habitat (vernal pools, lakes).

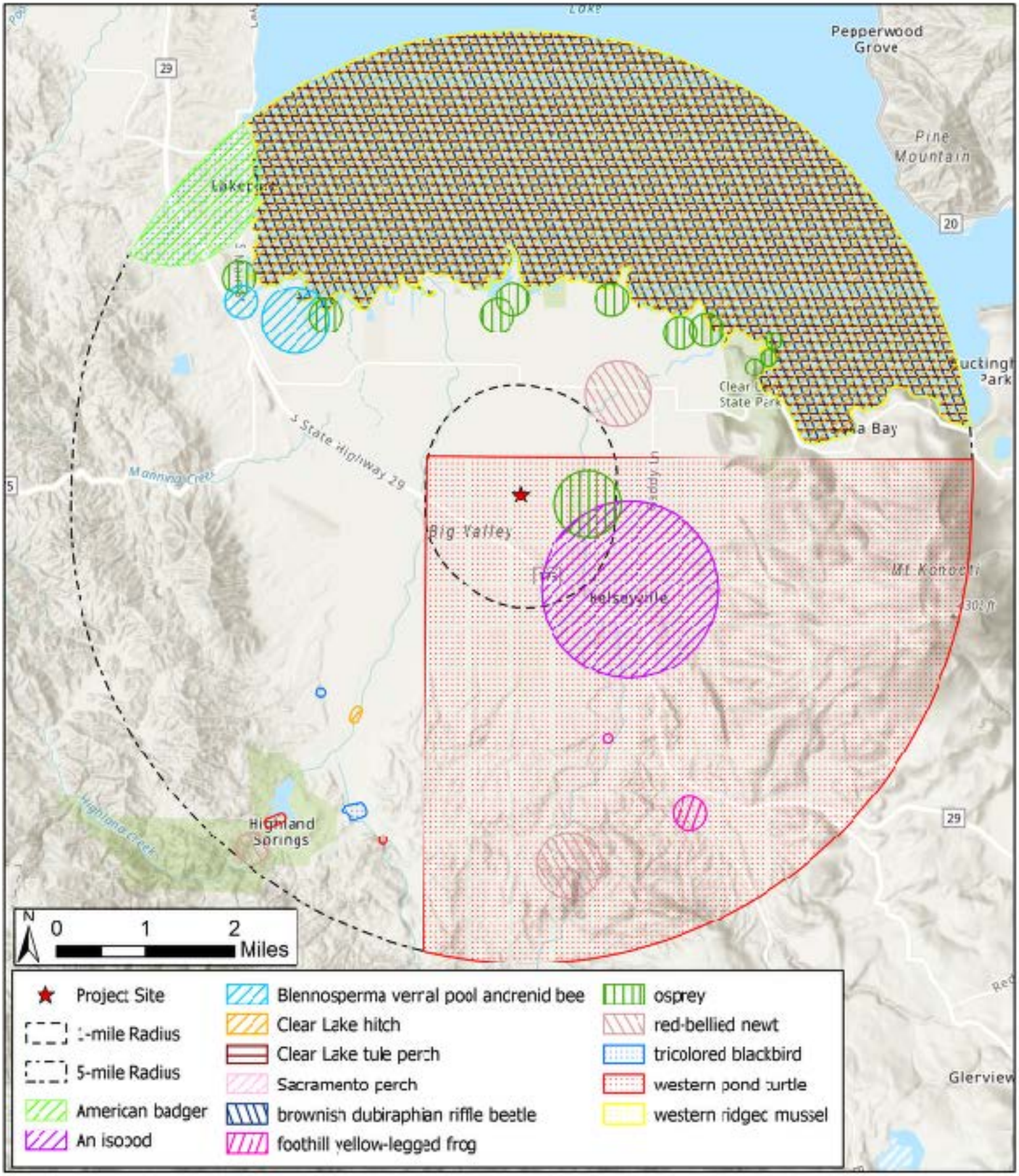
Species that may potentially be impacted by the proposed projects are described below.

Nesting Birds

The grasslands and oak woodlands on and adjacent to the site provide potential nesting habitat for a variety of nesting birds and raptors. Birds and raptors are protected under the federal Migratory Bird Treaty Act (50 CFR 10.13). Their nest, eggs, and young are also protected under California Fish and Wildlife Code (§3503, §3503.5, and §3800). In addition, raptors such as the white-tailed kite (*Elanus leucurus*) are "fully protected" under Fish and Wildlife Code (§3511). Fully protected raptors cannot be taken or possessed (that is, kept in captivity) at any time. Nesting season for birds in California generally occurs between February 1st and August 31st.

Western pond turtle

The Western pond turtle (*Emys marmorata)*(aka Pacific pond turtle) is the only native freshwater turtle in California. The species is considered a Species of Special Concern by the California Department of Fish and Wildlife. This turtle is uncommon to common in suitable aquatic habitat throughout California. Western pond turtle inhabits annual and perennial aquatic habitats including man-made habitats, such as coastal lagoons, lakes, ponds, marshes, rivers, and streams from sea level to 5,500 feet in elevation. This species requires low-flowing or stagnant freshwater aquatic habitat with suitable basking structures, including rocks, logs, algal mats, mud banks and sand. To escape periods of high-water flow, high salinity, or prolonged dry conditions, Western pond turtle may move upstream and/or take refuge in vegetated, upland habitat for up to four months, though aquatic habitat is preferred (Rathbun et al. 2002). Western pond turtle nests from late April through July. This species requires open, dry upland habitat with friable soils for nesting and prefer to nest on unshaded slopes within 5 to 100 meters of suitable aquatic habitat (Rathbun et al. 1992). Females venture from water for several hours in the late afternoon or evening during the nesting season to excavate a nest, lay eggs, and bury the eggs to incubate and protect them. Hatchlings generally emerge in late fall but may overwinter in the nest and emerge in early spring of the following year. This species may be present in both creeks west and east of the project site and could potentially nest in the field during nesting season.



2246 Camino Ramon
San Ramon, CA 94583

Figure 2: CNDDB Wildlife Occurrences Within 5-miles of 3050 Big Valley Rd. Kelseyville, California

4.1.6 Recommendations and Mitigation Measures

The following mitigation measures are recommended for minimizing potential impacts to special-status species potentially occurring on or in the vicinity of the project site. Additionally, best management practices are also provided in part as recommended by the California Department of Fish and Wildlife[1] for cannabis projects.

Nesting Birds

If project activities occur during the breeding season (February 1 through August 31), a qualified biologist will conduct a breeding bird survey no more than 7 days prior to project activities to determine if any birds are nesting in trees adjacent to the study area.

If active nests are found close enough to the study to affect breeding success, the biologist will establish an appropriate exclusion zone around the nest. This exclusion zone may be modified depending upon the species, nest location, and existing visual buffers. Once all young have become independent of the nest, work may take place in the former exclusion zone.

If initial work is delayed or there is a break in project activities of greater than 7 days within the bird-nesting season, then a follow-up nesting bird survey should be performed to ensure no nests have been established in the interim.

Western pond turtle

Potential breeding habitat for Western pond turtle is present in the vicinity but will not be affected by the proposed project; upland habitat on site may provide nesting habitat for pond turtle. To minimize potential impacts to this species, the following measures are recommended:

- Initial work should be initiated outside the nesting season for pond turtle, which is from May to October 1.

Best Management Practices

- If workers see wildlife, pause work so that wildlife may move out of the way.
- All equipment will be maintained such that there will be no leaks of automotive fluids such as gasoline, oils, or solvents.
- Hazardous materials such as fuels, oils, solvents, etc., will be stored in sealable containers in a designated location that is at least 200 feet from aquatic habitats. All fueling and

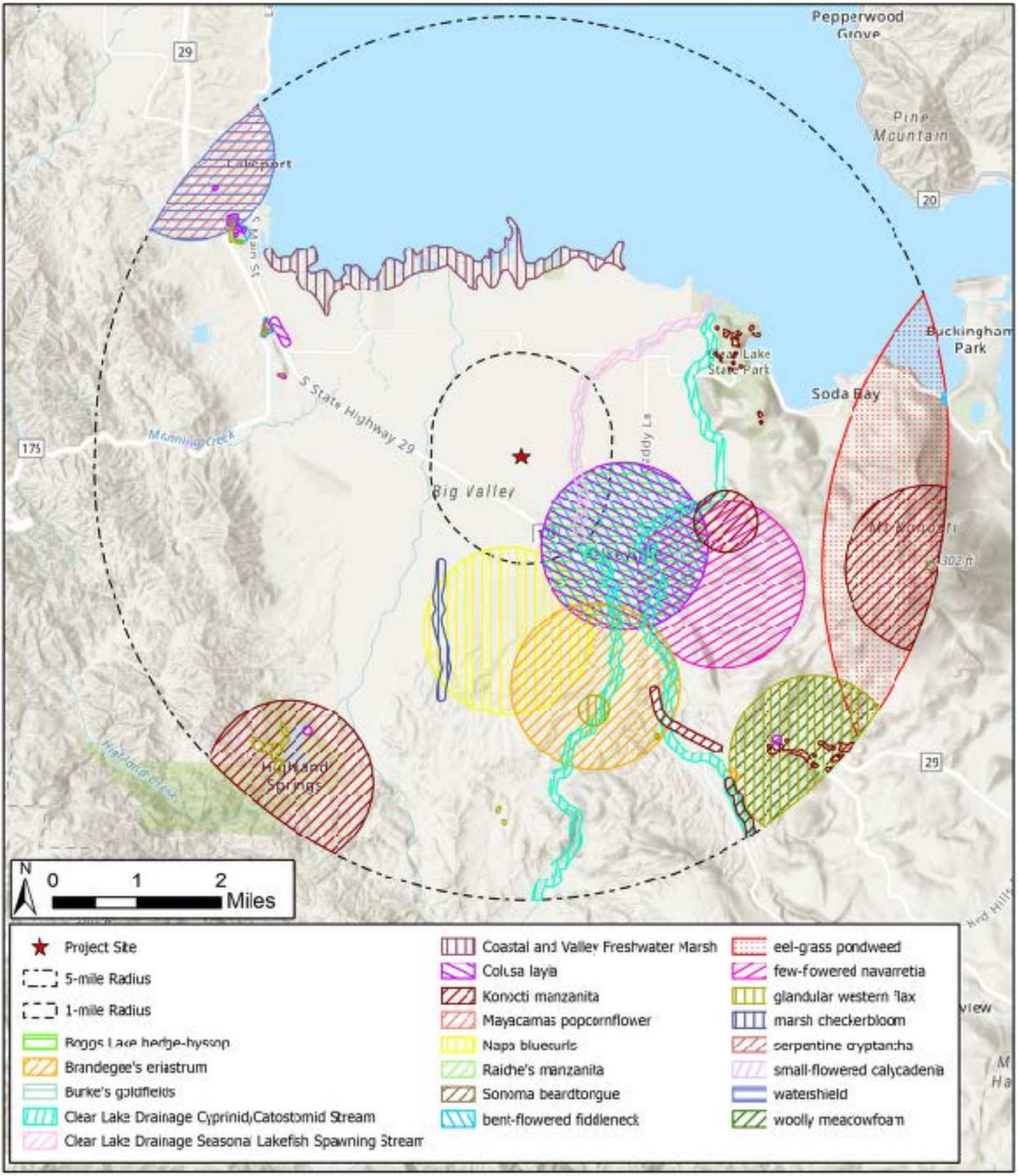
[1] Provided in email communication from Ms. Randi Logsdon, CDFW to Ms. Lucy Macmillan February 6, 2018.

maintenance of vehicles and other equipment and staging areas will occur at least 200 feet from any aquatic habitat

4.2 Special-status Plants

A database query of the CNDDB and the CNPS Electronic Inventory within a 5-mile radius of the parcels were conducted to assess the potential for sensitive communities and/or special-status plant species that may have the potential to occur in the Project Area. These species are listed on Figure 3.

The potential for rare plants to occur is extremely low due intensive disturbance from farming for at least 50 years or more.



2246 Camino Ramon
San Ramon, CA 94583

Figure 3: CNDDB Plant Occurrences Within 5-miles of 3050 Big Valley Rd. Kelseyville, California

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APPENDIX A - CNDDB PRINTOUT

SNAME	CNAME	ELMCODE	OCCNUMBER	MAPNDX	EONDX	KEYQUAD	KQUADNAME	KEYCOUNTY	PLSS	ELEVATION	PARTS	ELMTYPE	TAXONGROUP	EOCOUNT	ACCURACY	PRESENCE	OCCTYPE	OCCRANK
Potamogeton zosteriformis	eel-grass pondweed	PMPOT03160	8	50797	50797	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 13 (M)	0	1	1	Monocots	1	5 miles	Presumed Extant	Natural/Native occurrence	Unknown
Dubiraphia brunnescens	brownish dubiraphian riffle beetle	IICOL5A010	1	43098	61189	3912217	Lucerne	LAK	T14N, R08W (M)	1330	1	2	Insects	5	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Hysterocarpus traskii lagunae	Clear Lake tule perch	AFCQK02013	1	43098	117501	3912217	Lucerne	LAK	T14N, R08W (M)	1326	1	2	Fish	5	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Archoplites interruptus	Sacramento perch	AFCQB07010	5	43098	43098	3912217	Lucerne	LAK	T14N, R08W (M)	1326	1	2	Fish	5	non-specific area	Possibly Extirpated	Natural/Native occurrence	None
Lavinia exilicauda chi	Clear Lake hitch	AFCJB19011	4	43098	63621	3912217	Lucerne	LAK	T14N, R08W (M)	1326	1	2	Fish	5	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Gonidea angulata	western ridged mussel	IMBIV19010	123	43098	118964	3912217	Lucerne	LAK	T14N, R08W (M)	1326	1	2	Mollusks	5	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Emys marmorata	western pond turtle	ARAAD02030	601	54982	54982	3812287	Kelseyville	LAK		2800	1	2	Reptiles	1	80 meters	Presumed Extant	Natural/Native occurrence	Excellent
Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	PDPLM0C0E4	12	98462	99892	3812287	Kelseyville	LAK	T13N, R09W, Sec. 13 (M)	1600	1	1	Dicots	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Trichostema ruygtii	Napa bluecurls	PDLAM020H0	20	76781	77690	3812287	Kelseyville	LAK	T13N, R09W, Sec. 21 (M)	1500	1	1	Dicots	1	1 mile	Possibly Extirpated	Natural/Native occurrence	None
Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	459	92645	93795	3812286	Clearlake Highlands	LAK	T12N, R08W, Sec. 02 (M)	1915	1	2	Mammals	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	12	45510	45510	3812287	Kelseyville	LAK	T13N, R08W, Sec. 17 (M)	3800	1	1	Dicots	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	PDLIM02043	2	36584	32161	3812287	Kelseyville	LAK	T13N, R08W, Sec. 30 (M)	1400	1	1	Dicots	2	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Hesperolinon adenophyllum	glandular western flax	PDLIN01010	23	36584	42756	3812287	Kelseyville	LAK	T13N, R08W, Sec. 30 (M)	0	1	1	Dicots	2	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	18	24303	45540	3812288	Highland Springs	LAK	T13N, R09W, Sec. 31 (M)	2000	1	1	Dicots	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	90	24296	50325	3812287	Kelseyville	LAK	T13N, R09W, Sec. 14 (M)	0	1	1	Dicots	4	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Amsinckia lunaris	bent-flowered fiddleneck	PDBOR01070	82	24296	109748	3812287	Kelseyville	LAK	T13N, R09W, Sec. 14 (M)	1500	1	1	Dicots	4	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Calasellus californicus	An isopod	ICMAL34010	1	24296	59449	3812287	Kelseyville	LAK	T13N, R09W, Sec. 14 (M)	1380	1	2	Crustaceans	4	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Layia septentrionalis	Colusa layia	PDAST5N0F0	20	24296	7028	3812287	Kelseyville	LAK	T13N, R09W, Sec. 14 (M)	1400	1	1	Dicots	4	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Eriastrum brandegeeae	Brandegee's eriastrum	PDPLM03020	2	8104	18447	3812287	Kelseyville	LAK	T13N, R09W, Sec. 23 (M)	0	1	1	Dicots	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown
Clear Lake Drainage Resident Trout Stream	Clear Lake Drainage Resident Trout Stream	CARA2520CA	2	25928	5270	3812277	The Geysers	LAK	T12N, R08W, Sec. 33 (M)	2250	1	4	Inland Waters	1	non-specific area	Presumed Extant	Natural/Native occurrence	Good
Harmonia hallii	Hall's harmonia	PDAST6S0A0	22	B2573	114503	3812287	Kelseyville	LAK	T12N, R08W, Sec. 20 (M)	0	1	1	Dicots	1	3/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Bombus caliginosus	obscure bumble bee	IIHYM24380	95	96559	97735	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17 (M)	2800	1	2	Insects	1	3/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	17	45516	45516	3812287	Kelseyville	LAK	T12N, R09W, Sec. 12 (M)	2700	1	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Clear Lake Drainage Cyprinid/Catostomid Stream	Clear Lake Drainage Cyprinid/Catostomid Stream	CARA2530CA	2	25931	5086	3812287	Kelseyville	LAK	T13N, R09W, Sec. 34 (M)	1480	1	4	Inland Waters	1	non-specific area	Presumed Extant	Natural/Native occurrence	Fair
Clear Lake Drainage Cyprinid/Catostomid Stream	Clear Lake Drainage Cyprinid/Catostomid Stream	CARA2530CA	1	25926	5082	3812287	Kelseyville	LAK	T13N, R09W, Sec. 23 (M)	1400	1	4	Inland Waters	1	non-specific area	Presumed Extant	Natural/Native occurrence	Fair
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	PDERI041G2	8	97105	98346	3812286	Clearlake Highlands	LAK	T12N, R08W, Sec. 09 (M)	0	1	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Taricha rivularis	red-bellied newt	AAAAF02020	62	A2569	104158	3912217	Lucerne	LAK	T13N, R09W, Sec. 2 (M)	1332	1	2	Amphibians	1	2/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Linderiella occidentalis	California linderiella	ICBRA06010	513	B5598	118576	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17, SW (M)	2786	1	2	Crustaceans	1	2/5 mile	Presumed Extant	Natural/Native occurrence	Good
Taricha rivularis	red-bellied newt	AAAAF02020	72	A2590	104179	3812287	Kelseyville	LAK	T13N, R09W, Sec. 34 (M)	1450	1	2	Amphibians	1	2/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Pandion haliaetus	osprey	ABNKC01010	470	77155	78115	3812287	Kelseyville	LAK	T13N, R09W, Sec. 10, NE (M)	1364	1	2	Birds	1	2/5 mile	Presumed Extant	Natural/Native occurrence	Fair
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	20	45542	45542	3912217	Lucerne	LAK	T13N, R08W, Sec. 04, N (M)	1450	1	1	Dicots	1	2/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	14	45513	45513	3812287	Kelseyville	LAK	T13N, R09W, Sec. 12, S (M)	1800	1	1	Dicots	1	2/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Clear Lake Drainage Resident Trout Stream	Clear Lake Drainage Resident Trout Stream	CARA2520CA	1	25927	5083	3812287	Kelseyville	LAK	T12N, R08W, Sec. 08 (M)	2300	1	4	Inland Waters	1	non-specific area	Presumed Extant	Natural/Native occurrence	Good
Clear Lake Drainage Seasonal Lakefish Spawning Stream	Clear Lake Drainage Seasonal Lakefish Spawning Stream	CARA2550CA	1	26155	5081	3912217	Lucerne	LAK	T13N, R09W, Sec. 03 (M)	1340	1	4	Inland Waters	1	non-specific area	Presumed Extant	Natural/Native occurrence	Poor
Clear Lake Drainage Resident Trout Stream	Clear Lake Drainage Resident Trout Stream	CARA2520CA	3	25930	5085	3812287	Kelseyville	LAK	T12N, R09W, Sec. 11 (M)	2000	1	4	Inland Waters	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	15	45514	45514	3812287	Kelseyville	LAK	T13N, R08W, Sec. 29, S (M)	1800	39	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Northern Volcanic Ash Vernal Pool	Northern Volcanic Ash Vernal Pool	CTT64133CA	2	8195	16212	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17, W (M)	2790	1	3	Herbaceous	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	45	96315	97480	3812287	Kelseyville	LAK	T12N, R09W, Sec. 01, E (M)	1800	1	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	PDMAL110K2	25	A2192	103793	3812287	Kelseyville	LAK	T13N, R09W, Sec. 21, W (M)	1500	1	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	42	96311	97476	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 09 (M)	1500	1	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	13	45511	45511	3812287	Kelseyville	LAK	T13N, R09W, Sec. 26, NE (M)	1650	1	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	16	45515	45515	3812286	Clearlake Highlands	LAK	T12N, R08W, Sec. 09 (M)	2500	1	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Orcuttia tenuis	slender Orcutt grass	PMPOA4G050	10	8205	2241	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17, W (M)	280	2	1	Monocots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Taricha rivularis	red-bellied newt	AAAAF02020	71	A2586	104175	3812287	Kelseyville	LAK	T12N, R09W, Sec. 1, NE (M)	1900	1	2	Amphibians	1	1/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Hesperolinon adenophyllum	glandular western flax	PDLIN01010	40	A2348	61815	3812287	Kelseyville	LAK	T13N, R09W, Sec. 27, NE (M)	1400	1	1	Dicots	1	1/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Rana boylii	foothill yellow-legged frog	AAABH01050	1703	A8515	110305	3812287	Kelseyville	LAK	T13N, R09W, Sec. 26, SE (M)	1625	1	2	Amphibians	1	1/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Hesperolinon adenophyllum	glandular western flax	PDLIN01010	49	A2361	103973	3812287	Kelseyville	LAK	T12N, R08W, Sec. 18, S (M)	2900	1	1	Dicots	1	1/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Pandion haliaetus	osprey	ABNKC01010	471	77158	78116	3912217	Lucerne	LAK	T14N, R09W, Sec. 36, NW (M)	1328	1	2	Birds	1	1/5 mile	Presumed Extant	Natural/Native occurrence	Fair
Pandion haliaetus	osprey	ABNKC01010	472	77159	78118	3912217	Lucerne	LAK	T14N, R09W, Sec. 35, NE (M)	1334	1	2	Birds	1	1/5 mile	Presumed Extant	Natural/Native occurrence	Fair
Brasenia schreberi	watershield	PDCAB01010	12	82078	83070	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17, SW (M)	2800	1	1	Dicots	1	1/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	47	96317	97482	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17, SW (M)	2800	1	1	Dicots	1	1/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Hesperolinon adenophyllum	glandular western flax	PDLIN01010	14	8151	12609	3812287	Kelseyville	LAK	T12N, R09W, Sec. 13, SE (M)	2800	1	1	Dicots	1	1/5 mile	Presumed Extant	Natural/Native occurrence	Unknown
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	IICOL5V010	8	60713	60749	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17 (M)	2780	1	2	Insects	1	specific area	Presumed Extant	Natural/Native occurrence	Unknown
Hesperolinon adenophyllum	glandular western flax	PDLIN01010	24	42758	42758	3812288	Highland Springs	LAK	T13N, R09W, Sec. 30, SW (M)	1460	2	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Excellent
Navarretia leucocephala ssp. plieantha	many-flowered navarretia	PDPLM0C0E5	1	8191	13761	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17, SW (M)	2800	3	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Horkelia bolanderi	Bolander's horkelia	PDROS0W011	2	17069	12099	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17, W (M)	2800	2	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Excellent
Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	2	8206	26357	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17, SW (M)	2790	2	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	46	96316	97481	3812287	Kelseyville	LAK	T12N, R08W, Sec. 18, NE (M)	3000	1	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Hesperolinon adenophyllum	glandular western flax	PDLIN01010	41	61835	61872	3812288	Highland Springs	LAK	T12N, R09W, Sec. 6, NE (M)	1800	1	1	Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	44	96314	97479	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 35, SW (M)	1900	11	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Erethizon dorsatum	North American porcupine	AMAFJ01010	210	A5042	106742	3812287	Kelseyville	LAK	T13N, R08W, Sec. 33, NW (M)	1920	1	2	Mammals	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Agelaius tricolor	tricolored blackbird	ABPBX8D020	589	96933	98156	3812288	Highland Springs	LAK	T13N, R09W, Sec. 29, SW (M)	1430	1	2	Birds	1	specific area	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	51	96322	97487	3912217	Lucerne	LAK	T14N, R09W, Sec. 36, S (M)	1500	17	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Pandion haliaetus	osprey	ABNKC01010	469	77152	78114	3912217	Lucerne	LAK	T14N, R09W, Sec. 36, SE (M)	1482	1	2	Birds	1	1/10 mile	Presumed Extant	Natural/Native occurrence	Fair
Pandion haliaetus	osprey	ABNKC01010	468	77150	78113	3912217	Lucerne	LAK	T14N, R09W, Sec. 36, SE (M)	1357	1	2	Birds	1	1/10 mile	Presumed Extant	Natural/Native occurrence	Fair
Pandion haliaetus	osprey	ABNKC01010	467	77148	78111	3912217	Lucerne	LAK	T14N, R09W, Sec. 36, NE (M)	1328	1	2	Birds	1	1/10 mile	Presumed Extant	Natural/Native occurrence	Fair
Amsinckia lunaris	bent-flowered fiddleneck	PDBOR01070	50	65009	65088	3912217	Lucerne	LAK	T13N, R08W, Sec. 05, SE (M)	1300	1	1	Dicots	1	1/10 mile	Presumed Extant	Natural/Native occurrence	Unknown
Emys marmorata	western pond turtle	ARAAD02030	542	46847	46847	3812288	Highland Springs	LAK	T13N, R09W, Sec. 30, SW (M)	1500	1	2	Reptiles	1	non-specific area	Presumed Extant	Natural/Native occurrence	Good
Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	PDPLM0C0E4	5	16021	22491	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 34, SW (M)	1850	1	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Fair
Emys marmorata	western pond turtle	ARAAD02030	540	46568	46568	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 27, W (M)	1800	1	2	Reptiles	1	specific area	Presumed Extant	Natural/Native occurrence	Unknown
Lavinia exilicauda chi	Clear Lake hitch	AFCJB19011	2	63527	63619	3812288	Highland Springs	LAK	T13N, R09W, Sec. 20, SW (M)	1413	1	2	Fish	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	43	96313	97478	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 34, W (M)	1900	4	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Eriastrum brandegeeae	Brandegee's eriastrum	PDPLM03020	28	25973	4996	3812287	Kelseyville	LAK	T13N, R09W, Sec. 25, SE (M)	1680	1	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Fair
Legenere limosa	legenere	PDCAM0C010	9	8197	17386	3812287	Kelseyville	LAK	T12N, R08W, Sec. 17, SW (M)	2790	1	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Layia septentrionalis	Colusa layia	PDAST5N0F0	14	B6018	7029	3812288	Highland Springs	LAK	T13N, R09W, Sec. 30, SE (M)	1528	1	1	Dicots	1	80 meters	Presumed Extant	Natural/Native occurrence	Unknown
Penstemon newberryi var. sonomensis	Sonoma beardtongue	PDSCR1L483	17	B5659	118641	3812287	Kelseyville	LAK	T13N, R08W, Sec. 17, SE (M)	4200	1	1	Dicots	1	80 meters	Presumed Extant	Natural/Native occurrence	Unknown
Layia septentrionalis	Colusa layia	PDAST5N0F0	53	A0513	102074	3812287	Kelseyville	LAK	T13N, R08W, Sec. 30, SW (M)	1800	1	1	Dicots	1	80 meters	Presumed Extant	Natural/Native occurrence	Good
Progne subis	purple martin	ABPAU01010	31	70388	71281	3812287	Kelseyville	LAK	T12N, R08W, Sec. 18, SE (M)	2791	1	2	Birds	1	80 meters	Presumed Extant	Natural/Native occurrence	Good
Emys marmorata	western pond turtle	ARAAD02030	576	51831	51831	3812288	Highland Springs	LAK	T13N, R09W, Sec. 32, NE (M)	1460	1	2	Reptiles	1	80 meters	Presumed Extant	Natural/Native occurrence	Good
Lasthenia burkei	Burke's goldfields	PDAST5L010	35	71358	72252	3812287	Kelseyville	LAK	T13N, R09W, Sec. 14, NE (M)	1380	1	1	Dicots	1	80 meters	Presumed Extant	Natural/Native occurrence	Poor
Agelaius tricolor	tricolored blackbird	ABPBX8D020	590	96938	98164	3812288	Highland Springs	LAK	T13N, R09W, Sec. 19, SE (M)	1404	1	2	Birds	1	80 meters	Presumed Extant	Natural/Native occurrence	Unknown
Rana boylii	foothill yellow-legged frog	AAABH01050	286	43842	43842	3812287	Kelseyville	LAK	T13N, R09W, Sec. 23, SW (M)	140	1	2	Amphibians	1	80 meters	Presumed Extant	Natural/Native occurrence	Good
Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	97	22302	75375	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 28, NE (M)	1800	1	1	Dicots	2	80 meters	Presumed Extant	Natural/Native occurrence	Good
Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	PDPLM0C0E4	9	22202	22488	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 28, NE (M)	1800	1	1	Dicots	2	80 meters	Presumed Extant	Natural/Native occurrence	Good
Horkelia bolanderi	Bolander's horkelia	PDROS0W011	12	98231	99651	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 34, S (M)	1870	4	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	PDERI04271	21	45543	45543	3912217	Lucerne	LAK	T13N, R09W, Sec. 01, SE (M)	2000	2	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Hesperolinon adenophyllum	glandular western flax	PDLIN01010	22	42755	42755	3812287	Kelseyville	LAK	T13N, R09W, Sec. 33, E (M)	1520	2	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Hesperolinon adenophyllum	glandular western flax	PDLIN01010	21	42753	42753	3812287	Kelseyville	LAK	T13N, R09W, Sec. 26, SE (M)	1700	1	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Horkelia bolanderi	Bolander's horkelia	PDROS0W011	11	98229	99650	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 34, NW (M)	1865	2	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Good
Eriastrum brandegeeae	Brandegee's eriastrum	PDPLM03020	61	86987	87952	3812286	Clearlake Highlands	LAK	T13N, R08W, Sec. 34, S (M)	1890	2	1	Dicots	1	specific area	Presumed Extant	Natural/Native occurrence	Excellent

SENSITIVE	SITEDATE	ELMDATE	OWNERMGT	FEDLIST	CALLIST	GRANK	SRANK	RPLANTRANK	CDFWSTATUS	OTHRSTATUS	LOCATION
N	19450904	19450904	UNKNOWN	None	None	G5	S3	2B.2			CLEAR LAKE NEAR WYGALS RESORT AT SOUTH END OF LAKE.
N	1988XXXX	1988XXXX	UNKNOWN	None	None	G1	S1				CLEAR LAKE.
N	201506XX	201506XX	UNKNOWN	None	None	GST2T3	S2S3		SSC		CLEAR LAKE.
N	19370429	19370429	UNKNOWN	None	None	G2G3	S1		SSC	AFS_TH	CLEAR LAKE, BETWEEN HIGHWAYS 20, 29 & 53, LAKE COUNTY.
N	19620408	19620408	UNKNOWN	None	Threatened	G4T1	S1			AFS_VU; USFS_S	CLEAR LAKE.
N	20090719	19470729	UNKNOWN	None	None	G3	S1S2				CLEAR LAKE.
Y	20060716	20060716		None	None	G3G4	S3		SSC	BLM_S; IUCN_VU; USFS_S	
N	19350517	19350517	UNKNOWN	Endangered	Threatened	G4T1	S1	1B.1		BLM_S; SB_CalBG/RSABG	BREENS LAKE, WEST BASE OF MT KONOCTI, KELSEYVILLE.
N	19310715	19310715	PVT	None	None	G1G2	S1S2	1B.2		SB_CalBG/RSABG	ON A RANCH 1.5 MI SW OF KELSEYVILLE.
N	19490311	19490311	UNKNOWN	None	None	G3G4	S2		SSC	BLM_S; IUCN_LC; USFS_S; WBWG_H	ABOUT 3 MI S OF WHEELER POINT AND ABOUT 5.5 MI ENE OF LOWER LAKE.
N	19470318	19470318	UNKNOWN	None	None	GST3	S3	1B.3			NEAR TOP OF MT KONOCTI, CLEAR LAKE.
N	XXXXXXXX	XXXXXXXX	UNKNOWN	None	None	G4T4	S3	4.2		SB_UCBG	JUNCTION OF HIGHWAY 29 AND HIGHWAY 175, NEAR KELSEYVILLE.
N	19410608	19410608	UNKNOWN	None	None	G2G3	S2S3	1B.2		BLM_S	HILLS AT SOUTH BASE OF MOUNT KONOCTI.
N	19280428	19280428	UNKNOWN	None	None	GST3	S3	1B.3			HIGHLAND SPRINGS, MAYACAMAS RANGE, ADOBE CREEK WATERSHED.
N	19290525	19290525	PVT, CITY OF KELSEYVILLE	None	Endangered	G2	S2	1B.2		BLM_S	KELSEYVILLE.
N	XXXXXXXX	XXXXXXXX	UNKNOWN	None	None	G3	S3	1B.2		BLM_S; SB_UCBG; SB_UCSC	KELSEYVILLE.
N	193206XX	193103XX	PVT, CITY OF KELSEYVILLE	None	None	G2	S2				NEAR KELSEYVILLE.
N	19230426	19230426	UNKNOWN	None	None	G2	S2	1B.2		BLM_S; SB_UCBG	KELSEYVILLE.
N	197706XX	19310707	PVT	None	None	G1Q	S1	1B.1		BLM_S	1.5 MILES SW OF KELSEYVILLE, SOUTH OF CLEAR LAKE.
N	19881228	19881228	PVT	None	None	GNR	SNR				KELSEY CREEK, ABOUT 9 MILES SOUTH SOUTHEAST OF TOWN OF KELSEYVILLE, IN LAKE COUNTY.
N	19820618	19820618	UNKNOWN	None	None	G2?	S2?	1B.2		BLM_S; SB_CalBG/RSABG	MAYACMAS MOUNTAINS; EAST SIDE OF CANYON OF UNNAMED CREEK APPROXIMATELY 2 MILES NORTH OF GLENBROOK.
N	19560516	19560516	TNC-BOGGS LAKE PRESERVE	None	None	G4?	S1S2			IUCN_VU	BOGGS LAKE, SOUTH OF CLEAR LAKE.
N	19510328	19510328	UNKNOWN	None	None	GST3	S3	1B.3			1 MI N OF BOGGS LAKE.
N	19881228	19881228	PVT	None	None	GNR	SNR				KELSEY CREEK, UPSTREAM OF KELSEYVILLE, IN LAKE COUNTY.
N	19881228	19881228	PVT	None	None	GNR	SNR				COLE CREEK, UPSTREAM AND DOWNSTREAM OF KELSEYVILLE, IN LAKE COUNTY.
N	19380518	19380518	UNKNOWN	None	None	G3T2	S2	1B.1		BLM_S; SB_CalBG/RSABG; SB_USDA	SOUTH OF KELSEYVILLE ON ROAD TO ADAMS SPRINGS.
N	19600423	19600423	PVT	None	None	G4	S2		SSC	IUCN_LC	KELSEY CREEK, VICINITY OF INTERSECTION WITH SODA BAY RD, NORTH OF KELSEYVILLE AND SOUTH OF CLEAR LAKE.
N	19820210	19820210	TNC, DFG	None	None	G2G3	S2S3			IUCN_NT	BOGGS LAKE PRESERVE ALONG EAST SIDE OF HARRINGTON FLAT ROAD, ABOUT 7 MILES SE OF KELSEYVILLE.
N	19610126	19610126	PVT	None	None	G4	S2		SSC	IUCN_LC	KELSEY CREEK, ABOUT 3.5 MI SOUTH OF INTERSECTION WITH HWY 175, SOUTH KELSEYVILLE.
N	199307XX	199307XX	UNKNOWN	None	None	G5	S4		WL	CDF_S; IUCN_LC	BIG VALLEY, ALONG KELSEY CREEK; SOUTH OF CLEAR LAKE AND ABOUT 1 MILE NNE EAST OF KELSEYVILLE.
N	19370709	19370709	UNKNOWN	None	None	GST3	S3	1B.3			0.5 MILE NORTH OF LITTLE BORAX LAKE.
N	19460810	19460810	UNKNOWN	None	None	GST3	S3	1B.3			HILLTOP 1 MILE EAST OF KELSEYVILLE.
N	1975XXXX	1975XXXX	PVT	None	None	GNR	SNR				COLE CREEK, ABOUT 6 MILES SOUTHEAST OF KELSEYVILLE, IN LAKE COUNTY.
N	19891228	19891228	PVT	None	None	GNR	SNR				KELSEY CREEK, DOWNSTREAM OF KELSEYVILLE, IN LAKE COUNTY.
N	1975XXXX	1975XXXX	PVT	None	None	GNR	SNR				SWEETWATER CREEK, TRIBUTARY TO KELSEY CREEK, ABOUT 5 MILES SOUTH OF KELSEYVILLE, IN LAKE COUNTY.
N	20110719	20110719	PVT	None	None	GST3	S3	1B.3			ALONG HWY 29 AT SOUTH BASE OF MOUNT KONOCTI, NEAR JUNCTION WITH HWY 175, FROM SHAUL VALLEY TO SUGARLOAF.
N	198806XX	198806XX	TRUST FOR WILDLAND COMMUN, PVT	None	None	G1	S1.1				BOGGS LAKE, (NE OF HARRINGTON ROAD ABOUT 1/2 MILE SOUTH OF ITS JUNCTION W/BOTTLE ROCK ROAD).
N	19271228	19271228	UNKNOWN	None	None	GST3	S3	1B.3			COLD CREEK CANYON.
N	19320805	19320805	PVT?	None	None	GST2	S2	1B.2			BIG VALLEY, MCGAW SLOUGH, WEST OF KELSEYVILLE.
N	19510527	19510527	UNKNOWN	None	None	GST3	S3	1B.3			1 MILE NORTH OF MT KONOCTI.
N	19300510	19300510	UNKNOWN	None	None	GST3	S3	1B.3			COLD [COLE] CREEK CANYON, 2 MILES SOUTH OF KELSEYVILLE, CLEAR LAKE WATERSHED.
N	19640331	19640331	UNKNOWN	None	None	GST3	S3	1B.3			ALONG COLD CREEK, STATE HIGHWAY 29, 2.5 MILES NORTH OF SALMINAS RESORT, NORTH OF MOUNT HANNAH.
N	20170620	20170620	TNC-BOGGS LAKE PRESERVE	Threatened	Endangered	G2	S2	1B.1		SB_UCBG	NORTH AND EAST SIDE OF BOGGS LAKE, WEST SLOPE OF MT HANNAH, APPROXIMATELY 7 MILES SE OF KELSEYVILLE.
N	19600423	19600423	PVT	None	None	G4	S2		SSC	IUCN_LC	BOTTLE ROCK RD, ABOUT 1.8 MI SOUTH OF INTERSECTION WITH HWY 29, SOUTH KELSEYVILLE.
N	19280630	19280630	UNKNOWN	None	None	G2G3	S2S3	1B.2		BLM_S	RINCON SCHOOL HOUSE, KELSEYVILLE.
N	19390322	19390322	PVT	None	Endangered	G3	S3		SSC	BLM_S; IUCN_NT; USFS_S	COLE CREEK ROAD, ABOUT 2.6 ROAD MILES SOUTH OF KELSEYVILLE.
N	19820616	19820616	PVT	None	None	G2G3	S2S3	1B.2		BLM_S	HILL BETWEEN BOTTLE ROCK ROAD AND UPPER SWEETWATER CREEK, ABOUT 0.5 MILE WEST OF BOGGS LAKE, NORTH OF GLENBROOK.
N	199307XX	199307XX	DPR-CLEAR LAKE SP; UNKNOWN	None	None	G5	S4		WL	CDF_S; IUCN_LC	JUST WEST OF KELSEY CREEK AND 1 MILE SOUTHEAST OF QUERCUS POINT, SOUTH SIDE OF CLEAR LAKE.
N	199307XX	199307XX	UNKNOWN	None	None	G5	S4		WL	CDF_S; IUCN_LC	0.4 MI WEST OF KELSEY CREEK AND 0.9 MILE SOUTHEAST OF QUERCUS POINT, SOUTH SIDE OF CLEAR LAKE.
N	19870523	19870523	TNC-BOGGS LAKE PRESERVE	None	None	G5	S3	2B.3			BOGGS LAKE, AT BASE OF MOUNT HANNAH.
N	19850720	19850720	UNKNOWN	None	None	GST3	S3	1B.3			SOUTH SIDE OF BOGGS LAKE.
N	19820611	19820611	BLM-CLEAR LAKE RA	None	None	G2G3	S2S3	1B.2		BLM_S	ABOUT 1 MILE EAST OF BOGGS LAKE, ON CREST OF LONG RIDGE OVERLOOKING KELSEY CREEK.
N	XXXXXXXX	XXXXXXXX	TRUST FOR WILDLAND COMMUNITIES	None	None	G2?	S2?				BOGGS LAKE.
N	19990618	19990618	LAK COUNTY	None	None	G2G3	S2S3	1B.2		BLM_S	HIGHLAND SPRINGS ROAD, ALONG WEST SIDE OF HIGHLAND SPRINGS RESERVOIR, EAST OF THE MAYACAMAS MOUNTAINS.
N	20120526	20120526	TNC-BOGGS LAKE PRESERVE, DFG?	Endangered	Endangered	G4T1	S1	1B.2		SB_CalBG/RSABG	BOGGS LAKE, NW SLOPE OF MT HANNAH, APPROXIMATELY 7 MILES SE OF KELSEYVILLE.
N	20150512	20150512	TNC-BOGGS LAKE PRESERVE, DFG	None	None	G1	S1	1B.2		BLM_S	BOGGS LAKE, WEST OF MOUNT HANNAH.
N	20160511	20160511	TNC-BOGGS LAKE PRESERVE	None	Endangered	G2	S2	1B.2		BLM_S	SOUTH AND NORTHWEST SIDES OF BOGGS LAKE.
N	19750825	19750825	UNKNOWN	None	None	GST3	S3	1B.3			ALONG BOTTLEROCK ROAD 0.1 MILE FROM HARRINGTON FLAT ROAD, SOUTH OF CLEAR LAKE AND HIGHWAY 175.
N	19990603	19990603	UNKNOWN	None	None	G2G3	S2S3	1B.2		BLM_S	ALONG UNNAMED ROAD ABOUT 1.1 ROAD MILES UPHILL FROM GATE AT HIGHLAND SPRINGS ROAD, SOUTH OF HIGHLAND SPRINGS RESERVOIR.
N	20110719	20110719	PVT	None	None	GST3	S3	1B.3			ALONG HIGHWAY 29 FROM EAST SIDE OF HESSE FLAT TO JUST EAST OF INTERSECTION WITH KONECTI CONSERVATION CAMP RD.
N	20110915	20110915	UNKNOWN	None	None	G5	S3			IUCN_LC	ALONG HWY 29, ABOUT 0.4 MI NW OF KONOCKTI ROCK CO RD, 0.5 MI SE OF SMITH RANCH RD, SW OF CLEAR LAKE RIVIERA.
N	20140418	2013XXXX	PVT, UNKNOWN	None	Threatened	G2G3	S1S2		SSC	BLM_S; IUCN_EN; NABCI_RWL; USFWS_BCC	ADOBE CREEK RESERVOIR, 0.3 MI NW OF WIGHT WAY & ADOBE CREEK DR INTERSECTION, 0.9 MI ENE OF HIGHLAND SPRINGS.
N	201305XX	201305XX	DPR-CLEAR LAKE SP	None	None	GST3	S3	1B.3			ALONG DORN TRAIL SYSTEM IN NORTH PART OF CLEAR LAKE STATE PARK, NORTH OF SODA BAY ROAD AND MOUNT KONOCTI.
N	199307XX	199307XX	DPR-CLEAR LAKE SP	None	None	G5	S4		WL	CDF_S; IUCN_LC	CLEAR LAKE STATE PARK, 1.8 MILE SOUTHEAST OF QUERCUS POINT AND DIRECTLY NORTH OF DORN BAY, SOUTH-CENTRAL CLEAR LAKE.
N	199207XX	199207XX	DPR-CLEAR LAKE SP	None	None	G5	S4		WL	CDF_S; IUCN_LC	CLEAR LAKE STATE PARK, 1.9 MILE SOUTHEAST OF QUERCUS POINT AND DIRECTLY NORTH OF DORN BAY, SOUTH-CENTRAL CLEAR LAKE.
N	199307XX	199307XX	DPR-CLEAR LAKE SP	None	None	G5	S4		WL	CDF_S; IUCN_LC	CLEAR LAKE STATE PARK, 1.8 MILE SOUTHEAST OF QUERCUS POINT AND DIRECTLY NORTH OF DORN BAY, SOUTH-CENTRAL CLEAR LAKE.
N	19710408	19710408	UNKNOWN	None	None	G3	S3	1B.2		BLM_S; SB_UCBG; SB_UCSC	SODA BAY ROAD AT THE JUNCTION OF THREE ROADS, TWO MILES EAST OF SODA BAY.
N	20011009	20011009	UNKNOWN	None	None	G3G4	S3		SSC	BLM_S; IUCN_VU; USFS_S	SOUTH END OF HIGHLAND SPRINGS RESERVOIR; 0.2 MILE NORTH OF HIGHLAND SPRINGS.
N	2011XXXX	19900514	PVT	Endangered	Threatened	G4T1	S1	1B.1		BLM_S; SB_CalBG/RSABG	HESSE FLAT, 0.3 MILE NORTH OF LOWER LAKE ROAD (HIGHWAY 29), 0.1 TO 0.3 MILE EAST OF SODA BAY ROAD.
N	20010326	20010326	PVT	None	None	G3G4	S3		SSC	BLM_S; IUCN_VU; USFS_S	THURSTON CREEK, EAST OF SODA BAY ROAD, SOUTH OF CLEAR LAKE.
N	19630412	19630412	UNKNOWN	None	Threatened	G4T1	S1			AFS_VU; USFS_S	ADOBE CREEK AT BELL HILL ROAD IN BIG VALLEY.
N	20110719	20110719	PVT	None	None	GST3	S3	1B.3			WEST SIDE OF HESSE FLAT, ALONG SODA BAY ROAD FROM 0.06 TO 0.45 MILE NORTH OF INTERSECTION WITH HIGHWAY 29.
N	19920528	19920528	PVT	None	None	G1Q	S1	1B.1		BLM_S	2.5 AIR MILES SSE OF KELSEYVILLE, BETWEEN COLE CREEK AND MCINTIRE CREEK.
N	20160511	20160511	TNC-BOGGS LAKE PRESERVE	None	None	G2	S2	1B.1		BLM_S; SB_UCBG	SOUTHERN EDGE OF BOGGS LAKE, 1 MILE WEST OF MT HANNA.
N	20160416	20160416	LAK COUNTY	None	None	G2	S2	1B.2		BLM_S; SB_UCBG	NE END OF HIGHLAND SPRINGS RESERVOIR, ~0.2 AIR MILE SOUTH OF THE JCT OF HIGHLAND SPRINGS RD AND E HIGHLAND SPRINGS RD.
N	20110619	20110619	UNKNOWN	None	None	G4T3	S3	1B.3		BLM_S	SUMMIT OF MOUNT KONOCTI.
N	20030513	20030513	UNKNOWN	None	None	G2	S2	1B.2		BLM_S; SB_UCBG	NORTH OF HIGHWAY 29 AND WEST OF RANCH ROAD ON THE WEST SIDE OF SHAUL VALLEY.
N	19860723	19860723	DFG-BOGGS LAKE ER	None	None	G5	S3		SSC	IUCN_LC	WEST SIDE OF BOGGS LAKE, 6.5 MILES ESE OF KELSEYVILLE.
N	19990606	19990606	PVT	None	None	G3G4	S3		SSC	BLM_S; IUCN_VU; USFS_S	ADOBE CREEK, SW OF HIGHLAND SPRINGS CUTOFF, 1 MILE EAST OF HIGHLAND SPRINGS RESERVOIR.
N	20050526	20050526	PVT	Endangered	Endangered	G1	S1	1B.1		SB_CalBG/RSABG; SB_UCBG	4830 KONOCTI ROAD, KELSEYVILLE.
N	20140418	20110416	PVT	None	Threatened	G2G3	S1S2		SSC	BLM_S; IUCN_EN; NABCI_RWL; USFWS_BCC	ALONG HIGHLAND SPRINGS RD, ABOUT 0.2 ROAD MI N OF BELL HILL RD INTERSECTION, 0.5 MI S OF FRITCH RD, S OF FINLEY.
N	19990XXX	19990XXX	PVT	None	Endangered	G3	S3		SSC	BLM_S; IUCN_NT; USFS_S	VICINITY OF KELSEY CREEK, AT THE KELSEY CREEK DRIVE CROSSING, 1.5 MILES SOUTH OF KELSEYVILLE.
N	198907XX	198907XX	PVT	None	Endangered	G2	S2	1B.2		BLM_S	ELY FLAT, ABOUT 0.5 MI W OF SODA BAY ROAD, 0.5 MI N OF COUNTERFEIT HILL.
N	2007XXXX	19890609	PVT	Endangered	Threatened	G4T1	S1	1B.1		BLM_S; SB_CalBG/RSABG	ELY FLAT, ABOUT 0.5 MILE WEST OF SODA BAY ROAD, 0.5 MILE NORTH OF COUNTERFEIT HILL.
N	20110720	20110720	UNKNOWN	None	None	G1	S1	1B.2		BLM_S	SOUTHEAST PORTION OF HESSE FLAT, ABOUT 0.4 MILE EAST OF INTERSECTION OF HIGHWAY 29 AND SODA BAY ROAD.
N	201305XX	201305XX	DPR-CLEAR LAKE SP	None	None	GST3	S3	1B.3			CLEAR LAKE STATE PARK, SOUTH OF SODA BAY ROAD, JUST WEST OF SODA BAY.
N	19950603	19950603	PVT	None	None	G2G3	S2S3	1B.2		BLM_S	BETWEEN WIGHT WAY AND KELSEY CREEK ROAD, ABOUT 4 MILES NORTHWEST OF POISON SMITH SPRING, SSW OF KELSEYVILLE.
N	19990618	19990618	PVT	None	None	G2G3	S2S3	1B.2		BLM_S	INTERSECTION OF LIVE OAK DRIVE AND COLE CREEK ROAD, ABOUT 1.7 MILES WEST OF SHAUL VALLEY, SOUTH OF KELSEYVILLE.
N	20110601	20110601	PVT	None	None	G1	S1	1B.2		BLM_S	NORTHWEST EDGE OF HESSE FLAT, ABOUT 0.25 MILE NE OF INTERSECTION OF HIGHWAY 29 AND SODA BAY ROAD.
N	20110720	20110720	PVT	None	None	G1Q	S1	1B.1		BLM_S	HESSE FLAT, SW OF CLEAR LAKE.

LOCDETAILS
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN GENERAL VICINITY OF SOUTH END OF CLEAR LAKE.
COLLECTED FROM ROCKY POINT AND NICE, CLEAR LAKE. SHEPARD STATED IT IS ONLY KNOWN FROM THE NE SHORE OF CLEAR LAKE, BUT ROCKY PT IS NW. FURTHER, THERE IS ANOTHER ROCKY POINT FAR
MAPPED ACROSS THE EXTENT OF THE LAKE.
MULTIPLE HISTORICAL COLLECTIONS GIVE LOCALITY ONLY AS "CLEAR LAKE;" 1947 SPECIMEN FROM HORSESHOE BEND ON SE SHORE. 2009 RESURVEY SITE JKH09-009 FROM "ABOUT 2 MI S OF LUCERNE, CA
EXACT LOCATION UNKNOWN. UNABLE TO LOCATE BREENS LAKE, MAPPED AS BEST GUESS BY CNDDB IN THE VICINITY OF THE WEST BASE OF MT KONOCTI AROUND GIVEN ELEVATION OF 1600 FT.
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS 1.5 MI SW OF KELSEYVILLE.
EXACT LOCATION UNKNOWN. MAPPED TO PROVIDED LOCALITY OF 5.5 MI W AND 1 MI N OF LOWER LAKE.
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB AROUND THE SUMMIT OF MOUNT KONOCTI (WRIGHT PEAK).
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS A BEST GUESS.
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN THE GENERAL VICINITY OF HIGHLAND SPRINGS.
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN THE VICINITY OF KELSEYVILLE.
EXACT LOCATION UNKNOWN. MAPPED IN THE GENERAL VICINITY OF KELSEYVILLE.
TUTTLE RANCH.
OTHER INFO GIVEN ON LABEL WAS "BREEN'S", UNABLE TO LOCATE BREEN'S. MAPPED AS 1 MILE RADIUS AT KELSEYVILLE.
FROM HEADWATERS IN COBB VALLEY DOWNSTREAM TO WATERFALL BARRIER AT ABOUT 2000 FT. ELEVATION. ALSO INCLUDES LOWER REACHES OF TRIBUTARIES IN HEADWATER AREA.
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB IN THE GENERAL VICINITY 2 MILES NORTH OF GLENBROOK.
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB TO ENCOMPASS GIVEN TRS: T12N R9W SECTION 12.
FROM FISH BARRIER AT ABOUT 2200 FEET ELEVATION DOWNSTREAM TO TOWN OF KELSEYVILLE.
FROM UNNAMED TRIBUTARY CONFLUENCE AT 2000 FT. NEAR CARLSBAD SPRING DOWNSTREAM TO MOUTH AT CLEAR LAKE.
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS ALONG HIGHWAY 175 BETWEEN HIGHWAY 29 AND ADAMS SPRINGS.
LOCATION STATED AS BOGGS LAKE ON NATURE CONSERVANCY PROPERTY SOUTH OF CLEAR LAKE. MAPPED TO GENERALLY TO THE AREA OF THE LAKE.
MAPPED ACCCORDING TO LOCATION ON PROVIDED MAP.
MAPPED AS BEST GUESS BY CNDDB JUST NORTH OF LITTLE BORAX LAKE WITHIN GIVEN TRS: 13N08W SECTION 4.
GIVEN LOCALITY IS "HILLTOP W OF KELSEYVILLE, 1 MI, 1800 FT," BUT THERE ARE NO HILLS JUST WEST OF KELSEYVILLE AND AREA DOES NOT MATCH ELEVATION. MAPPED AS BEST GUESS BY CNDDB AROUND
FROM HEADWATER AREA NEAR MT. HANNAH LODGE DOWNSTREAM TO UNNAMED TRIBUTARY CONFLUENCE AT 2000 FT. ELEVATION.
FROM KELSEYVILLE DOWNSTREAM TO CLEAR LAKE.
FROM HEADWATERS NEAR POISON SMITH SPRING DOWNSTREAM TO LOWER REACHES NEAR CONFLUENCE WITH KELSEY CREEK.
SEVERAL POLYGONS MAPPED BY CNDDB ACCORDING TO A 2011 CALTRANS MAP. COLLECTIONS FROM "S OF MOUNT KONOCTI," "3 MI S OF KELSEYVILLE," "SHAW'S FLAT," "ALONG HWY NEAR MT KONOCTI," E
SCATTERED VERNAL POOLS MAINLY WEST & SOUTH OF LAKE.
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB ALONG COLE CREEK AROUND GIVEN ELEVATION OF 1800 FT.
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB ALONG THE UPPER PORTION OF MCGAUGH SLOUGH BASED ON COLLECTIONS FROM "BIG VALLEY, MCGAW SLOUGH, WILLIAM GARD RANCH
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB WITHIN GIVEN TRS OF SECTION 9, ALONG SODA BAY ROAD WHICH MATCHES GIVEN ELEVATION OF 1500 FT.
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB ALONG HIGHWAY 175 AROUND 2 ROAD MILES SOUTH OF KELSEYVILLE, NEAR GIVEN ELEVATION OF 1650 FT. MAY HAVE BEEN SEEN ON NEAR
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB ALONG HIGHWAY 175 (FORMERLY HWY 29) AROUND 2.5 ROAD MILES NORTH OF SALMINAS RESORT, ADJACENT TO COLE CREEK.
MAPPED ACCORDING TO A 1988 BIOSYSTEMS ANALYSIS INC MAP AND A 1985 CRANE & MALLOCH MAP. MOST SIGNIFICANT THREAT TO ORCUTTIA IS SEDIMENTATION AND MEADOW SUCCESSION ON THE LAKE
HISTORIC LOCATION OF RINCON SCHOOL WAS ON THE WEST BANK OF KELSEY CREEK ABOUT 2 MILES SOUTH OF KELSEYVILLE. MAPPED AS BEST GUESS BY CNDDB AROUND RINCON SCHOOL ROAD, WHICH
MAPPED TO COLE CREEK ROAD, FORMERLY PART OF HIGHWAY 29.
MAPPED ACCORDING TO A VAGUE HAND-DRAWN MAP FROM 1982.
MAPPED ACCCORDING TO LOCATION ON PROVIDED MAP.
MAPPED ACCCORDING TO LOCATION ON PROVIDED MAP.
SW END OF LAKE. MAPPED BY CNDDB AROUND WESTERN AND SOUTHERN PORTION OF LAKE BASED ON SEVERAL HISTORICAL COLLECTIONS.
MAPPED AS BEST GUESS BY CNDDB AROUND SOUTH SIDE OF BOGGS LAKE.
MAPPED AS BEST GUESS BY CNDDB AROUND CREST OF RIDGE WITHIN GIVEN TRS: SE 1/4 OF SECTION 13.
PLANTS OCCUR ON BOTH SIDES OF ROAD FROM ABOUT 0.5 - 1.2 MILES SOUTH OF HIGHLAND SPRINGS CUTOFF (EAST HIGHLAND SPRINGS ROAD). PLANTS ON BASE OF SLOPE NEAR ROAD AND ON TOP OF SL
MAPPED AS 3 POLYGONS ALONG THE EAST AND NORTH SIDES OF THE LAKE AS WELL AS IN MEADOW TO THE WEST OF THE LAKE. MANY HISTORIC COLLECTIONS FROM BOGGS LAKE ATTRIBUTED HERE.
2 POLYGONS MAPPED BY CNDDB ON THE FAR WESTERN SHORE OF THE LAKE AND CONTINUOUSLY ALONG THE NORTHERN, EASTERN, AND SOUTHEASTERN SHORE OF THE LAKE; PLANTS LIKELY EXTEND TO
SOUTHERN POLYGON IS MAPPED FROM SPECIFIC DATA ALONG SOUTHERN EDGE OF LAKE. POLYGON AT NW SIDE OF LAKE IS MAPPED FROM NON-SPECIFIC DATA (DATUM OF UTM COORDINATES IS UNKNOWN
MAPPED AS BEST GUESS BY CNDDB ALONG BOTTLE ROCK ROAD AROUND JUNCTION WITH HARRINGTON FLAT ROAD. WITHIN THE WEST 1/2 OF THE NE 1/4 OF SECTION 18.
MAPPED BY CNDDB AS A BEST GUESS BASED ON DESCRIPTION, AND WITHIN GIVEN TRS: NW 1/4 OF NE 1/4 OF SECTION 6.
11 POLYGONS MAPPED IN THE SOUTH 1/2 OF THE SE 1/4 OF SECTION 34, THE SW 1/4 OF THE SW 1/4 OF SECTION 35, AND THE NORTH 1/2 OF THE NW 1/4 OF SECTION 2 ACCORDING TO A 2011 CALTRANS MAP.
MAPPED ACCORDING TO THE PROVIDED COORDINATES FROM THE UC DAVIS CALIFORNIA ROADKILL OBSERVATION SYSTEM (CROS).
COLONY DATA STORED IN UC DAVIS TRICOLORED BLACKBIRD PORTAL; SITE NAME "ADOBE CREEK RESERVOIR." MAPPED ACCORDING TO PROVIDED AERIAL IMAGE IN PORTAL. DIFFERENT AREAS AROUND TH
SEVERAL POLYGONS MAPPED IN THE SOUTH 1/2 OF SECTION 36 AND THE NORTH 1/2 OF SECTION 1 ACCORDING TO A 2013 DEAN MAP.
MAPPED ACCCORDING TO LOCATION ON PROVIDED MAP.
MAPPED ACCCORDING TO LOCATION ON PROVIDED MAP.
MAPPED ACCCORDING TO LOCATION ON PROVIDED MAP.
ALONG ROADSIDE.
MAPPED ACCORDING TO A 1990 BITTMAN MAP.
4 POLYGONS MAPPED IN THE SW 1/4 OF THE NW 1/4 OF AND THE NW 1/4 OF THE SW 1/4 OF SECTION 34 ACCORDING TO A 2011 CALTRANS MAP.
0.3 AIR MILE ESE OF THE INTERSECTION OF BOTTLE ROCK ROAD AND COLE CREEK ROAD WHERE CHAPARRAL ENDS AT THE EDGE OF A PASTURE. WITHIN THE SW 1/4 OF THE SE 1/4 OF SECTION 25.
MAPPED ACCORDING TO 2016 LUCAS COORDINATES, IN THE SW 1/4 OF THE SW 1/4 OF SECTION 17.
MAPPED ACCORDING TO 2016 MAZUR COORDINATES, IN THE NW 1/4 OF THE SE 1/4 OF SECTION 30.
ABOUT 175 M DOWN ROAD FROM SUMMIT PARKING AREA, ON LARGE ROADSIDE ROCK OUTCROP ON SOUTH SIDE (UPSLOPE) OF THE ROAD.
SEVERAL COLONIES SPREAD OUT OVER A FEW ACRES. MAPPED IN THE NW 1/4 OF THE SW 1/4 OF SECTION 30 ACCORDING TO 2003 COORDINATES AND MAP FROM LEITNER.
SITE IS LOCATED ABOUT 100 FEET WEST OF POLE #3973+80.
S SIDE OF THE SEASONAL STREAM ON THE E SIDE OF THE PROPERTY IN THE SMALL MIDDLE VERNAL POOL.
COLONY DATA STORED IN UC DAVIS TRICOLORED BLACKBIRD PORTAL; SITE NAME "HIGHLAND SPRINGS ROAD." ALONG THE W SIDE OF HIGHLAND SPRINGS RD, AT THE CORNER WITH A PRIVATE DRIVEWAY. MA
LOCATED APPROXIMATELY 200 FEET WEST OF POLE 3780.
AN EXPERIMENTAL RICE PADDY WAS INSTALLED AT THE VERNAL POOL YEARS AGO, (AT NORTH END OF NAVARRETIA OCCURRENCE) AND WAS ABANDONED.
NORTH SIDE OF HIGHWAY 29. PLANTS RESTRICTED TO THIN BAND ALONG BORDERS BETWEEN LIVE OAK FOREST/CHAPARRAL & WET MEADOWS/MARSHES ALONG THURSTON CREEK. 4 POLYGONS MAPPED IN
SOUTHERN PART OF PARK OFF OF GLEBE ROAD, ON UNDEVELOPED ROAD THAT DEPARTS FROM GLEBE RD AT SE CORNER OF ORCHARD. 2 POLYGONS MAPPED BY CNDDB BASED ON A 2013 MAP FROM DEAN
2 SMALL COLONIES. NORTHERN COLONY MAPPED WITHIN THE SE 1/4 OF THE NE 1/4 OF SECTION 33 AND SOUTHERN COLONY MAPPED WITHIN THE NE 1/4 OF SE 1/4 OF SECTION 33.
ADJACENT TO LIVE OAK DRIVE ABOUT 500 FEET WEST OF INTERSECTION WITH COLE CREEK ROAD. IMMEDIATELY ADJACENT TO ROADSIDE AND ON TOP OF ROAD BERM/ROAD CUT. MAPPED WITHIN THE NW 1/
PLANTS RESTRICTED TO THIN BAND ALONG BORDERS BETWEEN LIVE OAK FOREST/CHAPARRAL AND WET MEADOWS/MARSHES ALONG THURSTON CREEK. 2 POLYGONS MAPPED IN THE SOUTH 1/2 OF THE NW
MAPPED BY CNDDB AS 2 POLYGONS AT THE EAST END OF HESSE FLAT BASED ON A 2011 MAP.

ECOLOGICAL
SHALLOW WATER.
INHABITS EXPOSED, WAVE WASHED WILLOW ROOTS.
ANODONTA ALSO FOUND HISTORICALLY AND RECENTLY.
HABITAT CONSISTS OF AN UPLAND VERNAL LAKE FORMED IN VOLCANIC ASH ROCK; SURROUNDING FOREST IS DOMINATED BY PONDEROSA PINE, CALIFORNIA BLACK OAK, DOUGLAS-FIR, AND MADRONE. THE
WET POND MARGINS.
SERPENTINE HILLS IN CHAPARRAL AREA.
FOOTHILLS.
FIELDS.
TAKEN FROM A RENOVATED FRESH-WATER WELL.
NO VOLCANIC ASH OR OBSIDIAN RUBBLE AT MAPPED LOCATION. BANKS OF COLE CREEK, 1/4 MILE TO THE EAST, APPEAR TO BE OF VOLCANIC MATERIAL, BUT AREA NOT SURVEYED DUE TO ACCESS LIMITATIO
RAINBOW TROUT AND SACRAMENTO SUCKER ARE ONLY NATIVE FISHES. BROWN TROUT ARE COMMON. GREEN SUNFISH ALSO FOUND.
ON SERPENTINE.
SQUAWFISH, SACRAMENTO SUCKER AND CALIFORNIA ROACH OCCUR THROUGHOUT COMMUNITY. PACIFIC LAMPREY FOUND IN LOW TO MID REACHES. RAINBOW TROUT ONLY IN UPPER REACH. GREEN SUNI
RAINBOW TROUT AND SACRAMENTO SUCKERS THROUGHOUT; CALIFORNIA ROACH AND SQUAWFISH IN LOWER REACH. THREESPINE STICKLEBACK POPULATION FOUND IN MIDDLE REACH (THE ONLY KNOWN
NATURAL COMMUNITIES INVENTORY INDICATES THIS IS NORTHERN VOLCANIC ASH VERNAL POOL. OBSERVER NOTED IT IS A LARGE, SOMETIMES EPHEMERAL LAKE.
HABITAT AT CLEAR LAKE: SALIX, QUERCUS, AND OTHER HARDWOOD SPECIES. NEST STRUCTURES USUALLY DEAD. SURROUNDING LAND USE IS ORCHARDS, VINEYARDS, RESIDENTIAL, WATER RECREATION & I
WOODLAND-CHAPARRAL, SLOPE 10% E.
CHAPARRAL, RED VOLCANIC SOIL.
RAINBOW TROUT ARE ABUNDANT, WITH CALIFORNIA ROACH IN LOWER REACHES. GAMBUSIA PLANTED IN UPPER REACH FOR MOSQUITO ABATEMENT. SINGLE BROWN BULLHEAD WAS CAPTURED IN MIDDLE S
ONE OF THE FEW TRIBUTARIES TO CLEAR LAKE THAT SUSTAINS A CLEAR LAKE HITCH SPAWNING RUN. STREAM TYPICALLY IS DRY IN SUMMER.
RAINBOW TROUT THROUGHOUT CREEK; OCCURRING WITH CALIFORNIA ROACH IN LOWER REACHES.
VARIETY OF HABITATS; IN UNDERSTORY OF QUERCUS KELLOGGII, Q. WISLIZENI, AND Q. DOUGLASII WOODLAND, SCATTERED SHRUBS IN GRASSLAND, EDGES OF QUERCUS WISLIZENI AND ADENOSTOMA FASC
ROLLING SWALE TOPOGRAPHY W/OAK WOODLANDS, CHAPARRAL & PINE FORESTS SURROUNDING. LAKE INTERIOR MARSHY, RARELY DRIES. POOLS SUPPORT SPECIAL TAXA NAVARRETIA PLIEANTHA, ORCUTT
WET, HEAVY ADOBE.
CHAPARRAL, SLOPE 20% NORTH.
GRAVELLY LOAM SOIL OF VOLCANIC FORMATION. FOREST OF PINUS PONDEROSA, PSEUDOTSUGA MENZIESII, AND QUERCUS KELLOGGII.
VERNAL LAKE IN KLAMATH SILTY CLAY LOAM SOIL. ASSOCIATED SPECIES INCLUDE ELEOCHARIS MACROSTACHYA, ERYNGIUM ARISTULATUM, DOWNINGIA BICORNUTA, D. CUSPIDATA, NAVARRETIA PLIEANTHA,
DRY GROUND.
SERPENTINE WITH VOLCANIC SCREE. ASSOCIATED WITH DIGGER PINE, JEPSON'S CEANOTHUS, AND STANFORD'S MANZANITA.
HABITAT AT CLEAR LAKE: SALIX, QUERCUS, AND OTHER HARDWOOD SPECIES. NEST STRUCTURES USUALLY DEAD. SURROUNDING LAND USE IS ORCHARDS, VINEYARDS, RESIDENTIAL, WATER RECREATION & I
HABITAT AT CLEAR LAKE: SALIX, QUERCUS, AND OTHER HARDWOOD SPECIES. NEST STRUCTURES USUALLY DEAD. SURROUNDING LAND USE IS ORCHARDS, VINEYARDS, RESIDENTIAL, WATER RECREATION & I
SHALLOW WATER AND DESICCATED VERNAL POOL MARGIN OF LAKE. IN CLEAR AREA SURROUNDED BY TULES. ASSOCIATED WITH POTAMOGETON FOLIOSUS, P. DIVERSIFOLIUS, UTRICULARIA VULGARIS, ELATI
OPEN CHAPARRAL. SHALLOW ROCKY SOILS MOSTLY ON TOP OF RIDGE. SERPENTINE SUBSTRATE. ASSOCIATED WITH SARGENT'S CYPRESS, JEPSON'S CEANOTHUS, LEATHER OAK, ETC.
OPENINGS IN CHAMISE CHAPARRAL ON EAST FACING SLOPES. ASSOCIATED WITH AIRA CARYOPHYLLA, LOTUS HUMISTRATUS, BROMUS HORDEACEUS, VULPIA SPP., ERIOPHYLLUM LANATUM, AVENA BARBATA
IN VERNAL POOL AND MEADOW; ASSOCIATED WITH ORCUTTIA TENUIS, ERYNGIUM ARISTULATUM, ELEOCHARIS, PLAGIOBOTHRYS STIPITATUS, CRASSULA AQUATICA, VERONICA PEREGRINA, AND DOWNINGIA (
TRANSITION BETWEEN PONDEROSA PINE FOREST AND MEADOW. GRASSY MEADOW EDGE, WITH BROMUS SPP., ASCLEPIAS FASCICULATUS, ACHILLEA MILLEFOLIUM, PINUS PONDEROSA, MADRONE, ARCTOST
PLANTS OCCUR AS SCATTERED INDIVIDUALS IN S POLYGON AMONG G. EBRACTEATA, RANUNCULUS UNCINATUS PARVIFLORUS ON MOIST GROUND IN ADOBE SOIL. PLANTS IN N POLYGON ASSOCIATED WITH E
SOIL OBSIDIAN BASE. GROWING WITH PINUS PONDEROSA, QUERCUS AND A FEW OTHER SPECIES.
ROADCUT ON SANDSTONE IN CHAPARRAL. NORTH ASPECT. ASSOCIATED WITH ADENOSTOMA FASCICULATUM, QUERCUS BERBERIDIFOLIA, AND HETEROMELES ARBUTIFOLIA.
VARIETY OF HABITATS; IN UNDERSTORY OF QUERCUS KELLOGGII, Q. WISLIZENI, AND Q. DOUGLASII WOODLAND, SCATTERED SHRUBS IN GRASSLAND, EDGES OF QUERCUS WISLIZENI AND ADENOSTOMA FASC
HABITAT COMPOSED OF CATTAILS. G. CHANIOT REPORTED THAT HE HAS CONFIRMED BREEDING EVERY YEAR FROM 2005-2013. SMALL NUMBERS OF RED-WINGED & YELLOW-HEADED BLACKBIRDS OBSERVED
OPEN BLUE OAK/FOOTHILL PINE/CALIFORNIA BUCKEYE FOREST UNDERSTORY. GROWING MIXED WITH ARCTOSTAPHYLOS MANZANITA SSP. MANZANITA.
HABITAT AT CLEAR LAKE: SALIX, QUERCUS, AND OTHER HARDWOOD SPECIES. NEST STRUCTURES USUALLY DEAD. SURROUNDING LAND USE IS ORCHARDS, VINEYARDS, RESIDENTIAL, WATER RECREATION & I
HABITAT AT CLEAR LAKE: SALIX, QUERCUS, AND OTHER HARDWOOD SPECIES. NEST STRUCTURES USUALLY DEAD. SURROUNDING LAND USE IS ORCHARDS, VINEYARDS, RESIDENTIAL, WATER RECREATION & I
HABITAT AT CLEAR LAKE: SALIX, QUERCUS, AND OTHER HARDWOOD SPECIES. NEST STRUCTURES USUALLY DEAD. SURROUNDING LAND USE IS ORCHARDS, VINEYARDS, RESIDENTIAL, WATER RECREATION & I
FOOTHILL WOODLAND. E-FACING SLOPE. SANDY LOAM SOIL.
SHALLOW VERNAL POOLS WITHIN MATRIX OF MARSH HABITAT. ON OBSIDIAN RUBBLE. ASSOCIATED WITH QUERCUS WISLIZENI, QUERCUS DUMOSA, ADENOSTOMA FASCICULATUM, CEANOTHUS AND ARCTOST
HABITAT CONSISTS OF A RIPARIAN CORRIDOR ALONG THURSTON CREEK; SURROUNDED BY FALLOW ORCHARD, OPEN SPACE, AND CHAPARRAL.
TRIBUTARY CREEK TO CLEAR LAKE.
VARIETY OF HABITATS; IN UNDERSTORY OF QUERCUS KELLOGGII, Q. WISLIZENI, AND Q. DOUGLASII WOODLAND, SCATTERED SHRUBS IN GRASSLAND, EDGES OF QUERCUS WISLIZENI AND ADENOSTOMA FASC
ON OBSIDIAN RUBBLE IN OPEN AREA BORDERING CHAPARRAL. BOTTLEROCK-GLENVIEW-ARROWHEAD SOIL COMPLEX ON VOLCANIC HILLS. GENTLE SOUTHWEST FACING SLOPE.
GROWING ALONG THE EDGE OF LARGE VERNAL LAKE. ASSOCIATES INCLUDE ELEOCHARIS PALUSTRIS, GRATIOLA EBRACTEATA, AND VARIOUS GRASS SPECIES (NOT FLOWERING).
FOOTHILLS.
SCATTERED ON ROCK OUTCROPS.
ROCKY, GRASSY OPENINGS IN BLUE OAK WOODLAND. GENTLE SLOPE TO THE SE. SOILS ARE BENRIDGE-KONOCTI ASSOCIATION, 15 TO 30 PERCENT SLOPES. MICROPUS AMPHIBOLUS AND LEPTOSIPHON ACI
HABITAT CONSISTS OF MIXED CONIFER FOREST WITH A RECENT FIRE HISTORY AND LOTS OF BURNED-OUT SNAGS.
DECIDUOUS ORCHARD W/ AN UNDERSTORY OF NON-NATIVE ANNUAL GRASSLAND, BLUE OAK/FOOTHILL PINE FOREST, MIXED CHAPARRAL, SEASONAL WETLANDS. DOMINANT SPP IN THE 0.17 ACRE OF VERNA
A COPSE OF HIMALAYAN BLACKBERRIES ABOUT 7X18 METERS, VISIBLE IN GOOGLE STREET VIEW. BIRDS FORAGE IN NEARBY BLUE OAKS AND VINEYARDS TO THE E. "HAVE BRED HERE EVERY YEAR SINCE DIS(
FLAT, SPARSELY VEGETATED DRY MUD PATCHES WITHIN GRASSY MATRIX. THE RARE NAVARRETIA LEUCOCEPHALA SSP. PAUCIFLORA ALSO OCCURS HERE, ALONG WITH OTHER NAVARRETIAS.
FLAT, SPARSELY VEGETATED DRY MUD PATCHES WITHIN GRASSY MATRIX. WITH GRATIOLA HETEROSEPALA AND OTHER NAVARRETIAS.
VOLCANIC (OBSIDIAN SHARD) SOILS IN ECOTONE BETWEEN QUERCUS WISLIZENII WOODLAND/ADENOSTOMA FASCICULATUM CHAPARRAL AND GRASSLAND/ELEOCHARIS MACROSTACHYA/TYPHA/SCIRPUS M/
OPEN BLUE OAK/FOOTHILL PINE FOREST UNDERSTORY. GROWING ON SLOPE WITH S/SE ASPECT. MIXED WITH ARCTOSTAPHYLOS MANZANITA SSP. MANZANITA.
GROWING IN CHAPARRAL. ASSOCIATED WITH ERIODICTYON CALIFORNICUM, CALYCADENIA PAUCIFLORA, MINUARTIA DOUGLASII, GILIA CAPITATA, STREPTANTHUS BARBIGER, RIGIOPAPPUS LEPTOCLADUS. RO
GRASSLAND FRINGE OF ERIODICTYON CALIFORNICUM AND ADENOSTOMA FASCICULATUM CHAPARRAL. SOUTH FACING SLOPES TO FLAT. LIGHT SANDY SOIL; NO DISTINCT SERPENTINITE.
VOLCANIC (OBSIDIAN SHARD) SOILS IN ECOTONE BETWEEN QUERCUS WISLIZENI/ADENOSTOMA FASCICULATUM FOREST/CHAPARRAL AND ELEOCHARIS MACROSTACHYA/TYPHA/SCIRPUS MARSH/MEADOW, J
VOLCANIC ASH SOIL WITH SURFACE LAYER OF OBSIDIAN RUBBLE. W POPULATION IS IN OPENING IN CEANOTHUS CUNEATUS SHRUBS AT EDGE OF INTERIOR LIVE OAK WOODLAND. E POPULATION IS IN NARRO

GENERAL	THREAT
ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1945 COLLECTION BY BAKER. NEEDS FIELDWORK.	
2 SPECIMENS AT THE CALIFORNIA STATE COLLECTION OF ARTHROPODS (CDFA), COLLECTED BY H. CHANDLER 3 JUL 1946. 2 SPECIMENS COLLECTED 24 JUL 1969. POPULATION HIGH IN 1988 AND STABLE OVE	
FOUND IN 1873, 1894, 1946, 1948, 1953, 1959, 1961, 1962, 1963, 1964, 1965, 1968, 1969, 1972, 1973, 1976, 1977, 1978, 1979 & 2012. ALSO, A SET OF ELECTROFISHING SURVEYS IN 2014-2015 FOUND H. T. LAGUNAE	HABITAT HAS BEEN IMPACTED BY INTRODUCED FISHES, HISTORIC MINING, RESIDENTIAL DEVELOPMENT, AND AGRICULTURAL RUNOFF.
11 FISH COLLECTED IN CLEAR LAKE AND KEPT IN AQUARIUM AT ELK GROVE, RECEIVED AT NATIONAL MUSEUM OF NATURAL HISTORY DECEMBER 1937, ACC #146125 (USNM 00106570). 1 GILA CRASSICAUDA A	
COLLECTED 9 APR 1961 BY UCB ZOOLOGY 138 CLASS (CAS #72868) AND 8 APR 1962 BY P.R. NEEDHAM, & D.W. SEEGRIST & PARTY (CAS #24033) PARATYPE.	
COLLECTED PRIOR TO 1909, PRIOR TO APR 1918, AND ON UNKNOWN DATE. 9 COLLECTED ON 29 JUL 1947. LOCALITY LISTED IN INGRAM (1948). NONE FOUND ON 19 JUL 2009.	
	THREATENED BY CLOSE PROXIMITY TO ROAD AND DEPREDATION.
BASED ON A 1923 BLANKINSHIP COLLECTION FROM "KELSEYVILLE, NEAR BREENS LAKE" AND A 1935 BENSON COLLECTION FROM "W BASE OF MT KONOCTI, BREENS LAKE, 1600 FT ELEVATION." NEEDS FIELD	
RECENT SEARCHES FOR THE SPECIES IN LAKE COUNTY HAVE TURNED UP T. LANCEOLATUM BUT NOT T. RUYGTII.	MAY HAVE BEEN EXTIRPATED BY DEVELOPMENT.
1 SPECIMEN COLLECTED ON 11 MAR 1949 BY O. PEARSON AND M. KOFORD (MVZ #112907).	
MAIN SOURCES OF INFO FOR THIS SITE ARE A 1936 RICKABAUGH COLLECTION FROM MT KONOCTI AT 3800 FT ELEV AND A 1947 HOFFMAN COLLECTION FROM "NEAR TOP OF MT KONOCTI." VAGUE 1916 AND	
MAIN SOURCE OF INFORMATION FOR THIS OCCURRENCE ARE UNDATED COLLECTIONS BY ORNDUFF (#6881 UC) AND KALIN (#7020 UC).	
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1941 COLLECTION BY HOOVER. NEEDS FIELDWORK.	
ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1928 BENSON COLLECTION. NEEDS FIELDWORK.	
MAIN SOURCES OF INFORMATION ARE 1923 & 1929 COLLECTIONS BY BLANKENSHIP NEEDS FIELDWORK.	
ONLY SOURCE OF INFORMATION FOR THIS SITE IS AN UNDATED BENSON COLLECTION. NEEDS FIELDWORK.	
HOLOTYPE FEMALE AND AN UNDETERMINED NUMBER OF ADDITIONAL FEMALES AND MALES WERE COLLECTED. USNM #134486-134488 & #230370 & 239042.	
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1923 BLANKINSHIP COLLECTION. NEEDS FIELDWORK.	
SITE BASED ON A 1931 SCHULTHESS COLLECTION. NO PLANTS FOUND IN 1977. GOWEN (2012) TENDS TO VIEW THE POPULATIONS OF E. BRANDEGEEAE NEAR BORAX LAKE AS THE ONLY REPRESENTATIVE ONE	
	DEVELOPMENT AND RECREATION ALONG CREEK. INTRODUCED FISHES MAY DISPLACE NATIVES.
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1982 NEILSON COLLECTION. NEEDS FIELDWORK.	
COLLECTED 16 MAY 1956.	
ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1951 NEUNS COLLECTION. NEEDS FIELDWORK.	
GORGE AREA DOWNSTREAM FROM SWEETWATER CREEK SHOULD BE MANAGED TO PROTECT LAMPREY SPAWNING HABITAT.	RESIDENCES, FARMING, RECREATION AND GRAVEL MINING.
COLD WATER TEMPERATURE MAKES COLE CREEK THE ONLY STREAM IN CLEAR LAKE DRAINAGE TO HAVE RAINBOW TROUT IN ITS LOWER REACHES.	CHANNELIZATION IN LOWER REACH. AGRICULTURE AND DEVELOPMENT HAVE SOME IMPACTS TO STREAM.
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1938 EASTWOOD COLLECTION. NEEDS FIELDWORK.	
7 COLLECTED ON 14 APR 1958 AND 5 COLLECTED ON 23 APR 1960.	
COLLECTED BY BRODE AND ENG ON 10 FEB 1982; IN L. ENG COLLECTION, NO NUMBER (DATABASE RECORD 283).	
2 LARVAE COLLECTED ON 1 AUG 1943. 12 COLLECTED BETWEEN 3 DEC - 26 JAN 1961.	
1 NEST OCCUPIED AT THIS LOCATION DURING JULY OF 1993. CLEAR LAKE SURVEY OBSERVED 42 ADULTS & 17 JUVENILES DURING JULY 1993.	POSSIBLE THREATS: LOSS OF SUITABLE NESTING LOCATIONS & AG CHEMICALS.
ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1937 SIMONTACCHI COLLECTION. NEEDS FIELDWORK.	
MAIN SOURCE OF INFORMATION FOR THIS SITE IS A 1928 BENSON COLLECTION. A 1946 BENSON COLLECTION FROM "WEST SIDE OF MT KONECTI [KONOCTI], ELEV 2000 FT" IS ATTRIBUTED TO THIS SITE. NEED	
STREAM HAS MODERATE GRADIENT WITH LOW FLOWS AND COLD WATER.	RECREATIONAL FISHING.
	CHANNELIZED STREAM WITH SEVERAL CULVERTS THAT BECOME FISH BARRIERS WITH LOW FLOW. WATER DIVERSIONS REDUCE FISH HABITAT.
TYPE LOCALITY. SEEN IN 2003. OVER 30,000 PLANTS OBSERVED BETWEEN OCCURRENCE #S 9, 15, 43, & 44 IN 2011. INCLUDES FORMER OCCURRENCE #19.	GENERAL DEVELOPMENT IN REGION, CONVERSION TO VINEYARDS, AND WIDENING OF HIGHWAY 29.
UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO. SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE O	
ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1927 BENSON COLLECTION. NEEDS FIELDWORK.	
SITE IS BASED ON TWO BENSON COLLECTIONS FROM 1928 AND 1932. ONE OF THE 1932 SPECIMENS HAS BEEN ANNOTATED TO S. OREGANA SSP. OREGANA; ID OF OTHER SPECIMENS SHOULD BE CHECKED. T	
MAIN SOURCE OF INFORMATION FOR THIS SITE IS A 1937 SIMONTACCHI COLLECTION. A 1951 RUBTZOFF COLLECTION FROM "EAST BASE OF MT KONOCTI" IS ALSO ATTRIBUTED TO THIS SITE. NEEDS FIELDW	
MAIN SOURCE OF INFORMATION IS A 1930 BENSON COLLECTION. ANOTHER 1930 BENSON COLLECTION FROM "SOUTH OF WESTERN BASE OF MT KONOCTI, 1600 FT ELEVATION" IS ALSO ATTRIBUTED HERE. NI	
MAIN SOURCE OF INFORMATION FOR THIS SITE IS A 1964 STEBBINS COLLECTION. TWO 1934 ADAMS COLLECTIONS FROM "7.5 MI S OF KELSEYVILLE" AND A 1928 BENSON COLLECTION FROM MOUNT HANNA	
SEEN IN 1946, 1948, 1954 (VERY RARE), 1962, AND 1973. 10,000+ PLANTS IN 1982 (POSSIBLY IN THE 100,000S TO MILLIONS), "ABUNDANT" IN 1986. OBSERVED IN 1988 AND 1989. UNKNOWN NUMBER SEEN IN 200	UNPAVED JEEP TRAIL ALLOWS ACCESS TO LAKE; SOME TRACKS WERE SEEN ON LAKE BED IN 1988. NOT LIKELY TO BE PROBLEM IN 1990'S.
1 COLLECTED ON 23 APR 1960.	
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1928 BENSON COLLECTION. NEEDS FIELDWORK.	
1 COLLECTED ON 22 MAR 1939.	
100+ PLANTS AT THIS SITE IN 1982; THIS POPULATION IS PART OF A MUCH LARGER CONTIGUOUS GROUP OF POPULATIONS COVERING AN AREA ABOUT 1 MILE X 1/4 MILE ALONG THIS HILLSIDE, ESTIMATE IN E	PROPOSED ROADWAY FOR GEOTHERMAL DEVELOPMENT.
1 NEST OCCUPIED AT THIS LOCATION DURING JULY OF 1992 AND 1993. CLEAR LAKE SURVEY OBSERVED 24 ADULTS & 11 JUVENILES DURING JULY 1992, AND 42 ADULTS & 17 JUVENILES DURING JULY 1993.	POSSIBLE THREATS: LOSS OF SUITABLE NESTING LOCATIONS & AG CHEMICALS.
1 NEST OCCUPIED AT THIS LOCATION DURING JULY OF 1992 AND 1993. CLEAR LAKE SURVEY OBSERVED 24 ADULTS & 11 JUVENILES DURING JULY 1992, AND 42 ADULTS & 17 JUVENILES DURING JULY 1993.	POSSIBLE THREATS: LOSS OF SUITABLE NESTING LOCATIONS & AG CHEMICALS.
SITE BASED ON COLLECTIONS AND OBSERVATIONS FROM 1928, 1945, 1952, 1958, 1957, 1966, 1982, AND 1987. NEEDS FIELDWORK.	
ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1985 KEELEY COLLECTION. NEEDS FIELDWORK.	
1000+ PLANTS OBSERVED IN SEVERAL SCATTERED COLONIES IN 1982.	PROPOSED ROAD AND WELL PAD SITE FOR GEOTHERMAL DEVELOPMENT.
NO OTHER COLLECTION INFORMATION GIVEN.	
1500-2000 PLANTS OBSERVED IN 1995. 100 PLANTS OBSERVED ON BLM CLEAR LAKE RESOURCE AREA PARCEL 117-L IN 1997. MORE THAN 5000 PLANTS OBSERVED IN 1999. THE RARE CALYSTEGIA COLLINA S	POSSIBLE THREATS INCLUDE ROAD MAINTENANCE, HERBICIDES. BLM PORTION OF THIS SITE UNDER CONSIDERATION FOR LAND EXCHANGE.
TYPE LOCALITY. 200+ IN 1977, 600 IN 1978, 10,000+ OBSERVED AT N AND E SIDES OF LAKE IN 1982. 2000+ IN 2 WEST POLYGONS IN 1985. MILLIONS IN 1986. MONITORING SURVEYS PERFORMED IN 1986-1991. O	INVASIVE WEEDS INCLUDING CIRSIUM CALLILEPIS, CENTAUREA SPP, & TYPHA.
WESTERN POLYGON: APPROXIMATELY 5000 PLANTS OBSERVED IN 1989, UNKNOWN NUMBER SEEN IN 2015. TENS OF THOUSANDS OF PLANTS IN EASTERN POLYGON IN 2015. SEVERAL COLLECTIONS AND OBS	TRAMPLING FROM NEARBY TRAIL.
TYPE LOCALITY. >1000 IN 1981. ONLY A FEW PLANTS IN 1986, 1987, & 1988. EO APPEARS TO BE DECLINING; 1987 & 1988 WERE DRY YEARS. NO PLANTS FOUND 1989-1992. 5 PLANTS IN 1997. UNKNOWN NUMBE	
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1975 WALLACE COLLECTION; MENTIONED AS "OCCASIONAL" IN 1975. NEEDS FIELDWORK.	
SITE IS BASED ON A 1999 TAYLOR COLLECTION.	
POSSIBLY SEEN IN VICINITY IN 2003. OVER 30,000 PLANTS OBSERVED BETWEEN OCCURRENCE #S 9, 15, 43, & 44 IN 2011. A 1951 CUFF COLLECTION FROM "8 MI E OF KELSEYVILLE" AT 1900 FT ELEVATION IS AL	GENERAL DEVELOPMENT IN REGION, CONVERSION TO VINEYARDS, AND WIDENING OF HIGHWAY 29.
1 PORCUPINE OBSERVED AS ROADKILL ON 15 SEP 2011.	POTENTIAL THREAT DUE TO VEHICLE COLLISIONS.
60 BIRDS OBS ON 7 JUN 2005; CARRYING NEST MATERIAL. 53 BIRDS OBS ON 25 APR 2008; SINGING, COPULATION, & NEST BUILDING OBS. 580 OBS PROVISIONING ON 18 APR 2008. 195 OBS ON 16 APR 2011; N	
OVER 500 PLANTS SEEN BETWEEN THIS OCCURRENCE AND OCCURRENCE #21 IN 2013. A 1936 ABRAMS COLLECTION FROM "NEAR CLEAR LAKE PARK, ON THE 'SCENIC RIM' OPPOSITE MT KONOCTI" IS ATTRIB	
1 NEST OCCUPIED AT THIS LOCATION DURING JULY OF 1993. CLEAR LAKE SURVEY OBSERVED 42 ADULTS & 17 JUVENILES DURING JULY 1993.	POSSIBLE THREATS: LOSS OF SUITABLE NESTING LOCATIONS & AG CHEMICALS.
1 NEST OCCUPIED AT THIS LOCATION DURING JULY OF 1992. CLEAR LAKE SURVEY OBSERVED 24 ADULTS & 11 JUVENILES DURING JULY 1992.	POSSIBLE THREATS: LOSS OF SUITABLE NESTING LOCATIONS & AG CHEMICALS.
1 NEST OCCUPIED AT THIS LOCATION DURING JULY OF 1993. CLEAR LAKE SURVEY OBSERVED 42 ADULTS & 17 JUVENILES DURING JULY 1993.	POSSIBLE THREATS: LOSS OF SUITABLE NESTING LOCATIONS & AG CHEMICALS.
ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1971 COLLECTION BY DEARDEN.	
9 OCT 2001: 2 INDIVIDUALS OBSERVED BASKING.	CHANGE IN WATER REGIME.
COLLECTED IN HESSE FLAT IN 1951. SEARCHED FOR BUT NOT FOUND IN 1985; CORRECT HABITAT EXISTS. MANY 100S OF PLANTS SEEN IN 1990. NO PLANTS FOUND IN 2007; SURVEYS REVEALED ONLY VERNAL	HORSE GRAZING AND AN ATTEMPT TO DRAIN THE FLAT VIA A DITCH. PUMPING IS OCCURRING TO WEST; COULD BE DRAINING FLAT (1990).
1 INDIVIDUAL OBSERVED ON 26 MAR 2001.	THREATENED BY UPLAND CONVERSION TO VINEYARDS.
COLLECTED 12 APR 1963 BY J.D. HOPKIRD & C.C. SWIFT (CAS #23261) PARATYPE.	
POSSIBLY SEEN IN VICINITY IN 2003. OVER 30,000 PLANTS OBSERVED BETWEEN OCCURRENCE #S 9, 15, 43, & 44 IN 2011.	GENERAL DEVELOPMENT IN REGION, CONVERSION TO VINEYARDS, AND WIDENING OF HIGHWAY 29.
200-300 PLANTS SEEN IN 1992. GOWEN (2012) TENDS TO VIEW THE POPULATIONS OF E. BRANDEGEEAE NEAR BORAX LAKE AS THE ONLY REPRESENTATIVE ONES OF THE SPECIES; ID OF THIS SITE NEEDS CHEC	PORTIONS OF ADJACENT CHAPARRAL HAVE BEEN BULLDOZED; SUBDIVISION HAS BEEN PLANNED IN THE AREA.
COLLECTED HERE IN 1951 & 1952. NO PLANTS FOUND IN 1983, 1987, AND "NUMEROUS OTHER TIMES" THAT THE AREA WAS SEARCHED. UNKNOWN NUMBER OBSERVED IN 2010. 10,000-100,000 PLANTS ESTIM	TRAMPLING.
UNKNOWN NUMBER OF PLANTS OBSERVED IN 2016. A 1928 BENSON COLLECTION AND A 1947 HOFMAN COLLECTION FROM "HIGHLAND SPRINGS"" ARE ATTRIBUTED TO THIS OCCURRENCE.	
SCATTERED PLANTS OBSERVED IN 2011. A MORE SYSTEMATIC, INTENSIVE SURVEY OF THE SUMMIT AREA IS WARRANTED. A 1930 BENSON COLLECTION FROM "ABOVE KELSEYVILLE, SUMMIT OF MOUNT KONO	
1000-2000 PLANTS OBSERVED IN SEVERAL COLONIES IN 2003.	POSSIBLY THREATENED BY FURTHER DEVELOPMENT AND SUBDIVISION IN THIS AREA.
4 ADULTS OBSERVED NESTING IN BURNED-OUT SNAGS ON 23 JUL 1986.	
1 INDIVIDUAL OBSERVED DURING MAY-JUN 1999.	
8 PLANTS SEEN IN 2005.	SITE DEVELOPMENT INTO HOUSING SUBDIVISION, ANNUAL DISKING, CHANGE IN AGRICULTURAL PRACTICIES.
COPULATION & NEST BUILDING OBS ON 25 MAR 2008. ABOUT 295 BIRDS OBS PROVISIONING YOUNG ON 18 APR 2008. OBS FORAGING ON 25 APR 2008. ABOUT 100 ESTIMATED ON 16 APR 2011; CARRYING NES	BLACKBERRY PATCH REDUCED TO SMALL, LOW STRIP ALONG ROAD; POND EMPTY (VARIABLE), NOT SUITABLE IN 2014.
1 INDIVIDUAL OBSERVED BETWEEN MAY AND JUN 1999.	
UNKNOWN NUMBER OF PLANTS OBSERVED IN 1989 DURING SURVEY FOR NAVARRETIA LEUCOCEPHALA SSP. PAUCIFLORA. AN EXPERIMENTAL RICE PADDY WAS INSTALLED AT THE VERNAL POOL YEARS AGO,	CATTLE GRAZING AND HABITAT MODIFICATION (DRAINAGE DITCHES AND PONDS FOR CATTLE).
120,000 PLANTS IN 1989, ID CONFIRMED BY DAY. 2007 SURVEY REVEALED THAT MUCH OF AREA HAS BEEN CONVERTED TO VITICULTURE, NEITHER VERNAL POOL HABITAT NOR NAVARRETIA FOUND; BUT THIS S	CATTLE GRAZING AND HABITAT MODIFICATION (DRAINAGE DITCHES AND PONDS FOR CATTLE). VITICULTURE CONVERSION.
~300 PLANTS OBSERVED IN 2011.	COULD BE AFFECTED BY ALTERED HYDROLOGY IN THURSTON CREEK AND EXOTIC SPECIES (CENTAUREA SOLSTITIALIS). CLOSE TO HWY 29.
AT LEAST 5 INDIVIDUALS OBSERVED IN 2013. A 1936 BAKER COLLECTION FROM "SODA BAY NEAR HENDERSON RANCH"" AND 1937 SIMONTACCHI COLLECTIONS FROM 0.3 AND 0.4 MI W OF SODA BAY ARE ALS	
5000 PLANTS OBSERVED IN 1995 IN 2 COLONIES. OWNER IS PROTECTING SITE, IS INTERESTED IN CONSERVATION EASEMENT.	UNDISTURBED OTHER THAN ROADWAY.
200 PLANTS OBSERVED IN 1999.	ROADSIDE VEGETATION CLEARING/HERBICIDE USE.
APPROXIMATELY 15 PLANTS OBSERVED IN 2011. 1892 JEPSON COLLECTION FROM "NEAR MT KONOCTI" AND 1966 HOOVER COLLECTION FROM "8 MI W OF LOWER LAKE, NEAR SOUTH BASE OF MT KONOCTI" A	COULD BE AFFECTED BY ALTERED HYDROLOGY IN THURSTON CREEK AND EXOTIC SPECIES INVASION (CENTAUREA SOLSTITIALIS).
IN 2011, APPROX 150 PLANTS WERE OBSERVED IN WEST POPULATION AND 15 PLANTS IN EAST POPULATION. GOWEN (2012) TENDS TO VIEW THE POPULATIONS OF E. BRANDEGEEAE NEAR BORAX LAKE AS THE	CENTAUREA SPP AND NON-NATIVE ANNUAL GRASSES ARE COMMON AT SITE.

THREATLIST	LASTUPDATE	AREA	PERIMETER	AVLCODE	NEAR_DIST
	20030327	201052266.4	50264.91251	11001	1.364536532
	20121015	158840400.1	127877.2776	20305	3.644603837
Agriculture; Biocides; Degraded water quality; Development; Mining; Non-native animal impacts; Pollution; Road/trail construction/maint.	20200107	158840400.1	127877.2776	20305	3.644603837
	20000619	158840400.1	127877.2776	20305	3.644603837
	20051228	158840400.1	127877.2776	20305	3.644603837
	20200730	158840400.1	127877.2776	20305	3.644603837
Other	20061019	150392692.8	49436.03689	99901	0
	20151209	8042470.189	10053.09421	10901	0.45922016
Development	20091008	8042068.91	10052.96891	10901	1.512976813
	20140605	8042068.818	10052.96885	20901	4.646001189
	20150602	8042000.563	10052.92619	10901	1.913046166
	19980115	8041987.059	10052.93377	10902	0.162412999
	20161024	8041987.059	10052.93377	10902	0.162412999
	20150603	8007752.455	10044.14402	10901	4.01485991
	20090408	8007752.277	10044.14358	10904	1.134540178
	20180104	8007752.277	10044.14358	10904	1.134540178
	20050118	8007752.277	10044.14358	20904	1.134540178
	20160616	8007752.277	10044.14358	10904	1.134540178
	20121017	8007750.548	10044.14272	10901	0.33822899
Development; Non-native animal impacts; Recreational use (non-ORV)	19940803	4474322.798	55852.03134	40301	4.356967846
	20190314	3141588.907	6283.186369	10701	4.891845757
	20150709	3141433.194	6283.105593	20701	4.048467124
	20010809	2960641.713	6538.508363	10301	2.667777517
Agriculture; Development; Mining; Recreational use (non-ORV)	19940803	2608563.171	32820.9645	40301	1.049410268
Agriculture; Development; Recreational use (non-ORV); Waterway bank protection/maintenance	19940803	2362715.403	29731.99929	40301	0.394642711
	20150803	2221858.894	27967.7702	10301	1.156912371
	20161110	1130971.281	3769.918899	20601	3.879786519
	20200529	1130970.877	3769.909272	20601	4.287337512
	20161115	1130970.451	3769.917576	20601	1.594513862
	20091103	1130890.887	3769.842465	20601	2.832622769
	20150603	1130890.872	3769.84244	10601	4.665860193
	20150610	1130888.364	3769.841498	10601	1.825125058
Recreational use (non-ORV); Road/trail construction/maint.	19940803	1097911.799	14006.9675	40301	2.389201223
Agriculture; Road/trail construction/maint.; Surface water diversion; Waterway bank protection/maintenance	19940817	1017614.943	13120.7804	40301	2.429870791
	19940803	708752.998	9029.020244	40301	3.05321971
Agriculture; Development; Road/trail construction/maint.	20150816	619525.1924	20656.19985	10201	0.597812396
	19980716	530438.8158	2789.838144	30201	4.369529878
	20150605	473493.7943	6143.728342	10301	0.719059437
	20161012	439593.8785	5742.970582	10301	3.06080645
	20150605	362289.2143	4759.441863	10301	4.304081864
	20150602	302775.5409	4036.490445	10301	0.224478893
	20150611	284147.0876	3803.217932	10301	4.156176473
ORV activity; Other	20180111	282904.9615	3323.30398	10201	4.427705678
	20161115	282742.4858	1884.992729	20501	1.763260394
	20161025	282742.3835	1884.962976	10501	1.140851376
	20180220	282742.234	1884.955307	20501	0.388438591
Road/trail construction/maint.	20161026	282742.0111	1884.953268	10501	4.316509435
	20091103	282660.7102	1884.838735	20501	4.643956727
	20091103	282659.3642	1884.815624	20501	4.625759166
	20181017	282657.7126	1884.827059	10501	4.537114618
	20150605	282656.7198	1884.810405	10501	4.632451464
Development; Road/trail construction/maint.	20161026	281521.9423	1883.275074	10501	4.095023492
	20050329	241728.5369	2245.433386	20201	4.470301809
Biocides; Other; Road/trail construction/maint.	20050504	186472.6042	3326.561683	10201	4.958425889
Non-native plant impacts	20150519	181086.0654	3716.204055	10201	4.396082603
Foot traffic/trampling	20151202	140036.9861	4034.28212	10201	4.400654719
	20171117	138643.0146	2705.089244	10301	4.5201272
	20150605	130315.2281	1880.685179	10301	3.908515017
	20161025	98077.9576	1449.84456	10301	4.807908408
Agriculture; Development; Road/trail construction/maint.	20150611	93418.33731	3955.296698	10201	4.406799353
Vehicle collisions	20170613	86946.23079	1334.452312	20301	2.624563299
	20150722	86111.95655	1163.394057	20201	3.955447238
	20150605	86040.31815	4227.337173	10201	3.999607773
	20091103	70604.91561	942.2184551	20401	4.320986109
	20091103	70602.60568	942.2003053	20401	4.438019929
	20091103	70602.60028	942.200263	20401	4.630924006
	20060705	70602.59983	942.2002624	10401	4.440404842
Other	20011217	56427.33138	957.3022667	20301	4.867441462
Altered flood/tidal/hydrologic regime; Grazing; Non-native plant impacts	20151208	54916.119	919.8326662	10201	4.066794182
Agriculture	20011127	49451.50759	869.0683622	20201	4.081122657
	20051228	46931.85314	837.2176842	20301	4.008259383
Agriculture; Development; Road/trail construction/maint.	20150610	36049.96917	1413.155081	10201	3.853446516
Development	20121017	25857.1795	632.9565939	10201	0.609396017
Foot traffic/trampling	20180112	20631.35525	778.5729195	10201	4.797502058
	20200812	20105.86009	502.6527539	10101	4.67727491
	20200609	20105.86009	502.6527539	10101	2.890379539
Development	20160614	20105.84948	502.6526213	10101	0.612286303
	20071101	20023.51875	502.1962424	20101	4.559481195
	20030722	20023.32553	502.1364224	20101	3.775432532
Agriculture; Development; Disking	20080613	20023.32518	502.136418	10101	1.762208783
Wood cutting or brush clearing	20150722	20023.32386	502.1364014	20101	4.453112461
	20000921	20023.08451	502.1333959	20101	1.177403927
Agriculture; Grazing; Other	20090415	20019.48663	502.2085186	10102	3.683733157
Agriculture; Grazing; Other	20151209	20019.48663	502.2085186	10102	3.683733157
Altered flood/tidal/hydrologic regime; Non-native plant impacts; Road/trail construction/maint.	20151119	13010.0247	810.1904426	10201	4.336384455
	20150603	11024.90815	552.1297691	10201	3.377936255
Road/trail construction/maint.	20161025	10970.08952	561.7023014	10201	2.66959723
Biocides; Road/trail construction/maint.	20000413	8394.884683	329.529543	10201	0.591520572
Altered flood/tidal/hydrologic regime; Non-native plant impacts	20151119	7561.18299	440.5704008	10201	3.940953966
Non-native plant impacts	20121018	5630.433953	376.5834748	10201	4.375010343