Bobcat on Main Access Road at Lower elevation

Red Shouldered Hawk on Main Access Road Near Lookout Peak

View to East on Foggy Day

View to West

Redwood Ave Ridge Road

Fire Break Off Main Road

View of Ukiah from Project Site

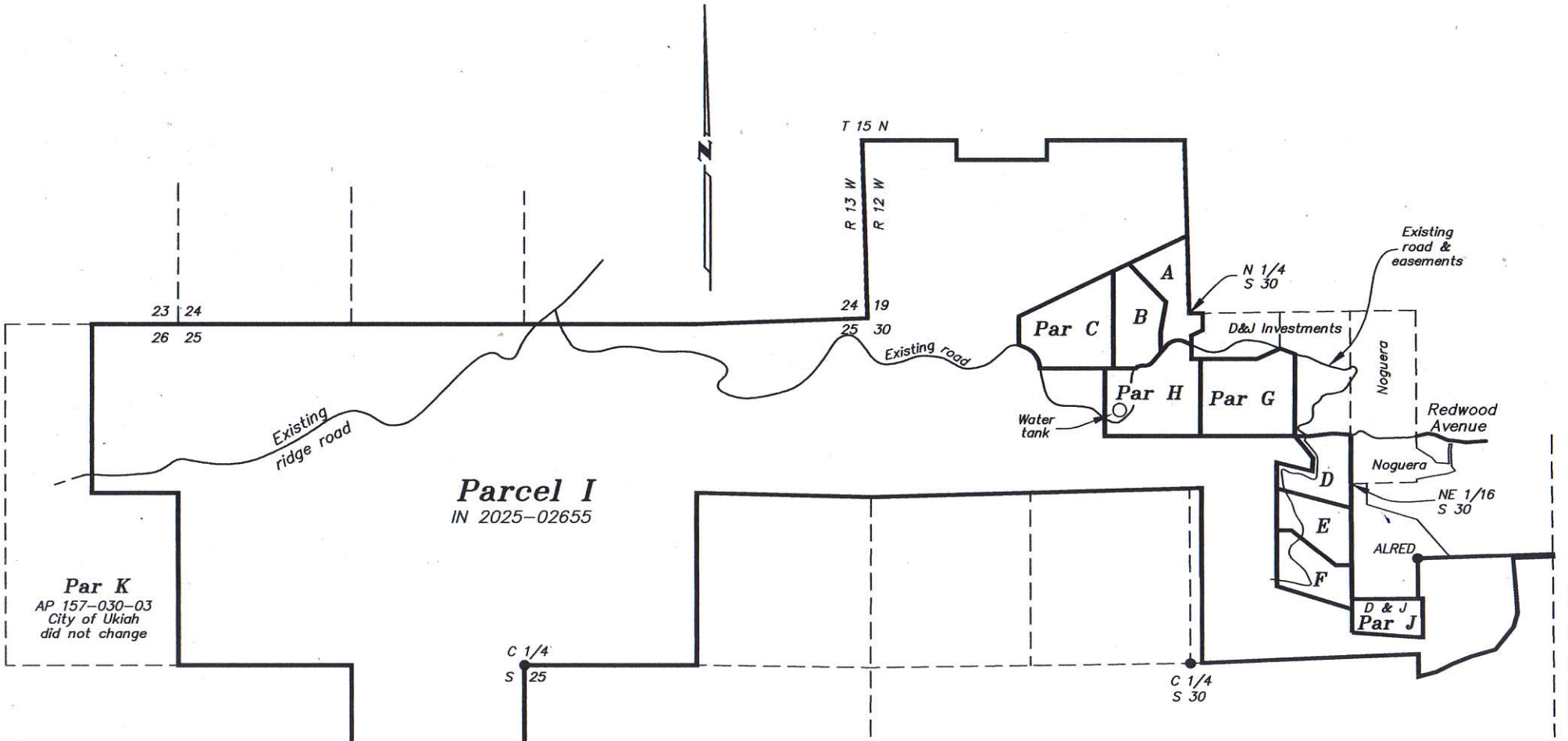
Fire Break Along Main Road Near Lookout Peak

Examples of Similar Trails in Similar Environments

Sol y Sombra Trai.l ~1 mile to north in Mixed woodland

Sol y Sombra Trail ~1 mile to north in Redwoods

Sol y Sombra Trail ~1 mile to north in chaparral



Final Parcel Deeds

Parcel	Inst. No.
A	2025–02645
B	2025–02646
C	2025–02647
D	2025–02649
E	2025–02650
F	2025–02651
G	2025–02653
H	2025–02654
I	2025–02655
J	2025–02656

Note:
The large parcel was IN 2025–02648 after the first LLA, it then became IN 2025–02652 after the second LLA and then became IN 2025–02655 after the third and final LLA.

Parcels after LLA's
Redwood Avenue, Ukiah
April 1, 2025 -- Scale: 1"=1150'

0 1150 2300 3450

CONFORMED COPY

Copy of Document Recorded on
04/01/2025 09:50:17 AM
as 2025-02655
Mendocino County Clerk-Recorder

WHEN RECORDED RETURN
AND MAIL TAX STATEMENTS TO
City of Ukiah, City Clerk
300 Seminary Avenue
Ukiah, Ca 95482
The undersigned Grantor declares that the
Document Transfer Tax is $ 0, value less than $100
Pursuant to RT 11922 / 27383

QUITCLAIM DEED

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

City of Ukiah, a Municipal Corporation and D&J Investments, LLC, a California limited liability company

hereby REMISE, RELEASE, AND FOREVER QUITCLAIM to:

City of Ukiah, a Municipal Corporation

The following described real property in the City of Ukiah, County of Mendocino, State of California

SEE ATTACHED Exhibit "A" (Parcel 3 City LLA File No. LLA25-000003) and Exhibit "B" (Plot Map)

This deed is given pursuant to the City of Ukiah Lot Line Adjustment File No. LLA25-000003 and is intended to create no new parcel.

City of Ukiah
Sage Sangiacomo, City Manager

D&J Investments, LLC
David J. Hull

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF MENDOCINO

On 3/31/25, before me, Kristine Lawler, Notary Public,

personally appeared Sage Sangiacomo, who proved to me on the basis of satisfactory evidence to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacities, and that by their signatures on the instrument, the persons or the entity upon behalf of which the persons acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal

Kristine Lawler
Signature

KRISTINE LAWLER
Notary Public - California
Mendocino County
Commission # 2506245
My Comm. Expires Jan 2, 2029

WHEN RECORDED RETURN
AND MAIL TAX STATEMENTS TO
City of Ukiah, City Clerk
300 Seminary Avenue
Ukiah, Ca 95482
The undersigned Grantor declares that the
Document Transfer Tax is $ 0, value less than $100
Pursuant to RT 11922 / 27383

QUITCLAIM DEED

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City of Ukiah
Sage Sangiacomo, City Manager

D&J Investments, LLC
David J. Hull

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF MENDOCINO

On _____, before me, _____,

personally appeared _____, who proved to me on the basis of satisfactory evidence to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacities, and that by their signatures on the instrument, the persons or the entity upon behalf of which the persons acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal

_____
Signature

CALIFORNIA
ACKNOWLEDGEMENT
ATTACHED

3/28/25

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Sonoma)

On March 28th, 2025 before me, YORI HERRERA-GONZALEZ (Notary Public)
(insert name and title of the officer)

personally appeared David J. Hull,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

YORI HERRERA-GONZALEZ
COMM. #2490587
NOTARY PUBLIC - CALIFORNIA
SONOMA COUNTY
My Comm. Exp. May 19, 2028

Signature _____ (Seal)

EXHIBIT "A"

(Parcel 3 City LLA File No. LLA25-000003)

Any and all lands and any and all interest thereto lying within the following described real property:

All that certain property situated in the City of Ukiah, County of Mendocino, State of California, more particularly described as follows:

TRACT ONE:
A portion of the southwest quarter of the northeast quarter of Section 30, Township 15 North, Range 12 West, Mount Diablo Meridian described as follows:
COMMENCING at the center quarter corner of said Section 30 as shown on the Record of Survey maps recorded in Map Case 2, Drawer 27, Page 1, and Map Case 2, Drawer 16, Page 30, Mendocino County Records; thence North 87°39'28" East, 87.71 feet to the **POINT OF BEGINNING**; thence continuing North 87°39'28" East, 1150.96 feet; thence North 00°21'25" West, 1324.57 feet; thence South 88°25'18" West, 1142.19 feet; thence South 00°00'00" East, 1340.12 feet to the Point of Beginning.

TRACT TWO:
The south half of the southwest quarter of Section 19, Township 15 North, Range 12 West, Mount Diablo Meridian.
EXCEPTING therefrom the following:
BEGINNING at the southwest corner of Parcel 3 as shown on the final subdivision map of Subdivision 98-37, recorded April 29, 2002 in Maps, Drawer 69, Pages 59-61, Mendocino County Records; thence South 00°00'35" East, 150.00 feet; thence North 89°59'25" East, 690.00 feet; thence North 00°00'35" West, 150.00 feet to the north line of the south half of the southwest quarter of said Section 19; thence along said line South 89°59'25" West, 60.00 feet to the southeast corner of said Parcel 3; thence along the south line of said Parcel 3 South 89°59'25" West, 630.00 feet to the Point of Beginning.

TRACT THREE:
The east half of the northeast quarter of the northeast quarter of Section 26, Lots 1, 2, 3, 4, 5, 6, 7 and 8 of Section 25, the northwest quarter of the northeast quarter of Section 25, the northeast quarter of the northeast quarter of Section 25, and the southwest quarter of the northeast quarter of Section 25, all in Township 15 North, Range 13 West, Mount Diablo Meridian.

Lot 7 of Section 30, the northeast quarter of the northwest quarter of Section 30, and the northwest quarter of the northeast quarter of Section 30, all in Township 15 North, Range 12 West, Mount Diablo Meridian as shown on the the Record of Survey maps recorded in Map Case 2, Drawer 27, Page 1, and Map Case 2, Drawer 16, Page 30, Mendocino County Records;

EXCEPTING THEREFROM said TRACTS ONE, TWO and THREE the following:

EXCEPTION #1: (Inst No 2021-10029 = AP 003-190-13)
COMMENCING at the northeast 1/16th corner of said Section 30, shown as note 1 on the Record of Survey map recorded in Map Case 2, Drawer 27, Page 1, Mendocino County Records; thence along the east line of the northwest quarter of the northeast quarter of said Section 30, North 00°21'25" West, 375.83 feet to the center of a private road as shown on said Record of Survey map and being the **POINT OF BEGINNING**; thence leaving said east line and following along the centerline of said road North 85°26'00" West, 109.50 feet; thence along a curve to the left with a radius of 275.00 feet, a central angle of 11°04'30" and an arc length of 53.16 feet; thence South 83°29'30" West, 143.44 feet; thence leaving said road North 90°00'00" West, 122.06 feet; thence North 00°00'00" East, 627.57 feet to the center of said private road at the easterly terminus of the course (N69°18'00"W 235.59'); thence along the centerline of said private road North 69°18'00" West, 123.00 feet; thence leaving said road, North 00°00'00" East, 278.55 feet to the north line of said northwest quarter of the northeast quarter of said Section 30; thence along said north line

North 89°11'29" East, 536.00 feet to the northeast corner of said quarter quarter; thence along the east line of said quarter quarter South 00°21'25" East, 948.74 feet to the Point of Beginning.

EXCEPTION #2: (Inst No 2021-15566 = AP 003-190-15)
COMMENCING at the northeast 1/16th corner of said Section 30, shown as note 1 on the Record of Survey map recorded in Map Case 2, Drawer 27, Page 1, Mendocino County Records; thence along the east line of the northwest quarter of the northeast quarter of said Section 30, North 00°21'25" West, 375.83 feet to the center of a private road as shown on said Record of Survey map; thence leaving said east line and following along the centerline of said road North 85°26'00" West, 109.50 feet; thence along a curve to the left with a radius of 275.00 feet, a central angle of 11°04'30" and an arc length of 53.16 feet; thence South 83°29'30" West, 143.44 feet; thence leaving said road North 90°00'00" West, 122.06 feet; thence North 00°00'00" East, 627.57 feet to the center of said private road at the easterly terminus of the course (N69°18'00"W 235.59'); thence along the centerline of said private road North 69°18'00" West, 123.00 feet to the **POINT OF BEGINNING**; thence leaving said road, North 00°00'00" East, 278.55 feet to the north line of said northwest quarter of the northeast quarter of said Section 30; thence along said north line, South 89°11'29" West, 590.00 feet; thence leaving said north line, South 00°00'00" East, 130.00 feet; thence South 65°00'00" West, 95.00 feet; thence South 00°00'00" East, 180.00 feet; thence North 90°00'00" East, 500.00 feet; thence North 65°34'56" East, 193.33 feet to the Point of Beginning.

EXCEPTION #3:
BEGINNING at the most northwest corner of the above described Exception #2, being on the north line of said northwest quarter of the northeast quarter of said Section 30; thence leaving said north line, South 00°00'00" East, 130.00 feet; thence South 65°00'00" West, 95.00 feet; thence South 00°00'00" East, 70.32 feet to the centerline of an existing road; thence along said centerline, North 65°34'19" West, 56.24 feet; thence along a curve to the left with a radius of 120.00 feet, a central angle of 74°31'35" and an arc length of 156.09 feet; thence South 39°54'06" West, 160.58 feet; thence along a curve to the right with a radius of 80.00 feet, a central angle of 55°34'10" and an arc length of 77.59 feet; thence along a curve to the left with a radius of 80.00 feet, a central angle of 47°33'36" and an arc length of 66.41 feet; thence leaving said road North 90°00'00" West, 732.07 feet to the centerline of same road; thence along the centerline of said same road, North 05°30'48" West, 11.49 feet; thence along a curve to the left with a radius of 180.00 feet, a central angle of 63°23'00" and an arc length of 199.12 feet; thence North 68°53'48" West, 46.56 feet; thence leaving said road, North 00°00'00" East, 220.00 feet; thence North 64°23'10" East, 1442 feet, more or less, to a point on the east line of the south half of the southwest quarter of Section 19, Township 15 North, Range 12 West, Mount Diablo Meridian, mentioned above in Tract Two; thence Southerly along said east line, 602 feet, more or less, to the north quarter corner of said Section 30 as shown on the Record of Survey maps recorded in Map Case 2, Drawer 27, Page 1, and Map Case 2, Drawer 16, Page 30, Mendocino County Records; thence along the north line of said Section 30, North 89°11'29" East, 103.33 feet to the Point of Beginning.

EXCEPTION #4:
BEGINNING at the northeast 1/16th corner of said Section 30, shown as note 1 on the Record of Survey map recorded in Map Case 2, Drawer 27, Page 1, Mendocino County Records; thence along the east line of the northwest quarter of the northeast quarter of said Section 30, North 00°21'25" West, 375.83 feet to the center of a private road as shown on said Record of Survey map; thence leaving said east line and following along said road North 85°26'00" West, 109.50 feet; thence along a curve to the left with a radius of 275.00 feet, a central angle of 11°04'30" and an arc length of 53.16 feet; thence South 83°29'30" West, 143.44 feet; thence leaving said road North 90°00'00" West, 122.06 feet; thence South 39°00'00" East, 220.00 feet; thence South 03°00'00" West, 100.00 feet; thence North 76°00'00" West, 280.00 feet; thence South 00°00'00" East, 950.00 feet; thence South 72°56'21" East, 600.00 feet to a point on the east line of the southwest quarter of the northeast quarter of said Section 30; thence along said east line, North 00°21'25" West, 961.77 feet to the Point of Beginning.

EXCEPTION #5:
COMMENCING at the northeast 1/16th corner of said Section 30, shown as note 1 on the Record of Survey map recorded in Map Case 2, Drawer 27, Page 1, Mendocino County Records; thence along the east line of the northwest quarter of the northeast quarter of said Section 30, North 00°21'25" West, 375.83 feet to the center of a private road as shown on said Record of Survey map and being the southeast corner of the D & J Investments property described in Instrument Number 2021-10029, Mendocino County Records; thence along the boundary of said property and leaving said east line and following along said road North 85°26'00" West, 109.50 feet; thence along a curve to the left with a radius of 275.00 feet, a central angle of 11°04'30" and an arc length of 53.16 feet; thence South 83°29'30" West, 143.44 feet; thence leaving said road North 90°00'00" West, 122.06 feet to the ***POINT OF BEGINNING***; thence North 00°00'00" East, 627.57 feet to the center of said private road at the easterly terminus of the course (N69°18'00"W 235.59'); thence along the center of said private road North 69°18'00" West, 123.00 feet to the southeast corner of the D & J Investments property described in Instrument Number 2021-15566, Mendocino County Records; thence along the south and east lines of said property and leaving said road, South 65°34'56" West, 193.33 feet; thence South 90°00'00" West, 500.00 feet; thence North 00°00'00" East, 109.68 feet to the centerline of an existing road; thence leaving said D & J property line, along said centerline, North 65°34'19" West, 56.24 feet; thence along a curve to the left with a radius of 120.00 feet, a central angle of 74°31'35" and an arc length of 156.09 feet; thence South 39°54'06" West, 160.58 feet; thence along a curve to the right with a radius of 80.00 feet, a central angle of 55°34'10" and an arc length of 77.59 feet; thence along a curve to the left with a radius of 80.00 feet, a central angle of 47°33'36" and an arc length of 66.41 feet; thence leaving said road, North 90°00'00" West, 233.85 feet; thence South 00°00'00" East, 520.00 feet; thence North 90°00'00" East, 1451.10 feet to the Point of Beginning.

EXCEPTION #6:
Excepting therefrom all the coal and other minerals in the lands so entered and patented, together with the right fo prospect for, mine and remove the same pursuant to the provisions and limitations of the Act of December 29, 1916(39 Stat.,862) as reserved by the United States of America in the Patents recorded March 15, 1945 in Book 182 of Official Records, Page 212, and November 10, 1949 in Book 258 of Official Records, Page 273, Mendocino County Records.

TRACT FOUR:
A portion of Lot 2 of Section 30, Township 15 North, Range 12 West, Mount Diablo Meridian, more particularly described as follows:

COMMENCING at a 1/2" iron pipe plugged L.S. 3089 and being the northwesterly corner of Lot 2 of said Section 30 as shown on the Record of Survey map recorded in Map Case 2, Drawer 16, Page 30, Mendocino County Records; thence along the west line of said Lot 2, South 00°10'50" East, 884.00 feet to the northwest corner of the D & J Investments property described in Instrument Number 2022-12534, Mendocino County Records; thence continuing South 00°10'50" East, along the west line of said property, 256.72 feet to the **POINT OF BEGINNING**; thence continuing along said west line, South 00°10'50" East, 185.00 feet to a 1/2" iron pipe plugged L.S. 3089 being the southwesterly corner of said Lot 2; thence North 87°51'37" East, 504.77 feet to a 1/2" iron pipe plugged L.S. 3089 being the southeasterly corner of said Lot 2; thence along the east line of said Lot 2, North 00°13'08" West, 130.00 feet to a point from which the point of beginning bears North 85°54'05" West; thence leaving said east line, North 85°54'05" West, 505.80 feet to the Point of Beginning.

TRACT FIVE:
BEGINNING at a post marked A.L.R.E.D. on the westerly line of Lot 77, Yokayo Rancho, 22.90 chains North 00°30' West from the southwest corner of Lot 27 of George Luce's Subdivision of said Lot 77; thence North 88°00' East, 1034.68 feet, more or less, to the west line of Helen Avenue; thence South 04°50' East along the west line of Helen Avenue, 372.22 feet to the centerline of a road from Helen Avenue toward Doolan Canyon; thence along the center of said road, South 86°52' West, 252.84 feet; thence South 44°51' West, 54.22 feet; thence South 16°04' West, 140.28 feet; thence South

38°52' West, 224.49 feet; thence South 73°52' West, 189.48 feet; thence South 68°31' West, 153.60 feet; thence South 63°02' West, 140.51 feet; thence South 75°16' West, 141.54 feet to the intersection of said centerline of said road with said westerly line of said Lot 77; thence along said westerly line, North 00°30' West, 905.32 feet, more or less, to the Point of Beginning.

EXCEPTING THEREFROM TRACT FIVE the following:

EXCEPTION A:
BEGINNING at the northeast corner of the D & J Investments property described in Instrument Number 2022-12534, Mendocino County Records, said point lying on the west line of TRACT FIVE; thence along the east line of said D & J Investments property and also being the west line of TRACT FIVE, South 00°13'08" East, 294.79 feet; thence leaving said line North 89°46'52" East, 35.00 feet; thence North 00°13'08" West, 294.79 feet; thence South 89°46'52" West, 35.00 feet to the Point of Beginning.

EXCEPTION B:
That portion conveyed by Mae Bell Stern to J.H. Penner, et ux, by deed dated March 16, 1946, recorded March 18, 1946 in Volume 194 of Official Records, Page 472, Mendocino County Records.

EXCEPTION C:
That portion conveyed by Mae Bell Gillespie, formerly Mae Bell Stern to E.A. Dunsing, et ux, by deed dated November 2, 1949, recorded November 16, 1949 in Volume 258 of Official Records, Page 299, Mendocino County Records.

Total AP's = 157-050-03 & 13 & 14 & 15 & 16 & 18, 157-030-02, 157-070-05x, 001-040-83x, 003-190-11x & 17 & 19x, 157-060-02 & 03, 003-260-01x, 003-500-14x

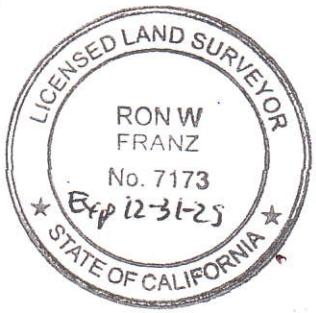
This deed is given pursuant to City of Ukiah Lot Line Adjustment File LLA25-000003 and is intended to create no new parcel.

The Lot Line Adjustment shall not relinquish, remise, release or terminate any prior right, interest in rights-of-way, easements, or other rights which may be appurtenant to and/or and encumbrance to the subject property.

This real property description has been prepared by me or under my direction in conformance with the Professional Land Surveyor's Act.

Ron W. Franz — 3-27-25

Ron W. Franz L.S. 7173 — Dated



The above legal description creates a lot line adjustment pursuant to the City of Ukiah Lot Line Adjustment File No. LLA25-00003 which has been approved by the City of Ukiah in accordance with Section 66412(d) of the Subdivision Map Act and is intended to create no new parcel.

APPROVED: _____
City Engineer, Tim E. Eriksen

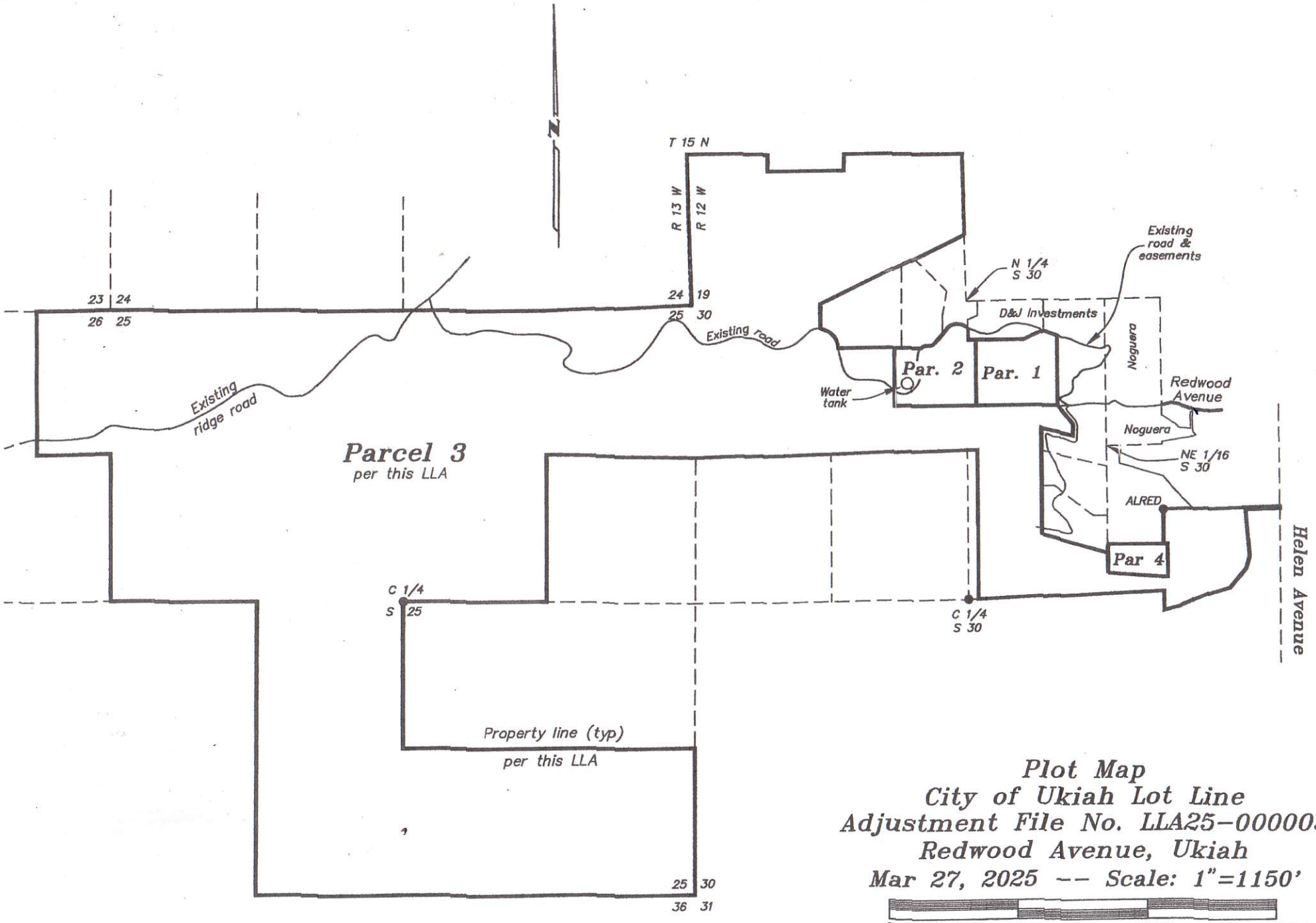


Exhibit "B"

Plot Map
City of Ukiah Lot Line Adjustment File No. LLA25-000003
Redwood Avenue, Ukiah
Mar 27, 2025 -- Scale: 1"=1150'

0 1150 2300 3450

Certificate of Acceptance

This is to certify that the interest in real property conveyed by the Quitclaim Deed dated 3-31-25 from City of Ukiah and D & J Investments, LLC, to the City of Ukiah, general law municipal corporation is hereby accepted by order of the undersigned officer on behalf of the City Council pursuant to authority conferred by resolution of the City Council adopted on February 1, 1961, and the Grantee consents to recordation thereof by its duly authorized officer.

This document is presented for recordation by the City of Ukiah pursuant to Section 27281 of the Government Code.

By: _____
Sage Sangiacomo, City Manager

Date: 3-31-25

CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Sacramento }

On March 31, 2025, before me, Kristine Lawler, Notary Public, personally appeared Sage Sangiacomo who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

SIGNATURE Kristine Lawler

PLACE NOTARY SEAL ABOVE

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of attached document

Title or type of document: Certificate of Acceptance.

Document Date: March 31, 2025

Attachment C - City of Ukiah Native Plant Palette

Symbol	Botanical Name	Common Name	Height	Spread	exp	color	bloom time	Riparian	Pocket Park	Trailside	Swale
Trees											
BLM	Acer macrophyllum	Big Leaf Maple	5m- 15m	5m - 15m	sun / par sha	pink	apr- may	x	x		
eld	Acer negundo	Box Elder	10m-15m	5m-12m	shade	pink	feb-mar	x			
Buc	Aesculus californica	CA Buckeye	3m-5m	5m-12m	sun / par sha	white	may-jul	x	x	x	x
Ald	Alnus rhombifolia	White Alder	10m- 30m	5m-10m	sun	NA	sep-nov	x			
Cot	Populus fremontii	Western Cottonwo	10m-20m	8m-10m	shade	NA	NA	x			
VO	Quercus lobata (garryana)	Valley Oak	10m -25m	10m-15m	sun/ par sha	rusty	apr-may			x	
LO	Quercus parvula var shrevei	Shreve Interior Live	5m-16m	5m-15m	sun/ par sha	Yellow	spring			x	
Wil	Salix lasiandra	Willow	1m- 3m	1m-3m	sun	yellow	may-apr	x			
Bay	Umbellularia californica	CA Bay Laurel	2m-16m	1m-8m	par shade	NA	mar-may	x	x		
Grasses/Sedges/Rushes											
SBS	Carex barbarae	Santa Babara sedge	0.5m- 0.1m	0.5m-3.0m	sun to shade	na		x			x
FS	Carex praegracilis	Slender Field sedge	0.1m- 0.5m	0.1m-1.0m	sun / par sha	na					x
OG	Danthonia californica	Ca Oat Grass	0.05m- 0.1m	0.5m-1.0m	sun / par sha	na				x	
CR	Juncus effusus	Common soft Rush	0.3m-1.0m	0.3m-0.5m	sun / par sha	na					x
BR	Juncus patens	Blue Rush	0.5m- 0.1m	0.5m-1.0m	sun to shade	na		x			x
DG	Muhlenbergia rigens	Deer grass	1m-1.5m	1m - 1.5m	sun	na				x	
NG	Stipa pulchra	Purple needle grass	0.7m-1.2m	0.1m - 0.5	sun	na				x	
Shrubs											
CB	Baccharis pilularis	Coyote bush	1.0m-3.0m	1.0m-4.0m	Sun	white	Oct-Jan			x	
SpB	Calycanthus occidentalis	Spice bush	1.0m-3.0m	1.0m-5.0m	sun / par sha	red	apr-aug	x	x	x	
cea	Ceanothus sp.	Ceanothus	2.0m-3.0m	2.5m-3.0m	sun	white-blue			x	x	
red	Cercis occidentalis	Redbud	1.0m-5.0m	1.0m-5.0m	sun	violet	feb-apr		x	x	x
MM	Cercocarpus betuloides	Mountain Mahogar	1.0m-5.0m	1.0m-2.0m	full sun	white	mar-may			x	
CoB	Frangula californica	Coffeeberry	2.0m-3.0m	2.0m-3.0m	Sun		Apr-May		x	x	
toy	Heteromeles arbutifolia	Toyon	2.0m-6.0	2.0m-3.0m	full sun	white	jun-aug		x	x	
man	Manzanita sp.	manzanita			Sun	pink			x	x	
HR	Rhamnus ilicifolia	Hollyleaf redberry	1.0m-4.0m	1.0m-3.0m	Par shade	NA	Apr-May		x	x	
SkB	Rhus trilobata	Skunk Bush	1.0m-1.0m	1.0m-3.0m	sun / par sha	yellow	mar-may	x			x

Symbol	Botanical Name	Common Name	Height	Spread	exp	color	bloom time	Riparian	Pocket Park	Trailside	Swale
Shrubs (Continued)											
SB	Symphoricarpos albus var lae	Snow Berry	2.0m-4.0m	4.0m-6.0m	sun to shade	pink	may-jul	x		x	
Vines											
PC	Clematis lasiantha	Pipestem clematis	2.0m-5.0m	0.5m-1.0m	sun / par sha	creamy	mar-aug	x	x	x	
HS	Lonicera hispidula	Honey Suckle	1.0m-6.0m	0.1m-0.3m	sun to shade	pink	apr-jul			x	
WG	Vitis californica	Wild Grape	1.0m-3.0m	0.5m-3.0m	full sun		may-jun	x		x	
Perennials/Bulbs/Annuals											
MW	Asclepias sp.	Milk Weed	0.5m-1.0m	0.2m-0.3m	sun	white	jun-sep		x	x	
CF	Epilobium canum	California fuschia			sun	Red	june-sept		x		
OS	Eriophyllum lanatum	Oregon sunshine			sun / par sha	Yellow	apr-aug		x	x	
CP	Eschscholzia californica	CA Poppies			sun	orange	feb- sep			x	
Gum	Grindelia sp.	Gumweed			sun	Yellow	aug-sept			x	
Lup	Lupinus sp.	Lupine			sun	blue	apr-jul			x	
MF	Mimulus aurantiacus	Monkey Flower			sun / par sha	yellow	mar-aug			x	
SM	Mimulus cardinalis	Scarlet monkey flower			sun / par sha	Red	may-aug	x	x		x

Trees	34 (15 Gallon)	16 (5 Gallon)	12 (1 Gallon)
Grasses	4000 (2" Plugs)		
Shrubs (1 Gallon)	500 (1 Gallon)		
Vines	50 (1 Gallon)		
Wildflower Seeds	6 lbs		

UVTG Design and Maintenance Standards (2024)

Trail Philosophy:Central to the Ukiah Valley Trail Group's approach to trails is the recognition that our world is one of finite resources and, since demand for these resources is increasing steadily; insightful management is of utmost concern. The Inland Mendocino County Trail system must be designed to utilize resources in ways that benefit all non-motorized users. This entails providing adequate accommodation and accessibility, rather than focusing on individual user groups. The increased sharing of resources sometimes creates friction between the diverse user groups vying for more trail space. This Trail Philosophy acknowledges that a certain amount of friction is inevitable and therefore focuses on planned communication to minimize the differences and optimize the benefits derived from these precious resources.

Plans for optimal use of trail resources must be in concert with the objective of natural and cultural resource protection. Any decisions on resource use affect not only local residents and visitors, but our natural and cultural habitat as well. If we make responsible decisions concerning preservation of our resources, we will succeed in our custodial duties to the environment while at the same time providing enjoyment for current and future generations. Through well designed, constructed, and maintained trails we will accomplish optimal public access while accommodating resource conservation.

Providing the public with increased access to trails and greenways is not enough; we must also strive to promote the abundant benefits that derive from them. Trail benefits include recreation, transportation, energy conservation, environment and habitat protection, fire suppression, improved physical and mental health, and local economic benefits. Informing the public of the significant benefits expands public awareness of the advantages that trails and greenways offer to the individual and the community. Gaining public support thereby encourages policy makers to support trails and greenways and to increase funding to better manage the trail system.

Improving relationships and interaction between government entities and the private sector will be necessary for the effective development of a well planned and managed trail and green-way system. Open communication between all levels of government and interested parties enhances the finding of common objectives by making individuals and groups part of the solution. Linking communities and trail advocates in trail planning minimizes land use conflicts and allows for optimal resource use. Joint planning emphasizes the development of interconnected trails in natural settings and a united effort creates a stronger voice for advancing trail proposals.

The general goals that define a quality trail system include:

1-Adequate mileage

- Moderate strong bike or horse riders ride 15-20 miles in a day
- Endurance riders will ride 100 miles in a day
- There are approximately 30 miles of trail in the Ukiah Valley

Lake Mendocino currently has approximately 16 miles of trail and is near to maximum capacity. Small increases are necessary but can be mitigated with road closures and road to trail conversions. Employing a “stacked loop” design can maximize the trail experience within the capacity.

2- Connectivity

- A single recreation area is unlikely to meet all the community’s needs.
- Trails that connect the various areas are therefore necessary.
- Connectivity allows trails to fulfill a transportation role.
- Lake Mendocino Trails do not currently connect with any other trail systems.
- Priority should be given to approving trails that link trail areas.

3- Variety of environments

- An example of each of the area's micro-ecosystems should be included, such as Riparian, oak woodland, mixed hardwoods etc.
- Trails should include sunny areas, which will be more desirable in the winter, and shady areas for summer use.

4- **Variety of trail experiences**

- Different trail users appreciate different trail characteristics.
- Equestrians generally prefer wider trails.
- Mountain bikers generally prefer lots of rolling ups and downs with lots of turns and features.
- Runners tend to prefer gentle grades.
- Advanced users desire more “technical” or challenging trail - narrower with a rougher, more uneven tread.
- A quality trail system will provide a variety of trail experiences. A small trail system should focus first on trails that meet the needs of the majority of users.

5- **Easy Access/Options**

- Users need to be able to get from home to trail quickly and start their experience.
- The first trail from the trailhead should be an easy trail, wide and smooth - suitable for all users.
- As users delve further into the system, the trails should increase in difficulty.
- “Stacked loops” of trails allow users to return by a different route while providing a variety of options.

6- **Signage / Mapping**

- All trails should be named and signed.
- All trailheads should have an information kiosk.
- Maps should be readily available for all trails.

7- **Sustainability & Maintenance**
- Trails need to be well maintained.
- Trails designed to sustainable standards require much less maintenance.

UVTG Design and Maintenance Standards

Definitions

Reroute/Realignment – a trail maintenance project that starts and ends on a single existing trail and abandons the trail between those points will be termed a reroute or realignment.

Trail - A trail is specifically designed, designated, developed, and maintained as a recreational corridor for the exclusive use of non-motorized vehicles. It is typically not more than 4 feet wide, unpaved and generally requires users to travel single file.

Use Trail - A Use Trail is a trail that has been created without a planning process and or approval by the repeated historic exploration of users.

Multi-Use Trail - A multi use trail is a trail that is open to non-motorized users including hikers, runners, equestrians, and bicyclists. All trails in the Lake Mendocino property will be multi use unless compelling reasons are presented to necessitate partial closure. (Such as the Shakota trail which is currently closed to equestrians.)

Road - Any transportation corridor designed for motor vehicle use and open to motor vehicle use. Although roads may be necessary for maintenance, further road building should be avoided and road closures should be pursued where possible. A road may be used for recreation but is not a trail.

Fire Break -Although trails act as small firebreaks and have been known to stop fires and can be used as locations to start backfires, a firebreak is not a trail.

Trail Maintenance and Repair [2] - Maintenance and repair of existing trail is performed to return the trail or trail segment to the standards or conditions to which it was originally designed and built, or to improve it to comply with more current design standards to achieve sustainability. The act of maintenance and repair includes but is not limited to:

- Removal of debris and vegetation from the trail corridor, clearing encroaching brush and grasses, removing rock slides, etc.- Maintenance of trail tread such as filling ruts and entrenchments; reshaping trail bed, repairing trail surface and washouts; installing rip rap; constructing retaining wall or cribbing
- Erosion control and drainage, replacing or installing necessary drainage structures, water bars, culverts; realigning sections of trail to deter erosion or avoid boggy/marshy areas.
- Repair or replacement of existing trail structures and features.
- Upgrades and short reroutes to improve sustainability and decrease maintenance needs.

Feature – Bermed corners, exaggerated rolling dips, jumps, and mountain bike skill development

stations are collectively referred to as “features.”

Trail tread and slope characteristics

1. Trail Width:
Trail beds shall be built and maintained with a goal of being a minimum of 24 inches wide. Thirty six inches is generally the widest maintainable width for a “backcountry” style trail. . Topographical, vegetation, or resource constraints may require sections that are less than three feet.

Rationale: Allows users to pass by each other safely.

2. Rolling “Contour” Trails:
Trails shall be built with the contour of the topography (plus or minus 10%) utilizing side-slopes and avoiding flat areas as much as feasible.

Rationale: Building trail along fall lines or in flat areas creates erosion. “Contour” trails allow water to sheet off the trail and flow downhill.

Keeping trails on hillsides keeps them out of flatter, wetter areas. Trails built in wet areas are not sustainable. Users tend to walk along edge of trails, creating trail widening. Wet areas are more prone to soil compaction and displacement.

“Contour trails create changing view sheds that add to the enjoyment of the trail.

3. Average trail grade less than or equal to 10%:
The average slope of the trail will *ideally* be less than 7% but should all be less than or equal to 10%, some slopes will be greater and some less. Side slope, soil type and natural obstacles will determine the grades for each individual section of trail. Sections that are over 10% should be short and followed by a relatively flat section or grade reversal.

Rationale: Most soil types can withstand up to 10% grades.

Minimizes user-caused erosion.

Allows for possible reroutes at a steeper grade if there is a future problem such as a slide.

Accommodates undulations/grade reversals.

Feels comfortable to most trail users.

Grade reversals after steep sections allow the user to recover from the increased effort.

4. Sustainable trail alignment - Trail grade does not exceed “half-rule”:
The grade of the trail should not be greater than half the grade of the sideslope that the trail traverses.

Rationale: Prevents erosion caused by water flowing down the trail rather than flowing down the hillside.

Guides individual trail planning segments to fit the topography.

5. Maximum trail grades should be less than 15%:

Rationale: Although this rule might occasionally need to be broken, at least for short segments of trail, most of the existing trails in the Ukiah Valley are sustainable up to a grade of 15%. Higher grades, especially in areas exposed to weather, have suffered more erosion and damage from users.

6. Incorporation of grade reversals:

Trails should incorporate frequent grade reversals every 10 to 50 feet, depending on soil type and topography.

Rationale: Grade reversals provide areas for water to drain off of trails. As trails age, the shape of the trail bed tends to become concave, leading to the trapping of water. Grade reversals divide the trail into short, individual watersheds.

7. Build in outslope:
Outer edges of trails shall be built and maintained so that they create an approximate 3-5% slope from the inner edge of the trail.
Rationale: Allows water to sheet off of trail, decreasing erosion.

8. Build in backslope:
Depending on soil stability and composition, the area uphill of the trail shall be sloped extending upward from the trail.
Rationale: Prevents a waterfall effect from water coming down the hill and dropping onto the trail tread.

9. Incorporate Features:
Some trails may be designed to include features including bermed corners, exaggerated rolling dips, jumps, and mountain bike skill development stations.
Rationale: Including trail features is highly desired by Mounatain Bike Riders and is necessary to promote tourism.

10. Harden areas subject to erosion:
Some trails will erode regardless of best practice design and construction. When trail use and conditions lead to the formation of “troughs” or require frequent trail tread repair, adding base rock or concrete pavers may be required.
Rationale: When necessary, hardening of trails will decrease sedimentation and maintenance costs.

11. Water Crossings:
Water crossings should be avoided when possible. Trails shall be designed, built, and maintained to minimize sedimentation in streams. Bridges shall be the ideal with puncheons, culverts or “hardening” being considered should resource limitations, infrequent water flow, or low use combine to make a bridge impractical. Prioritization of water crossings should be considered with high use crossings receiving first resources.

Rationale: Minimize impacts to the stream channel and environment.
Create a safe and sustainable passages for trail users.
Work within limits of resource availability and predicted impacts.

12. Tree Cutting/Care:
Prudent efforts to avoid cutting trees should be made in routing the trail. Greater care should be extended with older and/or slow growing trees and shrubs. Dirt excavated from the trail bed should be distributed and not allowed to mass at the base of trees. All efforts should be made to avoid

cutting roots greater than 4” in diameter. Generally, a trail should not be located on the downhill slope within 2 feet of the base of oaks greater than 2 feet in diameter.

Rationale: Minimize disruption to the vegetation along trail.
Protect the health of vegetation along trail

13. Pruning

Pruning vegetation is an essential and regular part of trail maintenance, especially in brushy chaparral areas. Equestrian trails should have 10' vertical clearance while hiking/biking trails can be maintained with 7’ clearance. Greater than four foot horizontal clearance should be avoided as it creates unnecessary disruption and decreases the aesthetic of the trail experience.

Attempts should be made to ensure that pruned branches are distributed in a natural manner with the cut ends away from the trail. Pruning should be done sensitively so that the trail appears natural. Prune to the collar of any branch stem for the health of the shrub and a more natural looking result. At the base of any branch there is a wide section that contains a plant's natural healing agents. Any pruning performed away from this collar will expose the plant to a greater risk of infection. A cut at the collar will naturally heal. For large branches over 2" in diameter, cut from the bottom, then cut down from the top. This prevents tearing of the bark, reducing infection.

Rationale: Maintain safe sight lines along trail.
Protect the health of the vegetation.
Maintain a naturally aesthetic setting.

14. References:

The following references will be used as resources to establish best practices and resolve questions not covered in the above. Additional references will be added upon availability.

Birchard, William & Proudman, Robert 2000 *Appalachian Trail: Design, Construction, and Maintenance. 2nd Edition* Appalachian Trail Conference Harper’s Ferry WV

Birkby, Robert. 2005 *Lightly on the Land: The SCA Trail Building and Maintenance Manual. 2nd edition.* The Mountaineers Books. Seattle WA ISBN

Demrow, Carl & Salisbury, David 1998. *The Complete Guide to Trail Building and Maintenance, 3rd Edition*. Appalachian Mountain Club Books. Boston, MA ISBN1-878239-54-6

Felton, Vernon. 2004 *Trail Solutions; How to Build Sweet Single Track*. Johnson Printing, boulder CO ISBN 0-9755023-0-1

Parker, Troy Scott, 2004. *Natural Surface Trails by Design.* NatureShape, Boulder,CO. ISBN0-9755872-0-X

Steinholz, Robert & Vachowski, Brian. 2001. *Wetland Trail Design and Construction*. USDA Forest Service Technology and Development Program Misoula, MT 8E82A3

Weaver W., Weppner E., Hagans, D; *Handbook for Forest, Ranch, & Rural Roads* (2015). Mendocino County Resource Conservation District

Weber, Peter(Ed). 2007 *Managing Mountain Biking: IMBA’s Guide to Providing Great Riding* International Mountain Biking Association. Boulder CO ISBN978-9755023-1-X

Fire- Hardened Trails (Vegetation Management Corridors)

The following proposal is a cross discipline collaborative concept proposal from Sierra Buttes Trail Stewardship in partnership with: US Forest Service Pacific Southwest Region 5. Plumas, Tahoe, Lassen and Humboldt-Toiyabe National Forest. Nevada, Sierra, Plumas, Lassen and Butte Counties as well as the cities of Loyalton and Portola.

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Proposal

The following proposal is a cross discipline collaborative concept proposal from Sierra Buttes Trail Stewardship in partnership with: US Forest Service Pacific Southwest Region 5. Plumas, Tahoe, Lassen and Humboldt-Toiyabe National Forest. Nevada, Sierra, Plumas, Lassen and Butte Counties as well as the cities of Loyalton and Portola.

Background

During the Dixie Fire and North Complex Fire of 2020, trails were used as firelines for fire crew access, fire containment, anchor points, and strategic firing operations.

The USDA Forest Service's longstanding history of managing for multiple uses is embodied by the 1960 Multiple Use Sustained Yield Act, which recognizes public benefit in managing multiple and often overlapping or congruent resources, including forest health, recreation, water, and wildlife habitat. Concerning twenty-first century trends of interacting landscape scale disturbances threaten these resource values through climate exacerbated drought, landscape level tree mortality, and increasing scale and proportion of high severity wildfire. Across the Plumas National Forest, over 16% of forests have been converted to non-forest types within the

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past 5 years. These alarming rates impact not only forest cover across watersheds and landscapes, but have cascading adverse impacts on recreation, water, and wildlife habitat. Considering these challenges have interconnected adverse effects across resource values, perhaps solutions should also be synergistic in nature across resource disciplines.

This Fire-Hardened Trails concept proposal represents a measured attempt to harness the interconnectivity of resources and benefits and has the potential to amplify these ideas across local, regional, and statewide trail-users and clientele. Traditional knowledge provides awareness and context of how important culture and social use of forest ecosystems are to forest stewardship, and this proposal tries to honor these concepts in a contemporary culture of recreation and trail-user groups.

The Sierra Buttes Trail Stewardship Connected Communities Project is a landscape-level project that connects rural communities throughout the Northern Sierra and provides local and regional recreation opportunities for forest use. This proposed trail system is much more than a route for recreation enthusiasts. These trails provide access and transportation through the forest that can be used to augment or enhance opportunities for forest stewardship, fuel and fire management, and improve or conserve wildlife habitat.

Primarily, these trails play a significant role in shaping the user's experience and impacting the culture and ecosystems of the forest. Yet, because of a century of fire suppression, many of these forests have deviated significantly from their natural fire patterns and the variability they once exhibited. In essence, by offering recreation opportunities without addressing restoration or management needs and without providing interpretation, we inadvertently present forest conditions to the public that are neither natural nor beneficial. Therefore, combining recreation and restoration serves as a medium to provide interpretation, education, and foster a contemporary culture of connectedness with public forests underscoring the imperative for forest restoration and responsible stewardship

Purpose and Need

Increasing scale and proportion of high-severity wildfire is a well-documented trend across the Sierra Nevada Mountain range (Miller and Safford 2012), and the Northern Sierra, in particular, has exhibited concerning trends wherein high-severity fire of past fires, drives future high severity fire (Coppoletta et al. 2016). Moving forward in the 21st century, recent research (Bernal et. al. 2022) indicates that future climate will support far more open and less dense forests, and resilient forest conditions may be far more open with 80-90 percent fewer trees (North et al 2022). Forest and fire ecologists and managers recommend that taking a "pyro silviculture" approach to management actions requires consideration and incorporation of wildfire as an anticipated disturbance and suggests that management actions that build in mechanical treatments to augment anchor points, ecosystem assets, and revenue considerations in project planning (North et al. 2022). These concepts and strategies can help promote forest resilience to disturbances, thereby enhancing the resilience of linked resource values like recreation opportunities, watershed health, and wildlife habitat.

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The Connected Communities Project provides approximately 551 miles of trail. This project not only represents recreation opportunities in the Northern Sierra, but contributes to accomplish stewardship by increasing vegetation management acres, increasing safe access/egress, and providing fuels management corridors. Incorporating fire, fuel and vegetation management planning into trail plans provides critical safe access for fire crews, fuel containment corridors and fire management opportunities, as well as provides public interpretation and education on the importance of managing forest ecosystems.

Combining trail development with trailside forest stewardship promotes shared stewardship for the resilience of forest ecosystems, recreation and natural resource-based economies. Outdoor recreation and resource related jobs are essential economic drivers of rural forested communities. Implementation of the design criteria contained in this report will create more resilient communities, sustainable recreation, and contribute to long-term, improved overall forest health.

Disturbances like high-severity wildfire and drought-driven tree mortality events create widespread impacts to forest ecosystems AND recreation opportunities dependent on these ecosystems. Over the past decade, hundreds of miles of recreation trails have been impacted by high-severity wildfire and tree mortality. These events compromise ecosystem values, visual quality objectives, access, and visitor safety. Standing dead trees within the trail prism serve as hazards to trail user groups. For example, the Cold Stream Trail in the Plumas National Forest was impacted by the 2001 Stream Fire, 2007 Antelope Complex and Moonlight Fires; the areas that burned with higher-severity fire created conditions where standing snags and impenetrable shrub recolonization years after the fire compromised safety and access to trail users. As a result, portions of this trail have seen decreased use and in some sections become impassable for users.

Restoration of the forests surrounding trails during their development provides an opportunity to strategically plan and implement forest and trail stewardship tactics that can both mitigate the potential for adverse effects in a pre-disturbance context and provide for nimble and flexible post-disturbance restoration assessment and response. Moreover, these trail systems with managed vegetation corridors can enhance fuels management and restoration activities by providing access and operational infrastructure for prescribed fire operations and wildfire incident management containment operations. (Moghaddas and Craggs 2007); For example, the 2021 Fly Fire (managed as part of the 2021 Dixie Fire Incident) was largely contained from spreading into the community of Quincy, due to backfiring operations that were facilitated by pre-fire fuel treatment infrastructure, which had been implemented a decade prior to the fire. These types of treatments, which facilitate access, mechanical and prescribed fire treatments, are critical infrastructure used for wildfire containment tactics in large wildfire incident management. Trail-side vegetation management corridors can be interchangeably defined as Fire-Hardened trails.

Fire-Hardened Trail Concept Proposal

A Fire-Hardened Trail is a designated and managed corridor that combines both vegetation management and recreational trails. It is a planned corridor where the preservation and

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enhancement of the forest plays a significant role in forest restoration and fuels reduction work, and is integrated with the creation of trails for recreational use.

Fire-Hardened Trails serve as multi-functional spaces that cater to both environmental conservation and community well-being. They are designed to provide a harmonious blend of nature and recreation, promoting a healthier lifestyle while preserving and enhancing the natural environment.

Much like a Shaded Fuel Break, The Fire-Hardened Trail prescription utilizes forest management techniques to create a resilient forest that supports healthy ecosystems, recreational benefits and wildfire resiliency. The community and forest benefits of a Fire-Hardened Trail can be accomplished by creating fuel conditions that pose low wildfire risk to communities while fostering a pattern of forest fuels that slow wildfire spread and intensity when wildfire encounters the trail corridors. The Prescription is a concept consistent with the goals and aims to implement actions identified in California's Joint Strategy for Sustainable Outdoor Recreation and Wildfire Resilience. Specifically, these desired conditions would implement Goal #1 of the Strategy: Integrate Forest Health and Sustainable Outdoor Recreation. Additionally, Fire-Hardened Corridors embrace the essence of Shared Stewardship by considering 'using all available tools for active management.' (California Wildlife and Forest Resilience Task Force , 2022).

During the Dixie Fire and North Complex Fire, trails were used as firelines for containment, anchor points, and strategic firing operations. Removing fuels along trail corridors allows for the protection of the investment in the trail systems, accounts for wildfire prevention from trail users, and provides strategically placed and tactically feasible trails for wildland fire operations.

The Fire-Hardened Trail prescription for vegetation management corridors can be accomplished through generally accepted fuels reduction practices and non-commercial thinning (i.e., mechanical thinning, mechanical piling, mastication, towed and tracked chipping, hand cutting, hand piling, pruning, pile burning and underburning). The site specific Prescription for a Fire-Hardened Trail will be created in partnership with the local land managers, applicable fire control agencies and the Natural Resources Conservation Service, Conservation Practice Specification Fuel Break – Forestland (Code 383).

Below is a sample Fire-Hardened Trail prescription that would maximize the 100-foot trail corridor as a fuel break that is conducive for trails as fireline. The prescriptions described for the Reduced Ignition Zone will be included within the Limited Spread Zone.

Reduced Ignition Zone - Within 15 feet of both sides of centerline of the trail:

- Remove all trees less than 6 inch DBH.

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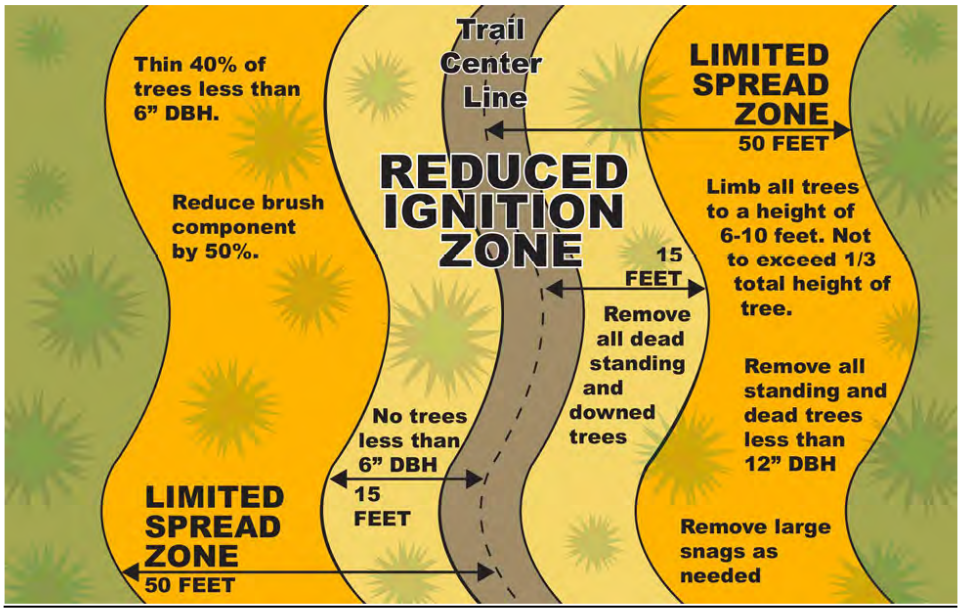
- Remove all dead standing or downed trees and brush.



<u>**Limited Spread Zone**</u> - <u>Within 50 feet of both sides of the centerline of the trail:</u>

- Thin 40 percent of trees less than 6 inch DBH and reduce brush components by 50 percent.
- Remove all dead standing trees less than 12" DBH.
- Leave trees will have a minimum spacing of 10 feet between branch tips of surrounding trees on slopes less than 20% and will have 20 feet of spacing on slopes greater than 20%.
- Limb all trees to a height of 6-10 feet, not to exceed ⅓ the total height of the tree.
- Keep at least three times the height of any shrubs between the shrubs and the lowest branches of overhanging trees.
- Disposal of slash will be accomplished either through chipping on site or hand piling not to exceed 4x4 piles to be burned by the US Forest Service.

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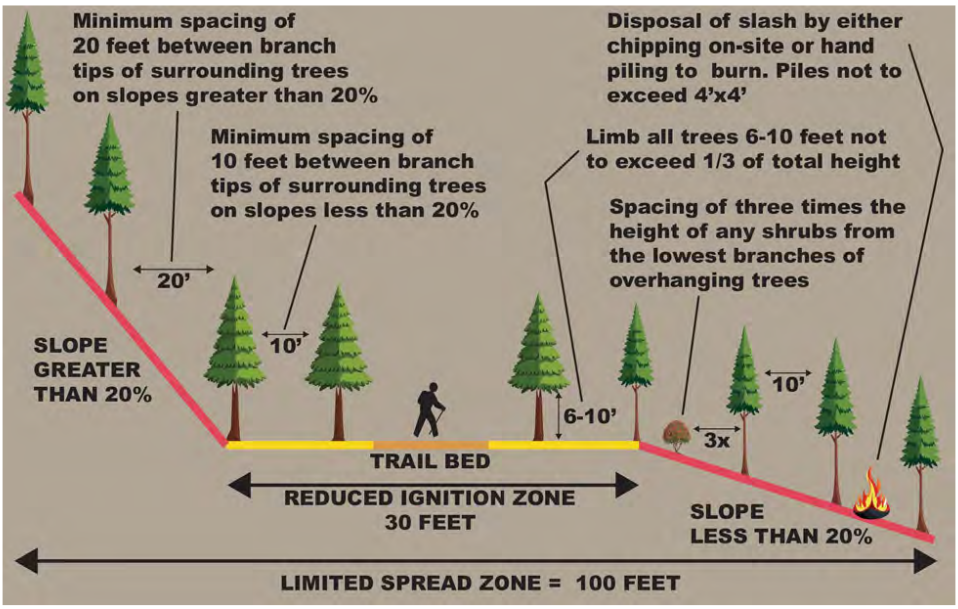

Implementation of the Fire-Hardened Trail prescription on all 551 miles of Connected Communities Identified Routes would result in 6,679 acres of healthy forest with only 267 acres of permanent infrastructure. The proposed trail prescription would be slightly modified from the trailhead in order to discourage ATV traffic.

Proposed Desired Conditions for Trailside Forest & Vegetation Restoration

The overall desired condition for the project area is to have a resilient forest that supports healthy ecosystems, recreational benefits, and wildfire resiliency. This can be accomplished by restoring forest structure to improve forest health, and creating fuel conditions that pose low wildfire risk to communities while fostering a pattern of forest fuels that slow wildfire spread and intensity when wildfire encounters the trail corridors.

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Removing fuels along trail corridors improves resistance to disturbances and contributes to resiliency of the overall trail system, reduces the opportunity and likelihood of accidental wildfire ignition by trail users, and increases options for ingress and egress during fires. Treated trail corridors allow wildlife access to fragmented habitat while providing for increased sightlines and escape routes from threats. Strategically placed and tactically feasible trail corridors with fuels reduction can be a critical component during wildland fires, prescribed fire operations, and overall forest health.

Wildfire and drought resilience can be improved through commonly used fuels reduction activities and forest density reduction. Both of these concepts are important to long term resiliency of trail systems. While surface and ladder fuels are the primary drivers of wildfire behavior, canopy fuels contribute to annual surface fuel accumulation and dense forest conditions can drive competition and low tree vigor, contributing to tree mortality in extended drought conditions. Treatments such as mechanical thinning, mechanical piling, mastication, towed and tracked chipping, hand cutting, hand piling, lop and scatter, pruning, pile burning, and underburning can be used to modify forest structure and reduce surface, ladder and canopy fuels to improve forest resistance to disturbances like wildfire, and promote forest resilience to compounding disturbances like extended drought, insect-driven tree mortality, and subsequent high-severity wildfire (Stephens et al 2022).

Fire-Hardened Trail prescriptions would be created in partnership with stakeholders and USDA Forest Service National Forest units (i.e. the Tahoe, Plumas and Lassen National Forests) to meet forest restoration and stewardship goals, while also meeting fuel treatment standards such as those detailed in the SNFPA 2004 ROD and/or the Natural Resources Conservation Service (NRCS) Conservation Practice Specifications for fuel breaks (Code 383).

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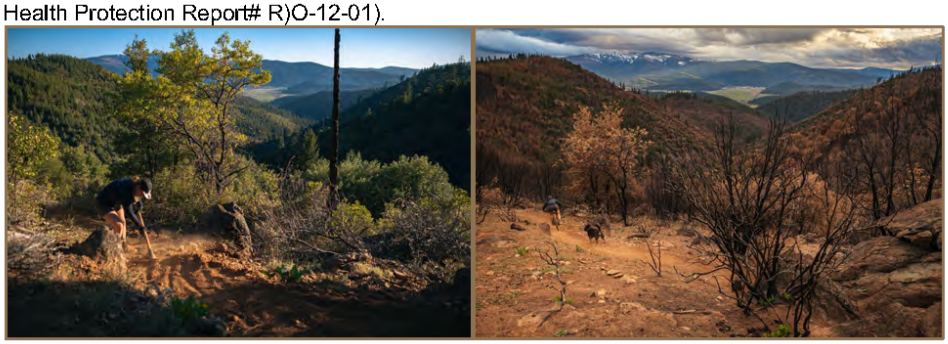
Proposed Design Criteria

Design criteria would be developed for pre-wildfire environments and post-fire environments, respectively, to address the unique variables in each environment. Post-fire environments present unique challenges for trail safety and maintenance due to the dynamic nature of post-fire environments. Within the first decade, standing snags deteriorate and fall either in part or in entirety. Dead tops or limbs pose an equally fatal hazard considering potential fall distances. The accumulation of this dead material contributes to surface fuel accumulations. Concurrently, shrub germination and growth can rapidly colonize sites, creating access barriers as well as impacts to trail view sheds, depth of penetration, and plant species diversity. In combination, the accumulation of dead woody fuels and live shrub fuels contribute to the development of fuel profiles, which can facilitate future high-severity fire (Coppoletta et al 2016).

Across environments, design criteria for trail specifications, drainage, erosion control, vehicle and equipment travel, maintenance, and repair would conform to trail specifications. Best management practices would be employed to reduce and mitigate potential for negative effects to hydrology, wildlife, botanical, or heritage resources. With regards to forest vegetation management, hazard tree guidelines would conform to the Region 5 Forest Health Protection Hazard Tree Guidelines for Forest Service Facilities and Roads (USDA Forest Service Forest Health Protection Report# R)O-12-01).



Fire- Hardened Trails (Vegetation Management Corridors)

The following proposal is a cross discipline collaborative concept proposal from Sierra Buttes Trail Stewardship in partnership with: US Forest Service Pacific Southwest Region 5. Plumas, Tahoe, Lassen and Humboldt-Toiyabe National Forest. Nevada, Sierra, Plumas, Lassen and Butte Counties as well as the cities of Loyalton and Portola.

Point Protect Specific Trail Alignments for Projects In or Near the Wildland Urban Interface, and Areas of Ecological and Cultural Importance

Partnered education programming and information transparency amongst participating agencies to create a map for a unified understanding of individual agency/organization objectives, known hazards, areas of cultural or biological concerns, and potential for escape routes, safety zones, and landing zones in the event of an emergency.
When applicable:

- Trails to be built parallel and in close proximity of existing man made (i.e. roads) and natural (i.e. ridges) features that can also be used as fire control lines.
- Design trails in conjunction with predicted localized weather conditions that exist during critical fire season (i.e. more emphasis on fuels reductions with wider trail corridors in areas of Wildland Urban Interface that have predicted seasonal wind events).
- Trails built in conjunction with timber stand objectives to slow the rate of spread and provide firefighters time for suppression.
- Trails aligned to allow for easy implementation of backfiring and holding operations during fire emergencies.
- Create connector trails and cutoffs to allow easy egress for firefighters while working in the wildland urban interface.
- Trails to be used as control lines for prescribed burning.
- Consider a top down approach to trail design in conjunction with prescribed burn plans.

Design Criteria specific to Unburned Forests

1. Retain all live conifer trees greater than or equal to 20" diameter at breast height (dbh). Retain all live hardwood trees greater than or equal to 8" diameter dbh. Live trees greater than these limits would only be removed/mitigated if they qualify as a hazard under the Region 5 FHP Hazard tree guidelines.
2. In general, focus tree removal to reduce suppressed understory trees and ladder fuels less than 12 inches DBH 15 feet from both sides of the centerline of the trail
3. Limb all trees to a height of 6-10 feet, not to exceed ⅓ of the total height of the tree.
4. Thin trees less than 10 inches DBH to 20-35 foot spacing from equal or larger size residual live trees. Clumping of trees and increasing spacing can be used to promote heterogeneity and diversity in forest structure.
5. Reduce shrub component to no more than 20-percent cover 50 feet from both sides of the centerline of the trail. Remove all brush and shrubs within 15 feet of trail centerline. Pile burn or chip cut material.
6. Pile and burn or chip slash or biomass debris. Treat up to 80% of the 10 and 100 hour naturally occurring ground fuels within 50 feet from both sides of the centerline of the trail.
7. Fall and remove or stably place hazard trees that have the potential to fall on or across the trail.
8. Where safe and feasible, integrate the treated trail network for use as fire lines on future prescribed fires.

Fire- Hardened Trails (Vegetation Management Corridors)

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9. Use a combination of future thinning, pruning, cutting, chipping, pile burning, and underburning to maintain corridor resiliency over time.
10. Allow for managing jurisdiction to modify prescription on case by case basis to respond to user issues related to trail use.

Design Criteria Specific to Post-Fire Environments

In High severity environments

1. Retain all live conifer trees greater than or equal to 16" diameter at breast height (dbh). Retain all live hardwood trees greater than or equal to 6" diameter dbh. Live trees greater than these limits would only be removed/mitigated if they qualify as a hazard under the Region 5 FHP Hazard tree guidelines.
2. In general, focus on the removal of dead trees that pose a hazard to the trail or could contribute to undesirable fuel loads/ fuel profile over time. Any dead, dying, or fire injured tree of sufficient probability of mortality and located in distance and arrangement making it capable of striking the trail system should be removed.
3. Dead trees less than 14" diameter could be felled and piled for burning. Dead trees greater than 14" dbh could be felled and limbed, with activity slash piled for burning.
4. Fire-injured trees that have crown scorch that equates to a probability of mortality of 50% or greater (respective to species and diameter per USFS Hood and Cluck Guidelines) could be removed to manage the development of future hazard trees or fuel profiles.
5. Consider shrub removal and management through manual, mechanical, or chemical (herbicide) means. Reduce shrub component to no more than 20 percent cover 50 feet from both sides of the centerline of the trail. Remove all brush and shrubs within 15 feet of the trail centerline. Pile burn or chip cut material.
6. Pile and burn or chip slash or biomass debris. Treat up to 80% of the 10 and 100 hour naturally occurring ground fuels within 50 feet from both sides of the centerline of the trail.
7. Consider trailside planting of conifers in a clustered or micro-sited arrangement to mimic a wild forest aesthetic. Tree stocking could be lower density ranging from 50-75 trees per acre.
8. Consider managing competing shrub vegetation around planted trees with manual or herbicide methods retaining no more than 20 percent shrub cover to promote tree growth and understory plant diversity.

Consider thinning or pruning and re-sprouting hardwoods to expedite the development of larger stems and individuals.

Public Benefits

Fire-Hardened Trails can play a crucial role in addressing wildfire recovery and forest resilience in California, aligning with the goals of the California Wildfire and Forest Resilience Action Plan and the Sierra Nevada Conservancy (SNC) Watershed Improvement Program. Fire Hardened Trails with the inclusion of recreational trails can offer several public benefits, including both natural resource benefits, recreational advantages and economic stability. Here are some of the key benefits:

Fire- Hardened Trails (Vegetation Management Corridors)

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1. Fuel Breaks and Firebreaks: Vegetation management corridors can serve as strategically placed fuel breaks and firebreaks. By reducing the density of vegetation in these areas, they can reduce the continuity of flammable vegetation, slow the spread of wildfires, prevent catastrophic wildfires, and provide firefighters with safer access to control and contain fires. This will also support defensible space to protect homes and strengthen community resilience.

2. Wildlife Habitat Preservation: Well-designed vegetation management corridors can provide essential habitat for wildlife by maintaining or restoring native plant species. The presence of such corridors can help support biodiversity by creating connected habitats and migration routes for animals. This will also help habitats remain or recover more quickly from wildfire, improve long term resilience of ecosystems and species.

3. Ecosystem Health and Biodiversity: Properly managed corridors can promote forest health by removing diseased, dead, or overgrown vegetation. This reduces competition for resources among trees and supports the growth of healthier, more resilient forests. Maintained corridors with also support diverse native vegetation that will enhance biodiversity and ecosystem resilience from disturbances, including wildfires.

4. Improved Air and Water Quality: Vegetation within these corridors can act as natural filters, improving air quality by absorbing pollutants and filtering dust particles. They can also help to maintain water quality by reducing runoff and filtering contaminants before they reach bodies of water.

5. Erosion Control: The roots of vegetation help stabilize soil, preventing erosion and reducing the risk of landslides, particularly in hilly or sloped areas. This contributes to the preservation of natural landscapes and infrastructure.

6. Climate Change Mitigation: Vegetation in these corridors can absorb carbon dioxide (CO_2) through photosynthesis, thereby helping to mitigate climate change by sequestering carbon. Additionally, shading from trees can reduce urban heat island effects, helping to mitigate local temperature increases.

7. Recreational Opportunities: Including recreational trails within these corridors provides the public with opportunities for outdoor activities such as hiking, biking, jogging, bird-watching and more. These activities promote physical fitness, mental well-being, and a connection to nature.

8. Economic Benefits: Access to recreational trails can boost local economies through increased tourism and visitor spending on accommodations, food, and outdoor equipment. Well-maintained trails can also enhance property values in nearby areas.

9. Educational and Cultural Value: These corridors can serve as educational resources by providing opportunities for nature-based learning and environmental education programs. Additionally, they may have cultural significance for indigenous communities and can help promote cultural awareness and preservation.

Fire- Hardened Trails (Vegetation Management Corridors)

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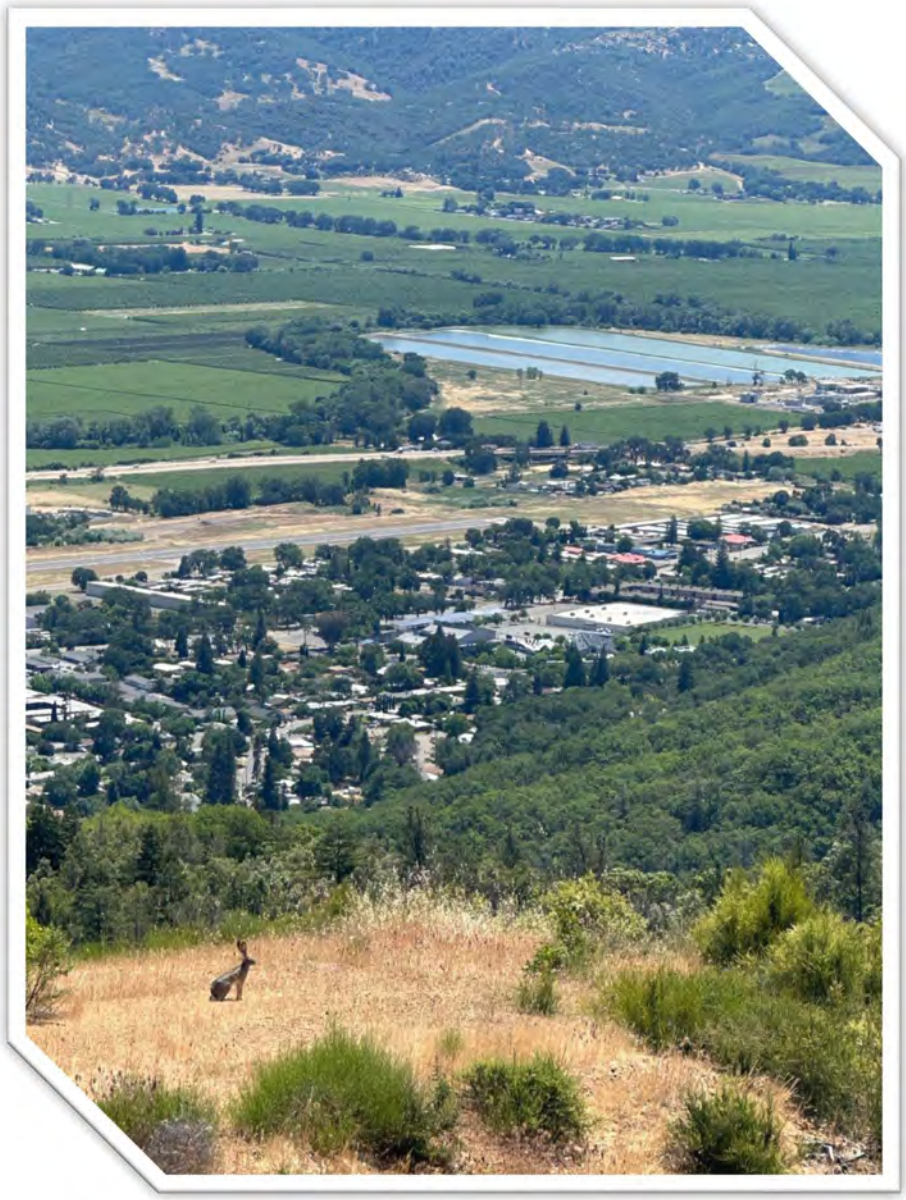
10. Community Engagement: Involving local communities in the creation and maintenance of vegetation management corridors fosters a sense of ownership and responsibility. Communities can be educated about the importance of wildfire resilience and engaged in activities like controlled burns or invasive species removal. They can also bring communities together by serving as gathering parts for community engagements and events.

11. Health and Security: Access to green spaces and recreational trails has been linked to reduced stress, improved mental health, and overall well-being. These areas can provide places for relaxation and stress relief. These open spaces also contribute to a sense of safety and security.

12. Visual Resources: Well-maintained vegetation corridors and recreational trails can enhance the visual appeal of an area, making it more attractive to residents and visitors alike.

JACOBSZOON & ASSOCIATES, INC.

natural resource planning & management



Biological Assessment Report

Prepared For:

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APN: Multiple

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Table of Contents

Section 1.0: Project Description

Jacobszoon & Associates, Inc. has performed a Biological Assessment (BA) and Botanical Survey (BS) for Ukiah Valley Trails- Doolin Ridge Trail Expansion in Ukiah, CA, 95482, (Appendix D: Map 1, Vicinity, Map 2, Study Area-Imagery, & Map 3, Study Area-Topographic) for a trail expansion project. The purpose of this study was to identify any special-status plants and special-status animal habitats within the Study Area to determine if they would be directly or potentially impacted by the project. The Study Area referred to in this report is contained within multiple parcels, comprising approximately 833 acres.

1.1 Summary of Findings

The BA and BS were conducted on April 17th, April 18th, May 22nd, May 23rd and July 18th, 2024, by Jacobszoon and Associates, Inc.'s Biologists Nicolas Morat, Jessenya Rivas, Jamie Beckett, and Airica Gallaspy. During the assessment, the habitat was classified under three (3) MCV2 classification systems: (1) *Quercus wislizeni-Quercus chrysolepis* (shrub) Shrubland Alliance, (2) *Avena* ssp.- *Bromus* ssp. Herbaceous Semi-Natural Alliance, and (3) *Pinus sabiniana* Woodland Alliance (Appendix D: Map 9, MCV2 Habitat Classifications). These communities are considered non-sensitive and thus require no special protection. No (0) sensitive biological communities were identified.

Three (3) watercourses flow through the Study Area including Doolin Creek, a Class I watercourse, and two unnamed Class III watercourses. All three (3) watercourses are classified by the United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) (Appendix D: Map 7, National Watershed Inventory) as a Riverine System which includes all wetland and deepwater habitats contained within a channel. The Study Area has a 100-Year Flood Zone hazard rating of moderate according to the FEMA National Flood Hazard Layer (NFHL) (Appendix D: Map 8, NFHL 100-Year Flood Zone).

The BA and BS were conducted during the blooming period for all special-status species listed with a moderate or high potential to be present in the Study Area. No (0) special status plants or wildlife were observed within the Study Area.

Section 2.0: Regulations and Descriptions

2.1 Regulatory Setting

The project shall comply with Federal, State, and local regulations designed to protect sensitive natural resources. The following natural resources are protected under one or more of several Federal and/or State regulations and should be considered when designing and/or implementing the project within the Study Area:

Streams, Lakes, and Riparian Habitat: protected under the California Fish and Game Code (CFGC), administered by the California Department of Fish and Wildlife (CDFW):

- Includes creeks and rivers (bodies where water flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life), and vegetation adjacent to and associated with (riparian habitat).

Waters of the State: protected under the State Water Resources Control Board (SWRCB).

Waters of the U.S.: protected under the Clean Water Act (CWA), administered by the Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (Corps):

- Includes wetlands, streams, rivers, and other aquatic habitats meeting the guidance issued by the Corps.

2.2 Natural Communities and Sensitive Natural Communities

Sensitive Natural Communities: protected under the California Fish and Game Code, administered by CDFW (CDFW 2024):

- Includes terrestrial vegetation or plant communities that are ranked by NatureServe and considered "threatened" or "endangered" by CDFW, lists of such are included in *List of Vegetation Alliances and Associations* (CDFW 2024).

2.3 Special-Status Species

Special-status Plant and Wildlife Species including Critical Habitat: protected under one or more of the Federal Endangered Species Act (ESA), California Endangered Species Act (CESA), California Environmental Quality Act (CEQA), administered by the U.S. Fish and Wildlife Service (USFWS), and/or CDFW:

- Includes plants listed under the ESA and/or CESA, or those plants ranked by the California Native Plant Society (CNPS) as Rank 1, 2, 3 and 4.

- Includes wildlife listed under the ESA and/or CESA, and wildlife listed by CDFW as Species of Special Concern, Fully Protected Species, and/or Special status including Invertebrates, Birds of Conservation Concern listed by USFWS, Species of Concern listed by National Marine Fisheries Service (NMFS), Western Bat Working Group (WBWG).

Section 3.0: Field Survey Methodology

3.1 Assessment Methods

The BA is designed to assess the potential for the presence of sensitive wildlife species and to determine whether habitat for sensitive plant species and plant communities may or may not be present within the Study Area. This includes the analysis and comparison of existing habitat conditions within the Study Area and the documented range and habitat requirements of sensitive plant and wildlife species described in CDFW's California Wildlife Habitat Relationships System (CWHR).

Field surveys (biological and botanical) were conducted by Jacobszoon and Associates, Inc. to identify and delineate potential sensitive habitats within the Study Area. The Study Area was assessed to document: (1) the on-site plant communities, (2) existing conditions and their ability to provide suitable habitat for any special-status plant or wildlife species, and (3) if sensitive biological communities (e.g., wetlands, vernal pools) are present.

Plant species observed during the site assessment were recorded and are listed in Appendix B. Plants listed in Appendix B were identified using *The Jepson Manual: Vascular Plants of California 2nd*

Edition (Baldwin et al. 2012) to the taxonomic level necessary to determine rarity. The names provided in this biological assessment report follow *The Jepson Flora Project* (JFP April 2024). The BA and BS were conducted during the blooming period for all special-status species listed with a moderate or high potential to be present in the Study Area. No (0) special status plants were observed within the Study Area.

3.2 Database and Resource Assessments

Prior to conducting field surveys, available reference materials were reviewed, including the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) *Web Soil Survey*, the USFWS NWI, the Ukiah 7.5-minute USGS quadrangle topographic maps, and the most recent available aerial imagery. The 100-year flood zone was assessed using the Federal Emergency Management Agency's (FEMA) NFHL. The location of streams and watercourses within the project vicinity were reviewed using datasets from California Streams and the California Department of Forestry and Fire Protection (CAL FIRE).

The potential for occurrences of rare, threatened, endangered or plant and animal species of concern within or near the Study Area were evaluated by reviewing the Ukiah, Orr Springs, and Elledge Peak, Laughlin Range, Redwood Valley, Potter Valley, Cow Mountain, Boonville, and Purdys Gardens 7.5 minute quadrangles topographic maps, aerial photography, California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants (online edition, v9.5), CDFW's Natural Diversity Database (CNDDB) Spotted Owl Data, CWHR, RareFind 5 and Quick Viewer Bios 6 processed and unprocessed data (online edition, v6.24.0604).

The CNPS database produces a list of sensitive plants potentially occurring at a site based on various site characteristics: location of the Study Area with regard to the geographic range of sensitive plant species, location(s) of known populations of sensitive plant species as mapped in the CNDDB, soils of the Study Area, elevation, presence/absence of special habitat features (vernal pools, serpentine/volcanic soils, etc.) and plant communities existing within the Study Area. While use of the CNPS inventory does not eliminate the need for an in-season botanical survey, it can, when used in conjunction with other information, provide a very good indication of the suitability of a site as habitat for sensitive plant species. The CNDDB consists of mapped overlays of all known populations of sensitive plants and wildlife. The database is continuously updated with new sensitive species population data.

Potential occurrence of special-status plants and wildlife in the Study Area was determined by identifying special-status species that could occur within the vicinity of the Study Area or in similar communities through a literature and database search (Appendix A).

A list of target plant and animal species with potential to occur in the Study Area was generated, which guided subsequent field surveys. During the site visit, existing habitat conditions were evaluated and used to assess the potential for presence of special-status species. The potential for each special-status species to occur in the Study Area was then evaluated according to the following criteria:

> No Potential: Habitat on and adjacent to the Study Area is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Low Potential: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the Study Area is unsuitable or of very poor quality. The species is not likely to be found on-site.

Moderate Potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the Study Area is suitable. The species has a moderate probability of being found on-site.

High Potential: All the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the Study Area is highly suitable. The species has a high probability of being found on-site.

Present: Species are observed on the site or have been recorded (i.e. CNDDB) on-site recently.

Existing vegetative communities were reviewed using CDFW's Vegetation Classification and Mapping Program (VegCAMP) data for the potential existence and location of sensitive biological communities and related vegetation. Where VegCAMP data was not available, existing vegetative communities were reviewed using USDA Forest Service Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG) data.

CWHR Predicted Habitat Suitability is a dataset accessed through CNDDB Biogeographic Information and Observation System (BIOS) Commercial/ Spotted Owl Viewer that represents areas of suitable habitat within an animal species ranges based on the CWHR. Habitat suitability ranks of Low (less than 0.34), Medium (0.34-0.66), and High (greater than 0.66) suitability are based on the mean expert opinion suitability value for each habitat type for breeding, foraging, and cover (CDFW 2024). Examination of the CWHR dataset was applied when: 1) the data is available for the species of concern, and 2) when there is a moderate to high potential for an animal to occur on or within 100 feet of the Study Area.

As with all models, these maps are not perfect, and do not predict the occurrence of an organism, it just examines whether the areas being examined in the biological assessment are habitats which *may* support a species of special concern. This information not only informs the landowner of what may occur on their property, but also assists the biologist when conducting a survey.

3.3 Special-status Species

Special-status plants (native, vascular and non-vascular) and wildlife assessed are of limited abundance in California, with known occurrence or distribution in Mendocino County, and were derived from the following lists:

- Federal listed or threatened or endangered plants or species of concern (FT, FE, FSC)
- California State listed or rare, threatened or endangered plants or species of concern (SR, ST, SE, SP, SSC)
- Board of Forestry Sensitive (BFS)
- California Department of Fish and Wildlife (CDFW) Status wildlife: Fully Protected, Species of Special Concern and Watch List (FP, SSC, WL)
- California Native Plant Society Rare Plant Rank (CRPR) list 1A species (plants presumed extirpated in California, and either rare or extinct elsewhere)

- California Native Plant Society Rare Plant Rank (CRPR) list 1B species (plants rare, threatened or endangered in California and elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 2A species (plants presumed extirpated in California but more common elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 2B species (plants rare, threatened, or endangered in California but more common elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 3 (plants which more information is needed- a review list)
- California Native Plant Society Rare Plant Rank (CRPR) list 4 (plants of limited distribution- a watch list)

Rare, threatened, and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, can be shown to be rare, threatened, and/or endangered under the following definitions:

> A species, subspecies, or variety of plant is **"endangered"** when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease. A plant is **"threatened"** when it is likely to become endangered in the foreseeable future in the absence of protection measures. A plant is **"rare"** when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its habitat continues to deteriorate.

Site visits were conducted by Nicolas Morat, Jessenya Rivas, Jamie Beckett, and Airica Gallaspy of Jacobszoon and Associates, Inc. on April 17th, April 18th, May 22nd, May 23rd and July 18th, 2024, for a total of forty-seven (47) survey hours to evaluate potentially suitable habitat characteristics for special-status plant and animal species within the Study Area. If a special-status species is observed during the site visit, its presence will be recorded and discussed. All plant and wildlife species observed were recorded and are included in Appendix B.

3.4 Critical Habitat

Critical habitat is a term defined by the Endangered Species Act (ESA) as the specific areas within the geographic area, occupied by the species at the time it was listed, that contain the physical or biological features that are essential to the conservation of endangered and threatened species and that may need special management or protection. Critical habitat may also include areas that were not occupied by the species at the time of listing but are essential to its conservation.

3.5 Natural Communities

Natural communities present within the Study Area were classified based on existing plant community descriptions described by Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986), USDA Forest Service Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG) system, and the Manual of California Vegetation Online Edition (MCV2 Alliances, CNPS 2024). The currently accepted vegetation classification system for the state that is standardly used by CDFW, CNPS, and other state and federal agencies, organizations, and consultants for survey and planning purposes is the *Manual of California Vegetation* (MCV; Sawyer, Keeler-Wolf, and Evens 2009).

Unlike Holland, this vegetation classification system is based on the standard National Vegetation Classification System (NVCS) and includes alliances (a floristically defined vegetation unit identified by its dominant and/or characteristic species) and associations (the finer level of classification beneath alliance). Although the CNDDB still maintains records of some of the old Holland vegetation types, these types are no longer the accepted standard, and the CDFW Vegetation Classification and Mapping Program (VegCAMP) has published more recent vegetation lists for the state based on a standardized vegetation classification system that is currently being developed for California and which is consistent with the MCV classification system. Global and state rarity rankings have been assigned for various types on the recent VegCAMP lists.

3.5.1 Non-sensitive Biological Communities

CEQA and other state, federal, and local laws, regulations, and ordinances do not provide special protection for non-sensitive natural communities. Some of these communities may provide suitable habitat for some special-status plant or wildlife species, and are described in section 5.1, if present within the Study Area.

3.5.2 Sensitive Biological Communities

Sensitive biological communities include those that are listed in CNDDB as well as MCV2 alliances or associations with state ranks of S1-S3. Aquatic resources (e.g., watercourses, ponds, wetlands, vernal pools, etc.) are also considered sensitive biological communities and are afforded special protections under CEQA and other Federal, State, and local laws, regulations, and ordinances. Sources for assessing sensitive terrestrial or aquatic natural communities include *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), *List of Vegetation Alliances* (CDFW, 2024), *A Manual of California Vegetation* (CNPS 2024), California Streams, USFWS National Wetlands Inventory (NWI), and National Flood Hazard Layer (NFHL). CDFW considers any MCV2 alliance or association with a state rank of S1-S3 a sensitive natural community. Global and state rankings are defined below.

Global Ranking:

- G1-Critically Imperiled: At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
- G2-Imperiled: At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
- G3-Vulnerable: At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
- G4-Apparently Secure: Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- G5-Secure: Common; widespread and abundant.

State Ranking:

- S1-Critically Imperiled: Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
- S2-Imperiled: Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
- S3-Vulnerable: Vulnerable in the state due to a restricted range, relatively few populations

(often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
- S4-Apparently Secure: Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
- S5-Secure: Common, widespread, and abundant in the state.

3.5.3 Wetlands

The US Army Corps of Engineers (USACE) methods utilize three parameters (indicators) to determine wetland boundaries: (1) hydrophytic vegetation, (2) wetland hydrology, and (3) hydric soils.

- *Hydrology:* The area is inundated either permanently or periodically at mean water depths: 6.6 ft, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.
- *Soils*: Soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions.
- *Plants*: The prevalent vegetation consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions described above. Hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), can grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions.

The USACE developed a classification system for plant species known to occur in wetlands. The plant species are categorized based on the frequency that they have been observed in wetlands. Species classified as obligate (OBL), Facultative Wetland (FACW), and Facultative (FAC) are considered hydrophytic. If more than 50 percent of the plant species in each area are hydrophytic, the area meets the wetland vegetation criterion and is presumed to be a jurisdictional wetland under the CCA.

Plant Indicator Status Categories (as per USACE)

Indicator Category	Indicator Symbol	Definition
Obligate Wetland Plants	OBL	Plants that occur almost always (estimated probability >99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated probability <1 percent) in non-wetlands. Examples: *Spartina alterniflora, Taxodium distichum*.
Facultative Wetland Plants	FACW	Plants that occur usually (estimated probability >67 percent to 99 percent) in wetlands, but also occur (estimated probability 1 percent to 33 percent) in non-wetlands. Examples: *Fraxinus pennsylvanica, Cornus stolonifera.*
Facultative Plants	FAC	Plants with a similar likelihood (estimated probability 33 percent to 67 percent) of occurring in both wetlands and non-wetlands. Examples: *Gleditsia triacanthos, Smilax rotundifolia.*
Facultative Upland Plants	FACU	Plants that occur sometimes (estimated probability 1 percent to <33 percent) in wetlands but occur more often (estimated probability >67 percent to 99 percent) in non-wetlands. Examples: *Quercus rubra, Potentilla arguta.*
Obligate Upland Plants	UPL	Plants that occur rarely (estimated probability <1 percent) in wetlands but occur almost always (estimated probability >99 percent) in non-wetlands under natural conditions. Examples: *Pinus echinata, Bromus mollis.*

3.5.4 Streams, Rivers and Anadromous Fish Habitat

Watercourses and other waterbodies were classified using guidance from the *California Forest Practice Rules 2024* (FPR). Streams and rivers were evaluated for their potential to support anadromous fish by reviewing the CNDDB' intrinsic potential layers for fish species. Also, general observations of a stream's bed substrate, bank stability, run-riffle-pool complexes, riparian quality, and upstream and downstream barriers were noted during a site visit.

Section 4.0: Study Area Setting

4.1 Climate and Hydrology

The project site is located near Ukiah, CA within Section 30, Township 15N, Range 12W, MDBM, in the Ukiah USGS 7.5-minute quadrangle, (Appendix D: Map 1, Vicinity, Map 2, Study Area-Imagery, & Map 3, Study Area-Topographic). The Study Area is located within the Williams Creek Watershed (HUC 12 180101045201). The average annual precipitation is 35-60 inches, the average annual air temperature is 54-59 degrees F, elevation is 1,560-1,680 feet, and the average frost-free period is 150 to 250 days.

4.2 Topography and Soils

The Study Area is located at approximately 1,560-1,680 feet in elevation and is underlain by eight (8) soil mapping units, according to the United States Department of Agriculture, Natural Resources Conservation Service's *Web Soil Survey* (Appendix D: Map 6: USGS Soils): Cummiskey gravelly loam, 30 to 75 percent slopes, Hopland loam, 30 to 50 percent slopes, high ffd, Hopland loam, 50 to 75 percent slopes, high ffd, Hopland-Maymen-Etsel complex, 50 to 75 percent slopes, Hopland-Wohly loams, 50 to 75 percent slopes, Maymen-Etsel-Snook complex, 30 to 75 percent slopes, high ffd, Urban land 0.2 0.0%, and Yorkville-Ashokawna-Witherell complex, 30 to 50 percent slopes. A description of the soil series is as follows:

116- Cummiskey gravelly loam, 30 to 75 percent slopes: This unit includes a very deep well drained solid that is typically vegetated with oaks, annual grasses and brush. The elevation is 500 to 2500 ft, avg precipitation is 35-50 in, and avg annual temperature is 54-59 degrees F. Permeability is low and water capacity is moderate.

141-Hopland loam, 30 to 50percent slopes, high ffd: This unit is moderately deep, well drained soils that is typically vegetated with oaks, annual grasses and forbs, and the occasional Douglas fir. The elevation is 500-3000 ft, average precipitation is 35-50 inches annually, avg annual temperature is 54-59 degrees F. Permeability is slow and water capacity is low to moderate. Runoff is rapid and the risk of erosion is high.

142-Hopland loam, 50 to 75 percent slopes, high ffd: Moderately deep, well drained soils, on hills and mountains, vegetated with black oak, live oak, Oregon white oak, Douglas fir, and madrone. The elevation is 500-3000 ft, average annual precipitation is 35-50 in, and average annual temperature is 54-59 degrees F. Permeability is moderately slow and the available water capacity is low to moderate. Harvesting trees is not likely because of the steep slopes and unstable ground.

144 Hopland-Maymen-Etsel complex, 50 to 75 percent slopes: Located on the tops of mountains and ridges, vegetated with oaks and chaparral. The elevation is 2000-3500 ft, annual precipitation is 40 to 55 inches a year, and the average annual temperature is 53 to 58 degrees F. Most of the vegetation is oaks and chaparral. This type of soil usually occupies a small area imbedded in other soil types. The permeability of the soil is moderately slow and the water holding capacity is low to moderate. With this soil type, runoff is rapid, and the hazard of erosion is high.

151-Hopland-Wohly loams, 50 to 75 percent slopes: Located on hills and mountains, which typically consist of oaks and pockets of Douglas fir for their vegetation. The elevation is 500 to 2500 ft, average precipitation 35 to 50 inches, average annual temperature is 54 to 59 degrees F. This soil type is well drained, permeability is moderately slow, and available water is low to moderate. The runoff for this soil happens fast and the hazard of erosion is very high.

160-Maymen-Etsel-Snook complex, 30 to 75 percent slopes, high ffd: This soil type is found on hills and mountains with the main type of vegetation consisting of chaparral plants. It is typically found at elevations of 1000 to 4000 ft. The average precipitation is 35 to 55 inches, and the average annual temperature is 53 to 58 degrees F. The permeability of this soil type is moderate and available water is low. Runoff is very fast, and the hazard of soil erosion is very high.

210-Urban land 0.2 0.0%: This soil type is found on terraces and alluvial plains in Ukiah. Slopes are nearly level or gently sloping with elevations of 500 to 1400 ft. More than 60 percent of this soil type is covered with impervious surfaces like concrete, asphalt, and buildings. Drainage, permeability, surface runoff, and available water capacity are variable because of all the impervious surfaces.

211-Witherell-Hopland-Ashokawna complex, 50 to 75 percent slopes, high ffd: This soil type exists on hills and mountains with native vegetation consisting of oaks and annual grasses. The elevation is 500 to 2500 ft, with annual precipitation of 35 to 55 inches, and average annual temperature 54 to 59 degrees F.

4.3 Biota and Land Use

Areas in which these soils reside are typically used for aggregate, wildlife habitat, recreation, watershed, and livestock grazing (USDA Web Soil Survey, 2024). Section 5 provides a detailed account of the biological communities found on-site, including sensitive and non-sensitive biological communities and additionally the special-status flora and fauna with potential to occur within the Study Area.

Section 5.0: Field Survey Results

5.1 Natural Communities

The Study Area and immediate surroundings were assessed during a site visit on April 17th, April 18th, May 22nd, May 23rd and July 18th, 2024, to determine local biological communities present and develop a comprehensive list of all plant and wildlife species observed. Biological communities referred to in this report include Holland 1986 descriptions, USFS CALVEG classifications, and the Manual of California Vegetation (MCV2) alliance descriptions.

Holland Descriptions:

The Study Area is within the Valley and Foothill Grassland and Chamise Chaparral habitats as best classified by the habitat classification system described by Holland 1986. A description of this habitat type is as follows:

Valley and Foothill Grassland: This habitat includes introduced, annual Mediterranean grasses and native herbs. On most sites the native bunch grass species, such as needle grass, have been largely or entirely supplanted by introductions. Stands rich in natives are usually found on unusual substrates, such as serpentinite or somewhat alkaline soils.

Chamise Chaparral: This habitat is like the Upper Sonoran Mixed Chaparrals, but on shallower, drier soils or at somewhat lower elevations. Often on xeric slopes and ridges, with adjacent more mesic slopes and ridges, with adjacent mesic sites mantles by Upper Sonoran Mixed Chaparrals.

USFS CALVEG Classifications:
According to USDA Forest Service CALVEG mapping delineation, the regionally dominant vegetation type within the Study Area is a combination of Interior Live Oak Alliance and Lower Montane Mixed Chaparral Alliance (Appendix D: Map 4, CalVeg Classification). A description of this vegetation type is as follows:

INTERIOR LIVE OAK ALLIANCE: The Interior Live Oak (*Quercus wislizenii*) Alliance occurs mainly in southern areas of the Coast and Mountains Sections as mapped in eight subsections. It is often found to the north and east of the Coast Live Oak (*Q. agrifolia*) Alliance distribution and topographically above Blue Oak (*Q. douglasii*) dominated stands towards the east. This type often indicates xeric or rocky sites when associated with other hardwood types and has been mapped at elevations up to about 4400 feet (1342 m). The shrubby form (*Q. wislizenii var. frutescens*) may also dominate a site, especially in areas of frequent fires. Occasional trees and shrubs such as Douglas-fir (*Pseudotsuga menziesii*), Gray Pine (*Pinus sabiniana*), Blue Oak (*Q. douglasii*), Oregon White Oak (*Q. garryana*) and Chamise (*Adenostoma fasciculatum*) may be associated with this pure hardwood alliance. Interior Live Oak is known to hybidize with California Black Oak (*Q. kelloggii*) and Coast Live Oak (*Q. agrifolia*), occasionally making field identification more difficult.

LOWER MONTANE MIXED CHAPARRAL ALLIANCE: This widespread low-elevation mixed shrub type is usually found below about 5000 feet (1524 m) in this zone, having been mapped in thirty-three subsections. No single shrub species is dominant, as the mixture includes varying mixtures of Chamise (*Adenostoma fasciculatum*), Wedgeleaf Ceanothus (*Ceanothus cuneatus*), Common and Whiteleaf Manzanita (*Arctostaphylos manzanita, A. viscida*), shrubby California Buckeye (*Aesculus californica*), Birchleaf Mountain Mahogany (*Cercocarpus betuloides),* Huckleberry Oak *(Quercus vaccinifolia)* and shrub oaks such as Scrub, Canyon Live, and Sadler Oaks (*Quercus berberidifolia, Q. chrysolepis var. nana, Q. sadleriana*). In western areas, it is sometimes found on poorer or ultramafic sites in proximity to Chamise and Knobcone Pine (*Pinus attenuata*) sites. At higher elevations it is often adjacent to the Upper Montane Mixed Chaparral type, with which it may share species such as Greenleaf Manzanita (*A. patula*), Brewer Oak (*Quercus garryana var. breweri*) and Deerbrush (*C. integerrimus*). Trees such as Douglas-fir (*Pseudotsuga menziesii*), various

MCV2 Alliances:
Biological communities observed were classified using the Manual of California Vegetation Online Edition (MCV2 Alliances, CNPS 2024) (Appendix D: Map 9: MCV2 Habitat Classification). In the Study Area, three (3) non-sensitive MCV2 Alliance were observed on site: (1) *Quercus wislizeni-Quercus chrysolepis* (shrub) Shrubland Alliance, (2) *Avena* ssp.-*Bromus* ssp. Herbaceous Semi-Natural Alliance, and (3) *Pinus sabiniana* Woodland Alliance.

5.1.1 Non-sensitive Natural Communities
Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other Federal, State, and local laws, regulations, and ordinances. The Study Area is comprised of three (3) non-sensitive biological community, as classified under the MCV2 system:

Quercus wislizeni - Quercus chrysolepis (shrub) Shrubland Alliance: Canyon live oak - Interior live oak chaparral State Rarity: S3S4, Global Rarity: G4

- Characteristic Species: *Quercus chrysolepis, Quercus parvula and/or Quercus wislizeni* are dominant or co-dominate together in the shrub canopy with *Adenostoma fasciculatum, Adenostoma sparsifolium, Arctostaphylos glandulosa, Arctostaphylos glauca, Carpenteria californica, Ceanothus cuneatus, Ceanothus integerrimus, Ceanothus leucodermis, Ceanothus oliganthus, Cercocarpus montanus, Frangula californica, Fraxinus dipetala, Hesperoyucca whipplei, Heteromeles arbutifolia, Prunus ilicifolia, Quercus agrifolia, Quercus berberidifolia, Rhamnus ilicifolia* and/or *Toxicodendron diversilobum.* Emergent trees may be present at low cover, including *Aesculus californica, Juniperus californica, Pinus attenuata, Pinus coulteri, Pinus sabiniana* or *Umbellularia californica.*
- Habitats: Variable topography with steep slopes. Soils are alluvial or bedrock and may be rocky.
- Vegetation Layers: Sparse cover of emergent trees may be present. Shrubs < 6 m; canopy is intermittent to continuous. The herbaceous layer is variable.
- Membership Rules:
    - *Quercus wislizeni shrubs > 30% relative cover in the shrub canopy.*
    - *Quercus chrysolepis shrubs > 50% relative cover in the shrub canopy.*
    - *Regenerating or shrubby Quercus wislizeni (or Quercus parvula) is > 30% relative cover in the shrub layer or is codominant with Ceanothus oliganthus.*
    - *Regenerating or shrubby Quercus chrysolepis, Q. wislizeni, Q. parvula and/or Q. agrifolia > 30% relative cover in the shrub layer.*

Arctostaphylos (canescens, manzanita, stanfordiana) Shrubland Alliance: Hoary, common, and Stanford manzanita chaparral State Rarity: S3S4, Global Rarity: G4

- Characteristic Species: *Arctostaphylos canescens, Arctostaphylos manzanita* or *Arctostaphylos stanfordiana* is dominant or co-dominant in the shrub canopy with *Adenostoma fasciculatum, Arctostaphylos auriculata, Arctostaphylos glandulosa, Arctostaphylos viscida, Baccharis pilularis, Ceanothus spp., Eriodictyon californicum, Heteromeles arbutifolia, Lotus scoparius, Pickeringia montana* or *Quercus berberidifolia.* Emergent trees may be present at low cover, including *Pinus attenuata, Pseudotsuga menziesii, Quercus chrysolepis, Quercus douglasii* or *Quercus wislizeni*.
- Habitats: Mid to upper slopes and ridges in transitional settings between grassland and oak woodland or closed-cone coniferous forest or associated with extensive old growth chaparral. Soils are sandy to clayey loam, often derived from sandstone or volcanic.
- Vegetation Layers: Shrubs 1-5 m; canopy is intermittent to continuous. Herbaceous layer is sparse to intermittent.
- Membership Rules:
    - *Arctostaphylos canescens, A. manzanita* and/or *A. stanfordiana* dominant or co- dominant in the shrub canopy.
    - *Arctostaphylos canescens* dominant or co-dominant in the shrub canopy.
    - *Arctostaphylos canescens* and/or *A. manzanita* > 30% relative in the shrub canopy.

Pinus sabiniana Woodland Alliance Foothill pine woodland, State Rarity: S4, Global Rarity: G4

- Characteristic Species: *Pinus sabiniana* is dominant or co-dominant in the tree canopy with *Aesculus californica, Juniperus californica, Juniperus occidentalis, Pinus coulteri, Quercus chrysolepis* and *Quercus wislizeni*.
- Habitats: Streamside terraces, valleys, slopes, and ridges. Soils are shallow, often stony, infertile, and moderately to excessively drained.

- Vegetation Layers: Trees < 20 m; canopy open to intermittent and one or two tiered. Shrubs are common or infrequent. The herbaceous layer is sparse or grassy.
- Membership Rules:
    - *Pinus sabiniana* > 10% absolute cover and dominant in the tree canopy.
    - *Pinus sabiniana* > 50% relative cover in the tree canopy.

5.1.2 Sensitive Natural Communities

Sensitive biological communities include those that are listed in CNDDB as well as observed MCV2 alliances or associations with state ranks of S1-S3 and are listed on CDFW's *List of California Sensitive Natural Communities* (CDFW 2024). There are no sensitive terrestrial communities present within the Study Area.

5.2 Aquatic Resources

Aquatic resources, communities, and habitats (e.g., watercourses, ponds, wetlands, vernal pools, etc.) are considered sensitive biological communities and are afforded special protections under CEQA and other Federal, State, and local laws, regulations, and ordinances. Wet areas are areas with observed hydrophytic vegetation and/or other hydrologic indicators that suggest the area is influenced by ponding or flooding for a significant amount of time throughout the growing season. Wet areas may provide habitat for special-status plants and wildlife as well as for nesting birds protected by the Migratory Bird Treaty Act (MBTA).

Stream, Rivers, and Anadromous Fish Habitat:

Three (3) watercourses flow through the Study Area including Doolin Creek, a Class I watercourse, and two (2) unnamed Class III watercourses.

Wetlands:

Doolin Creek is a Class I watercourse that flows through the APN 157-06-003. The second and third watercourses flow through the furthest extent of the Study Area and are both Class III watercourses. All three (2) watercourses are classified by the NWI as a Riverine system (Appendix B: Map 7: National Wetland Inventory).

100-Year Flood Zone:

The entirety of the Study Area falls within a moderate hazard rating for 100-Year Flood Zone. This was concluded using the FEMA National Flood Hazard Layer (NFHL) (Appendix D: Map 8, National Flood Hazard Layer 100-Year Flood Zone). Recommendations to avoid or mitigate potential impacts to aquatic resources are discussed in Section 6.0, Assessment Summary and Recommendations.

5.3 Special-status Species

5.3.1 Special-status Plant Species

Upon review of the resource databases listed in Section 3.2, forty-two (42) special-status plant species have been documented within the vicinity of the Study Area. Please refer to Appendix A for a table of all special-status plant species which occur within a nine-quad search surrounding the Study Area and additional discussion of the potential for each species to occur within the Study Area. Special-status species documented within five miles of the Study Area are depicted in the CNDDB Vicinity map (Appendix D: Map 5, CNDDB Vicinity).

Of the forty-two (42) special-status plant species within the vicinity of the Study Area, twenty-three (23) special-status plant species have a moderate to high potential to occur within the Study Area. The remaining nineteen (19) special-status plant species documented within the vicinity of the Study Area are unlikely to occur or do not have the potential to occur due to one or more of the following reasons:

- Hydrologic conditions (e.g., vernal pools, riverine) necessary to support the special- status plant species are not present within the Study Area.
- Edaphic conditions (soils, e.g., rocky outcrops, serpentinite) necessary to support the special-status plant species are not present within the Study Area.
- Topographic conditions (e.g., montane) necessary to support the special-status plant species are not present within the Study Area.
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present within the Study Area.
- Associated vegetation communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present within the Study Area.
- The Study Area is geographically isolated (e.g., outside of required elevations, coastal environment) from the documented range of the special-status plant species.
- Ecological conditions (last recorded observations, human-made or natural disturbance) have encroached on species to a point causing presumed extinction.

The habitat requirements for the twenty-three (23) special-status plant species with moderate or high potential to occur within the Study Area is described in the table below:

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Plants				
Franciscan onion *Allium peninsulare* var. *franciscanum*	Rank 1B.2 G5T2 S2	Cismontane woodland, valley and foothill grassland, often in clay soils, sometimes on serpentine or volcanics. *A. peninsulare* var. *franciscanum* has a weak serpentine affinity of 1.8. The elevation ranges from 17 to 1050 feet (5 to 320 meters). A perennial herb (bulb), the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains valley and foothill grassland, cismontane woodlands, and serpentine soils. The Study Area may provide suitable habitat for these species.	**Not Observed.** Please see Section 6 for recommendations.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Raiche's manzanita *Arctostaphylos stanfordiana* ssp. *raichei*	Rank 1B.1 BLM: S G3T2 S2	Chaparral, lower montane coniferous forest (openings), rocky, serpentine sites, often on slopes and ridges. *A. stanfordiana ssp. raichei* has a strong serpentine affinity of 2.6. The elevation ranges from 1591 to 3511 feet (485 to 1070 meters). A perennial evergreen shrub, the blooming period is from Feb-Apr.	**Moderate Potential.** The Study Area contains chaparral and lower montane coniferous forest habitat and serpentine soil. The Study Area may provide suitable habitat for the species.	**Not Observed.** Please see Section 6 for recommendations.
Brewer's milk-vetch *Astragalus breweri*	Rank 4.2 G3 S3	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland. Often in grassy flats, meadows moist in spring, and open slopes in chaparral. Commonly on or near volcanic or serpentine sites. *A. breweri* has a strong serpentine affinity of 3.2. The elevation ranges from 296 to 2395 feet (90 to 730 meters). An annual herb, the blooming period is from Apr-Jun.	**Moderate Potential.** The Study Area contains chaparral and grassland habitats. The Study Area may provide suitable habitat for the species.	**Not Observed.** Please see Section 6 for recommendations.
Rincon Ridge ceanothus *Ceanothus confusus*	Rank 1B.1 BLM: S G1 S1	Closed-cone coniferous forest, chaparral, cismontane woodland, known from volcanic or serpentine soils, dry shrubby slopes. *C. confusus* has a weak serpentine affinity of 1.3. The elevation ranges from 492 to 4200 feet (150 to 1280 meters). A shrub, the blooming period is from Feb-Jun.	**High Potential.** The Study Area does provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
mountain lady's-slipper *Cypripedium montanum*	Rank 4.2 BLM: S IUCN: VU USFS: S G4 S4	Lower montane coniferous forest, broadleaved upland forest, cismontane woodland, north coast coniferous forest, often on dry, undisturbed slopes. The elevation ranges from 607 to 7300 feet (185 to 2225 meters). A perennial herb (rhizomatous), the blooming period is from Mar-Aug.	**High Potential.** The Study Area does provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.
bare monkeyflower *Erythranthe nudata*	Rank 4.3 G4 S4	Chaparral, cismontane woodland, moist areas, often along drainages and roadsides in serpentine seeps. The elevation ranges from 820 to 2297 feet (250 to 700 meters). An annual herb, the blooming period is from May-Jun.	**Moderate potential.** The Study Area contains chaparral, cismontane woodlands, and roadside seeps along roadsides. The Study Area may provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.
stinkbells *Fritillaria agrestis*	Rank 4.2 G3 S3	Cismontane woodland, chaparral, valley and foothill grassland, pinyon and juniper woodland, sometimes on serpentine, mostly found in non- native grassland or in grassy openings in clay soil. The elevation ranges from 33to 5102 feet (10 to 1555 meters). A perennial bulbiferous herb, the blooming period is from Mar-Jun.	**Moderate Potential.** The Study Area contains chaparral, cismontane woodlands, and grassland habitats. The Study Area may provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Purdy's fritillary *Fritillaria purdyi*	Rank 4.3 G4 S4	Chaparral, cismontane woodland, lower montane coniferous forest, usually on serpentine. *F. fritillary* has a broad endemic serpentine affinity of 4.5. The elevation ranges from 574 to 7399 feet (175 to 2255 meters). A perennial bulbiferous herb, the blooming period is from Mar-Jun.	**High Potential.** The Study Area does provide the habitat requirements for the species.	**Not Observed.** Please see Section 6 for recommendations.
Toren's grimmia *Grimmia torenii*	Rank 1B.3 G2 S2	Cismontane woodland, lower montane coniferous forest, chaparral, often found in openings, rocky, boulder and rock walls, carbonate, volcanic soils. The elevation ranges from 1067 to 3806 feet (325 to 1160 meters). A moss, no distinct blooming period.	**Moderate Potential.** The Study Area contains chaparral and cismontane woodlands habitats. The Study Area may provide suitable habitat for this species.	**Not Observed.** There are no recommendations for this species.
Mendocino tarplant *Hemizonia congesta ssp. calyculata*	Rank 4.3 G5T4 S4	Cismontane woodland, valley and foothill grassland, open woods and forests, sometimes on serpentine. *H. congesta ssp. calyculata* has a weak serpentine affinity of 1.5. The elevation ranges from 738 to 4593 feet (225 to 1400 meters). An annual herb, the blooming period is from Jul-Nov.	**High Potential.** The Study Area does provide the habitat requirements for the species.	**Not Observed.** Please see Section 6 for recommendations.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
glandular western flax *Hesperolinon adenophyllum*	Rank 1B.2 BLM: S G2G3 S2S3	Chaparral, cismontane woodland, valley and foothill grassland, serpentine soils, generally found in serpentine chaparral. *H. adenophyllum* has a strict endemic serpentine affinity of 5.7. The elevation ranges from 1395 to 4413 feet (425 to 1345 meters). An annual herb, the blooming period is from May-Aug.	**High Potential.** The Study Area does provide the habitat requirements for the species.	**Not Observed.** Please see Section 6 for recommendations.
small groundcone *Kopsiopsis hookeri*	Rank 2B.3 G4? S1S2	North coast coniferous forest, open woods, shrubby places, generally on *Gaultheria shallon.* The elevation ranges from 394 to 4708 feet (120 to 1435 meters). A perennial herb, the blooming period is from Apr-Aug.	**Moderate Potential.** The Study Area may provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.
Colusa layia *Layia septentrionals*	Rank 1B.2 BLM: S G2 S2	Chaparral, cismontane woodland, valley and foothill grassland, scattered colonies in fields and grassy slopes in sandy or serpentine soil. The elevation ranges from 49 to 3609 feet (15 to 1100 meters). An annual herb, the blooming period is from Apr-May.	**High Potential.** The Study Area does provide the habitat requirements for the species.	**Not Observed.** Please see Section 6 for recommendations.
bristly leptosiphon *Leptosiphon acicularis*	Rank 4.2 G4? S4?	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. The elevation ranges from 180 to 4920 feet (55 to 1500 meters). An annual herb, the blooming period is from Apr-Jul.	**Moderate Potential.** The Study Area contains chaparral, cismontane woodland, and valley and foothill grassland habitats. The Study Area may provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
woolly-headed lessingia *Lessingia hololeuca*	Rank 3 G2G3 S2S3	Coastal scrub, lower montane coniferous forest, valley and foothill grassland, broadleaved upland forests, often on clay or serpentine along fields and roadsides. *L. hololeuca* has a strong serpentine affinity of 2.5. The elevation ranges from 49 to 1001 feet (15 to 305 meters). An annual herb, the blooming period is from Jun-Oct.	**Moderate Potential.** The Study Area contains valley and foothill grassland habitat. The Study Area may provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.
redwood lily *Lilium rubescens*	Rank 4.2 G3 S3	Chaparral, lower montane coniferous forest, broadleaved upland forest, upper montane coniferous forest, north coast coniferous forest, sometimes serpentine. *L. rubescens* has a weak serpentine affinity of 2. The elevation ranges from 99 to 6267 feet (30 to 1910 meters). A perennial herb (bulb), the blooming period is from Apr-Aug.	**Moderate Potential.** The Study Area contains chaparral habitat. The Study Area may provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.
Mendocino bush-mallow *Malacothamnus mendocinensis*	Rank 1A GXQ SX	Chaparral, open roadside banks. The elevation ranges from 1395 to 1887 feet (425 to 575 meters). A shrub, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains chaparral habitat. The Study Area may provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
green monardella *Monardella viridis*	Rank 4.3 G3 S3	Broadleaved upland forest, chaparral, cismontane woodland. The elevation ranges from 328 to 3314 feet (100 to 1010 meters). A perennial herb, the blooming period is from Jun-Sep.	**High Potential.** The Study Area does provide the habitat requirements for the species.	**Not Observed.** Please see Section 6 for recommendations.
Bolander's catchfly *Silene bolanderi*	Rank 1B.2 G2 S2	Cismontane woodland, lower montane coniferous forest, North Coast coniferous forest, meadows and seeps, chaparral (edges). Usually grassy openings, sometimes dry rocky slopes, canyons, or roadsides; sometimes serpentinite. The elevation ranges from 1380 to 3775 feet (420 to 1150 meters). A perennial herb, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains lower montane coniferous forest that may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Hoffman's bristly jewelflower *Streptanthus glandulosus* ssp. *hoffmanii*	Rank 1B.3 G4T2 S2	Chaparral, cismontane woodland, valley and foothill grassland, moist, steep rocky banks in serpentine and non-serpentine soils. The elevation ranges from 197 to 2510 feet (60 to 765 meters). An annual herb, the blooming period is from Mar-Jul.	**Moderate Potential.** The Study Area contains chaparral, cismontane woodland, valley and foothill grassland. The Study Area may provide suitable habitat for this species.	**Not Observed.** Please see Section 6 for recommendations.
beaked tracyina *Tracyina rostrata*	Rank 1B.2 USFS: S G2 S2	Cismontane woodland, valley and foothill grassland, chaparral, often observed in open grassy meadows commonly within oak woodland and grassland habitats. The elevation ranges from 492 to 2609 feet (150 to 795 meters). An annual herb, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains chaparral, cismontane woodland and grassland habitats that may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Santa Cruz clover *Trifolium buckwestiorum*	Rank 1B.1 BLM: S G2 S2	Coastal prairie, broadleaved upland forest, cismontane woodland, often found in moist grasslands along gravelly margins. The elevation ranges from 99 to 2641 feet (30 to 805 meters). An annual herb, the blooming period is from Apr-Oct.	**Moderate Potential.** The Study Area contains cismontane woodland and broadleaved upland forest habitats that may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
oval-leaved viburnum *Viburnum ellipticum*	Rank 2B.3 G4G5 S3?	Chaparral, cismontane woodland, lower montane coniferous forest. The elevation ranges from 706 to 4593 feet (215 to 1400 meters). A shrub, the blooming period is from May-Jun.	**High Potential.** The Study Area does provide the species' habitat requirements.	**Not Observed.** Please see Section 6 for recommendations.

No (0) special status plant species were observed within the Study Area during the biological site assessment. Please see Section 6 for plant species recommendations.

Please refer to Appendix A for a table of all special-status plant species within a nine-quad vicinity of the Study Area as well as a discussion of the potential for each species to occur within the Study Area based on habitat present. No special-status species were observed within the Study Area during the Rare and Special-Status Plant Surveys conducted on April 17th, 18th, May 22nd, May 23rd and July 18th, 2024. Please refer to Appendix B for a complete list of all floristic species observed within the Study Area during the BA site visit.

5.3.2 Special-status Animal Species

A total of fifty-four (54) special-status wildlife species have been documented within the vicinity of the Study Area. Please refer to Appendix A for a table of all special-status wildlife species which occur within the vicinity of the Study Area and discussion of the potential for each species to occur within the Study Area. Special-status species documented within five miles of the Study Area are depicted in the CNDDB Vicinity map (Appendix D: Map 5, CNDDB Vicinity).

Of the fifty-four (54) special-status wildlife species within the vicinity of the Study Area, twenty (20) special-status wildlife species recorded have a moderate to high potential to occur within the Study Area. The remaining thirty-two (34) special-status wildlife species documented within the vicinity of the Study Area are unlikely to occur or do not have the potential to occur due to one or more of the following reasons:

- Aquatic Habitats (e.g., streams, rivers, vernal pools) necessary to support special- status wildlife species are not present within the Study Area.
- Vegetation Habitats (e.g., forested area, riparian, grassland) that provide nesting and/or

foraging resources necessary to support special-status wildlife species are not present within the Study Area.
- Physical Structures and Vegetation (e.g., caves, old-growth trees) that provide nesting, cover, and/or foraging habitat necessary to support special-status wildlife species are not present within the Study Area.
- Host Plants (e.g., *Cirsium sp.*) that provide larval and nectar resources necessary to support special-status wildlife species are not present within the Study Area.
- Historic and Contemporary Disturbance (e.g., cattle grazing, agriculture) deter the presence of the special-status wildlife species from occupying the Study Area.
- The Study Area is outside the documented nesting range of special-status wildlife species.

The twenty-two (22) special-status wildlife species with moderate or high potential to occur within the Study Area are described in the table below.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Amphibians				
red-bellied newt *Taricha rivularis*	CDFW: SSC IUCN: LC G2 S2	*T. rivularis* occur in coastal drainages from Humboldt County south to Sonoma County, inland to Lake County within broadleaved upland forest, North Coast coniferous forest, redwood, and riparian forest and woodland habitats. There is an isolated population of uncertain origin in Santa Clara County. Adults are active at the surface in moist environments. Transformed juveniles leave aquatic environments and go into hiding in underground shelters, often until they are ready to reproduce. This species will migrate over 1km to breed, typically in streams with moderate flow and clean, rocky substrate.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (1) suitability for this species and does provide the required habitat for this species.	**Not Observed**: See Section 6 for general recommendations.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Avifauna				
American goshawk *Accipiter atricapillus*	CDFW: SSC IUCN: LC G5 S3	Throughout their range, whether at sea level or in alpine settings, American Goshawks nest in mature and old-growth forests with more than 60% closed canopy. They typically build nests in conifers, such as Douglas-fir, white fir, California red fir, ponderosa pine, western larch, and western hemlock, along with deciduous trees including aspens and paper birch ear breaks in the canopy, such as a forest trail, jeep road, or opening created by a downed tree, and prefer sites with a creek, pond, or lake nearby.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.11), Medium (0.44), and High (1) suitability for this species and may provide the required habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
Cooper's hawk *Accipiter cooperies*	CDFW: WL IUCN: LC G5 S4	*A. cooperii* are forest and woodland birds, often in open, interrupted or marginal woodlands within cismontane woodland, riparian forest/woodland and upper montane coniferous forested habitats. Nest sites mainly in riparian growths of deciduous trees as in canyon bottoms on river flood plains and in live oak trees.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33), Medium (0.66), and High (1) suitability for this species and may provide the required habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
grasshopper sparrow *Ammodramus savannarum*	CDFW: SSC IUCN: LC G5 S3	*A. savannarum* are an uncommon and local, summer resident in valley and foothill grassland west of the Cascade- Sierra Nevada crest from Mendocino and Trinity Counties south to San Diego County. *A. savannarum* nests on the ground in dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes in areas with a variety of native grasses and tall forbs and scattered shrubs for singing perches. Nests are typically found at the base of a small clump of overhanging grass or other vegetation, perhaps in close proximity to other breeding grasshopper sparrows, and this species may double or triple clutch.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33) and Medium (0.66) suitability for this species. The Study Area may provide suitable habitat for the species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
golden eagle *Aquila chrysaetos*	BLM: S CDF: S CDFW: FP, WL IUCN: LC G5 S3	Golden eagles are found primarily in rolling foothills, mountain areas, sage-juniper flats, and desert in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinon and juniper woodlands, upper montane coniferous forest and valley foothill grassland habitats up to 12,000 feet. Cliff-walled canyons provide nesting habitat in most parts of the range; also, large trees in open areas.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (0.77) suitability for this species and does provide the required habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
white-tailed kite *Elanus leucurus*	BLM: S CDFW: FP IUCN: LC G5 S3S4	*E. leucurus* forages in open grasslands, meadows, or marshes close to isolated, dense-topped trees for nesting and perching. This species is located in rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland within cismontane woodland, marsh and swamp, riparian woodland, valley and grassland, and wetland habitats.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33) and Medium (0.66) suitability for this species. The Study Area may provide suitable habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
osprey *Pandion haliaetus*	CDF: S CDFW: WL IUCN: LC G5 S4	*P. haliaetus* occupies riparian forest habitat. They forage over ocean shores, bays, freshwater lakes and larger streams. They construct large nests in large trees, snags, and blown-out treetops within 15 miles of a good fish-producing body of water.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33) and Medium (0.66) suitability for this species. The Study Area may provide suitable habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
yellow warbler *Setophaga petechia*	CDFW: SSC IUCN: LC G5 S3S4	*S. petechia* often inhabits riparian forest, scrub and woodland habitats in summer in close proximity to water. Frequently found nesting and foraging in willows shrubs and thickets and in alders, ash, cottonwoods, and sycamores. This species will also nest in montane shrubbery in open conifer forest in the Cascades and Sierra Nevada.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33) and Medium (0.66) suitability for this species. The Study Area may provide suitable habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
Insects				
obscure bumble bee *Bombus caliginosus*	IUCN: VU G2G3 S1S2	*Bombus caliginosus* inhabits open grassy coastal prairies and Coast Range meadows in coastal areas from Santa Barbara County to north to Washington state. Nesting occurs underground as well as above ground in abandoned bird nests. Males patrol circuits in search of mates. This species is classified as a medium long-tongued species, whose food plants include *Ceanothus, Cirsium, Clarkia, Keckiella, Lathyrus, Lotus, Lupinus, Baccharis, Rhododendron, Rubus, Trifolium,* and *Vaccinium*.	**Moderate Potential.** The Study Area may contain suitable habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for insect species.
western bumble bee *Bombus occidentalis*	SCE IUCN: VU USFS: S G3 S1	The habitat for this species is described as open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. typically nests underground in abandoned rodent burrows or other cavities Food plants of *Bombus occidentalis* include *Ceanothus, Centaurea, Chrysothamnus, Cirsium, Geranium, Grindellia, Lupinus, Melilotus, Monardella, Rubus, Solidago, and Trifolium.*	**Moderate Potential.** The Study Area may contain suitable habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for insect species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
monarch – California overwintering pop. *Danaus plexippus pop. 1*	FC IUCN: EN USFS: S G4T1T2 S2	*D. plexippus* are a migratory species, making massive migrations from August-October to hibernate along the California coast and central Mexico. They commonly occur in closed-cone coniferous forest habitat. This species roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. *D. plexippus* feeds on flower nectar from all milkweeds, dogbane, lilac, red clover, lantana, thistles, goldenrods, blazing stars, ironweed and tickseed sunflower. The majority of overwintering sites are found within 1.5 miles of the Pacific Ocean or San Francisco Bay which moderates temperatures. Sites are typically found at low elevations (200-300ft) and situated on slopes oriented to the south, southwest, or west which provide the most solar radiation, or in shallow canyons or gullies. Monarchs require very specific microclimatic conditions at overwintering sites including dappled sunlight, high humidity, fresh water, and an absence of freezing temperatures or high winds. Fall or winter-blooming flowers provide nectar which may be needed to maintain lipid levels necessary for spring migration.	**Moderate Potential.** The Study Area may contain suitable habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for insect species.
Mammals				
pallid bat *Antrozous pallidus*	BLM: S CDFW: SSC IUCN: LC USFS: S G4 S3	*A. pallidus* is found in chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley & foothill grassland habitats. Most common in open, dry habitats with rocky areas for roosting. This species forages along river channels. Roosts must protect bats from high temperatures. This species is very sensitive to disturbance of roosting sites.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.11) and Moderate (0.66) suitability, for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
northern California ringtail *Bassariscus astutus raptor*	CDFW: FP G5TNR SNR	This species will exploit a variety of habitats such as dry, rocky, brush-covered hillsides or riparian areas, typically near an open water source. Dens are most often located in rock crevices, boulder piles, or talus, but also tree hollows, root cavities, and rural buildings. They rarely use the same den for more than a few days. Females with litters change dens within 10 days of birth and almost daily after 20 days.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.67) suitability for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
North American porcupine *Erethizon dorsatum*	IUCN: LC G5 S3	*E. dorsatum* inhabit broadleaved upland forest, cismontane woodland, closed-cone coniferous forest, lower montane coniferous forest, North coast coniferous forest, and upper montane coniferous forest habitats. This herbivore eats leaves, twigs, and green plants like Skunk cabbage (*Symplocarpus foetidus*) and clovers (Trifolium sp.). This species makes its dens in hollow trees, decaying logs and caves in rocky areas. Recognized as primarily solitary and nocturnal, *E. dorsatum* may be seen foraging during daytime.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.67) suitability for this species. The study area provides a significant amount of the species' habitat requirements.	**Not Observed.** See Section 6 for general recommendations for mammal species.
western mastiff bat *Eumops perotis californicus*	BLM: S CDFW: SSC G4G5T4 S3S4	*E. perotis californicus* occurs in a wide variety of habitats, including chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland. Roosting sites occur in rocky outcrops, crevices and cliffs with 50-100% rocky slopes. Day roosts are established in crevices in rocky canyons and cliffs, trees, tunnels and buildings with a minimum 2-meter (6.5 foot) drop-off to provide a takeoff or launching area. The animals are strong, fast fliers, with a likely extensive foraging range, up to 15 miles from the nearest possible roosting site. Foraging occurs in broad, open areas, woodlands and forest, scrub, chaparral, grassland, riparian and agricultural areas and there is no evidence of this species being habitat specialists.	**High Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within High (1) suitability for this species throughout the study area.	**Not Observed.** See Section 6 for general recommendations for mammal species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
hoary bat *Lasiurus cinereus*	IUCN: LC G3G4 S4	*L. cinereus* prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding in broadleaved upland forest, cismontane woodland, lower montane coniferous forest, and North coast coniferous forest habitats. Hoary bats roost in dense foliage of medium to large trees. They feed primarily on moths and requires water.	**Moderate Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.4) suitability for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
western red bat *Lasiurus frantzii*	CDFW: SSC IUCN: LC G4 S3	*L. blossevillii* roosts primarily in trees, often 2-40ft above the ground from sea level through mixed conifer forests. Typical habitats include cismontane woodland, lower montane coniferous forest, riparian forests and woodlands. This species prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Moderate Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.55) suitability for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
long-eared myotis *Myotis evotis*	BLM:S IUCN: LC G5 S3	*M. evotis* is found in all brush, woodland and forested habitats from sea level to approximately 9,000 feet in elevation; however, prefers coniferous woodlands and forests. Foraging occurs along habitat edges, in open spaces and over water. Nursery colonies are often found within buildings, crevices, spaces under bark and snags. Caves are used primarily as night roosts.	**Moderate Potential**. The CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate suitability with pockets of High for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
fisher [West Coast DPS] *Pekania pennanti*	CDFW: SSC IUCN: LC BLM: S G5 S3	*P. pennanti* inhabit forest stands with late-successional characteristics including intermediate-to-large tree stages of coniferous forest and deciduous-riparian areas with high percent canopy closure in North coast coniferous forest, old growth and riparian forest habitat. *P. pennanti* use cavities, snags, logs and rocky areas for cover and denning and require large areas of mature, dense forest. Fishers are primarily solitary, except during breeding season (February – April).	**Moderate Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate and High suitability for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
American badger *Taxidea taxus*	CDFW: SSC IUCN: LC G5 S3	*T. taxus* are found throughout most of California in a variety of habitats and are most abundant in drier open stages of most shrub, forest and herbaceous habitats, with friable soils. T. taxus dig burrows in the friable soils and frequently reuse old burrows and prey on burrowing rodents.	**Moderate Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate and High suitability for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.

No (0) special status wildlife species were observed within the Study Area during the biological site assessment. Please see Section 6 for animal species recommendations.

Section 6.0: Assessment Summary and Recommendations

6.1 Biological Communities

The Study Area and immediate surroundings were assessed during a site visit April 17th, April 18th, May 22nd, May 23rd and July 18th, 2024, to determine local biological communities present. Biological communities observed were classified using data collected in the field and the Manual of California Vegetation Online Edition (MCV2 Alliances, CNPS 2024). The Study Area contains three (3) non-sensitive biological communities, three (3) sensitive aquatic communities and no (0) sensitive biological communities.

Non-Sensitive Communities:

Three (3) non-sensitive biological community In the Study Area, three (3) non-sensitive MCV2 Alliance were observed on site: (1) *Quercus wislizeni-Quercus chrysolepis* (shrub) Shrubland Alliance, (2) *Avena* ssp.-*Bromus* ssp. Herbaceous Semi-Natural Alliance, and (3) *Pinus sabiniana* Woodland Alliance. No (0) sensitive biological communities were identified. A detailed description of these biological communities is discussed in section 5.1.1.

Sensitive Aquatic Communities:

Aquatic resources, communities, and habitats (e.g., watercourses, ponds, wetlands, vernal pools, etc.) are considered sensitive biological communities and are afforded special protections under CEQA and other Federal, State, and local laws, regulations, and ordinances. Aquatic habitats present within the Study Area could provide suitable aquatic or riparian habitats for sensitive flora and fauna.

Three (3) watercourses flow through the Study Area including Doolin Creek a Class I and two unnamed Class III watercourses. All three (3) watercourses are classified as a Riverine system by the USFWS National Wetland Inventory (Appendix D: Map 7, National Wetland Inventory).

Recommendations for wetland habitats are listed below:

- It is recommended that all earthwork within 50-ft of any wetland adhere to standard methods of erosion and sediment control.
- It is recommended that any future removal or disturbance to wetland vegetation be avoided if

possible or mitigated at a ratio of 3:1 total vegetative cover.

The Study Area does fall within the 100-year flood zone according to the FEMA National Flood Hazard Layer (NFHL) (Appendix D: Map 8, NFHL 100-Year Flood Zone). All the study areas were determined to have moderate risk within the 100-year flood zone.

Recommendations for sensitive aquatic communities are listed below:

- It is recommended that all earthwork adjacent to any watercourse or wetlands adhere to standard methods of erosion and sediment control and, if possible, complete all work while the channel is dry to reduce sediment load downstream.
- It is recommended that any work within a watercourse or wetlands with the potential to impact aquatic resources be conducted in compliance with CDFW's Lake and Streambed Alteration Agreement.
- It is recommended that future expansions or development associated with this project be located outside of the NFHL 100-year flood zone as well as SWRCB setbacks.

6.2 Special-status Species

Twenty-three (23) special-status plant species and twenty (20) special-status wildlife species have a moderate or high potential to occur within the Study Area based on habitat present. Please refer to the tables in section 5.2, Special-Status Species, for a complete list, state rarity ranks, and habitat descriptions of species with moderate or high potential to occur within the Study Area. No (0) special status plant or wildlife species were observed within the Study Area during the biological site assessment and botanical surveys.

6.2.1 Special-status Plant Species

Special-status plant species are afforded special protections under CEQA Section 15380 and the Native Plant Protection Act (NPPA). Twenty-three (23) special-status plant species have a moderate or high potential to occur within the Study Area. These species are listed in Section 5.2.1 above.

The Biological Assessment and Rare Plant Survey constitutes a seasonally appropriate botanical survey for this project that was conducted on April 17th, April 18th, May 22nd, May 23rd and July 18th, 2024. No (0) special-status species were observed during the BA and Rare Plant Survey. The Rare Plant Surveys were conducted during the blooming period for all plants with moderate or high potential to occur within the Study Area. A complete list of all plant species observed is included in Appendix B: List of Observed Taxa.

6.2.2 Special-status Wildlife Species

Special-status wildlife species are afforded special protections under the ESA, CESA, CEQA, CFGC, and other local laws and regulations. Native nesting and migratory birds are protected under the MBTA and CFGC Section 3503, 3503.5, and 3513.

Twenty (20) special-status wildlife species have a moderate or high potential to occur within the Study Area. These species are listed in Section 5.2.2 above. No (0) special-status wildlife species were observed within the Study Area during the biological site visits. A complete list of all wildlife species observed is included in Appendix B: List of Observed Taxa.

<u>Amphibians:</u>

One (1) special status amphibian species has a moderate potential to occur within the Study Area.

Recommendations for special-status amphibian species:

- It is recommended that all earthwork within or adjacent to any watercourse or waterbody adhere to standard methods of erosion and sediment control.
- It is recommended that a qualified biologist be on site for any groundbreaking activities or dewatering event within or adjacent to a watercourse or waterbody to address the potential for the presence of special-status amphibian species.
- It is recommended that any modifications to watercourses and waterbodies be notified for and adhere to a CDFW Lake and Streambed Alteration Agreement.
- It is recommended that any future expansions or development associated with the project be located outside of the SWRCB setbacks.

No (0) special-status amphibian species were observed within the Study Area during the biological site assessment.

Avifauna

Seven (7) special status avian species have moderate to high potential to occur within the Study Area. Development within the Study Area may have the potential to significantly impact bird species if present. Most non-game bird species in California are protected under the Migratory Bird Treaty Act (MBTA) which prohibits the deliberate destruction of active nests belonging to protected species. Groundbreaking activities, specifically vegetation removal, within the Study Area during avian breeding periods could significantly impact nesting bird species.

Recommendations for special-status avian species and migratory bird species are listed below:

- It is recommended that nesting bird surveys be conducted by a qualified biologist prior to the commencement of any activity that results in the removal of vegetation during nesting bird season. Nesting bird season is between March 1st and August 31st of any year.
- It is recommended that any active bird nest not be removed, relocated, or otherwise disturbed for any purpose until all fledglings have left the nest.

No (0) special-status avian species or nests were observed within the Study Area during the biological assessment.

Insects:

Three (3) special status insect species have a moderate to high potential to occur within the Study Area.

Recommendations for special-status insect species are listed below:

- It is recommended that trees or other vegetation occupied by overwintering populations of monarch not be removed or otherwise disturbed until all monarchs have left the site.
- It is recommended that monarch surveys be conducted by a qualified biologist no more than 14 days prior to the commencement of tree/shrub removal from November 1st-January 31st of any year when monarchs are most likely to be found overwintering.
- Land managers could consider planting or cover cropping with beneficial forage or host species for special-status insects. Host species for the monarch butterfly include milkweed (*Asclepias sp.).* Forage species for the western bumblebee include *Ceanothus, Centaurea, Chrysothamnus, Cirsium, Geranium, Grindellia, Lupinus, Melilotus, Monardella, Rubus, Solidago, and Trifolium.*

- If a special-status insect nests are observed, it is recommended that active nests not be removed, relocated, or otherwise disturbed until the nest becomes inactive.

No (0) special-status insects or insect nests were observed within the Study Area during the biological site assessment.

Mammals

Nine (9) special status mammal species have a moderate to high potential to occur within the Study Area.

Recommendations for special-status insect species are listed below:

- If evidence of bat roosts are observed (i.e. bat guano, ammonia odor, grease stained cavities) around trees, cavities, or structures proposed for removal, it is recommended that pre-construction bat surveys be conducted no more than 14 days prior to groundbreaking activities. If bat roosts are identified, buffer or mitigation measures should be established by a qualified biologist.
- If evidence of special-status mammal borrows or denning activity is observed, it is recommended that pre-construction surveys be conducted by a qualified biologist for activities that may affect den sites.

No (0) special-status mammals or evidence were observed during the biological site assessment.

6.3 Wildlife Corridors

No change to foraging or wintering habitat for migratory birds has occurred as a result of the cannabis development. Additionally, no significant impacts to migratory corridors for amphibian, aquatic, avian, mammalian, or reptilian species is expected because of the cannabis development.

6.4 Critical Habitat

The Study Area does not contain and is not adjacent to critical habitat for any Federal or State- listed species (Appendix E: Supporting Documents; USFWS IPAC Official Species List).

Section 7.0: References

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Alicia Ives Ringstad received a B.S. in Wildlife Management and Conservation from Humboldt State University in 2007, with studies including plant taxonomy. She is a Consulting Senior Wildlife Biologist with over 17 years professional wildlife biology, forestry, botany and environmental planning experience. Ms. Ives Ringstad provides Botanical surveys and Biological Assessments for large and small projects requiring compliance with the California Environmental Quality Act (CEQA), these projects include timber harvesting, land conversion, minor and major subdivisions, and development plans/permits. Ms. Ives Ringstad's experience includes conducting wetland delineations that met the requirements of the US Army Corps of Engineers Technical Report (Y-87-1).

Sincerely,

Alicia Ives Ringstad
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Appendix A: Table of Potential for Special-Status Plants and Wildlife within the Study Area

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Amphibians				
northern red-legged frog *Rana aurora*	CDFW: SSC IUCN: LC USFS: S G4 S3	*R. aurora* are often observed within humid forests, woodlands, wetlands, grasslands and stream sides in northwestern California, usually near dense riparian cover. This species is generally found near permanent water but can be found far from water in damp woods and meadows during the non-breeding season. Typical habitat types include Klamath/North coast flowing waters, riparian forest and woodland.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of this species.	**Not Present.** There are no recommendations for this species.
foothill yellow-legged frog - north coast DPS *Rana boylii pop. 1*	CDFW: SSC BLM: S USFS: S G3TNRQ S4	The foothill yellow-legged frog pop 1 (Northwest/North Coast clade) is found in or near partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats, including chaparral, cismontane woodland, coastal scrub, Klamath/North Coast flowing waters, lower montane coniferous forest, meadows and seeps, riparian forest, riparian woodland and flowing waters. This species needs at least some cobble-sized substrate for egg-laying and need at least 15 weeks to attain metamorphosis.	**Low Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33) suitability for this species and isn't likely to provide the required habitat for this species.	**Not Present.** There are no recommendations for this species.
red-bellied newt *Taricha rivularis*	CDFW: SSC IUCN: LC G2 S2	*T. rivularis* occur in coastal drainages from Humboldt County south to Sonoma County, inland to Lake County within broadleaved upland forest, North Coast coniferous forest, redwood, and riparian forest and woodland habitats. There is an isolated population of uncertain origin in Santa Clara County. Adults are active at the surface in moist environments. Transformed juveniles leave aquatic environments and go into hiding in underground shelters, often until they are ready to reproduce. This species will migrate over 1km to breed, typically in streams with moderate flow and clean, rocky substrate.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (1) suitability for this species and does provide the required habitat for this species.	**Not Observed**: See Section 6 for general recommendations.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Avifauna				
American goshawk *Accipiter atricapillus*	CDFW: SSC IUCN: LC G5 S3	Throughout their range, whether at sea level or in alpine settings, American Goshawks nest in mature and old-growth forests with more than 60% closed canopy. They typically build nests in conifers, such as Douglas-fir, white fir, California red fir, ponderosa pine, western larch, and western hemlock, along with deciduous trees including aspens and paper birch ear breaks in the canopy, such as a forest trail, jeep road, or opening created by a downed tree, and prefer sites with a creek, pond, or lake nearby.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.11), Medium (0.44), and High (1) suitability for this species and may provide the required habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
Cooper's hawk *Accipiter cooperies*	CDFW: WL IUCN: LC G5 S4	*A. cooperii* are forest and woodland birds, often in open, interrupted or marginal woodlands within cismontane woodland, riparian forest/woodland and upper montane coniferous forested habitats. Nest sites mainly in riparian growths of deciduous trees as in canyon bottoms on river flood plains and in live oak trees.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33), Medium (0.66), and High (1) suitability for this species and may provide the required habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
tricolored blackbird *Agelaius tricolor*	ST BLM: S CDFW: SSC IUCN: EN NABCI: RWL USFWS: BCC G1G2 S2	*A. tricolor* is largely endemic to California, most numerous in the Central Valley and vicinity within freshwater marsh, marsh and swamp. Swamp and wetland habitats. This species is highly colonial requiring open water, protected nest substrate and foraging area with insect prey within a few km of the colony.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of this species.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
grasshopper sparrow *Ammodramus savannarum*	CDFW: SSC IUCN: LC G5 S3	*A. savannarum* are an uncommon and local, summer resident in valley and foothill grassland west of the Cascade- Sierra Nevada crest from Mendocino and Trinity Counties south to San Diego County. *A. savannarum* nests on the ground in dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes in areas with a variety of native grasses and tall forbs and scattered shrubs for singing perches. Nests are typically found at the base of a small clump of overhanging grass or other vegetation, perhaps in close proximity to other breeding grasshopper sparrows, and this species may double or triple clutch.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33) and Medium (0.66) suitability for this species. The Study Area may provide suitable habitat for the species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
golden eagle *Aquila chrysaetos*	BLM: S CDF: S CDFW: FP, WL IUCN: LC G5 S3	Golden eagles are found primarily in rolling foothills, mountain areas, sage-juniper flats, and desert in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinon and juniper woodlands, upper montane coniferous forest and valley foothill grassland habitats up to 12,000 feet. Cliff-walled canyons provide nesting habitat in most parts of the range; also, large trees in open areas.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (0.77) suitability for this species and does provide the required habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
great egret *Ardea alba*	CDF: S IUCN: LC G5 S4	Great egrets are located in brackish marsh, estuary, freshwater marsh, marsh & swamp, riparian forest, and wetland habitats. They are colonial nesters in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of this species.	**Not Present.** There are no recommendations for this species.
great blue heron *Ardea herodias*	CDF: S IUCN: LC G5 S4	Great blue herons are located in brackish marsh, estuary, freshwater marsh, marsh and swamp, riparian forest and wetland habitats. They are colonial nesters in tall trees, cliffsides and sequestered spots on marshes. Rookery sites are located in close proximity to foraging areas; marshes, lake margins, tide-flats, rivers, streams and wet meadows.	**Low Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Unranked and Low (0.33) suitability for this species and does not provide the required habitat for this species.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
western snowy plover *Charadrius nivosus nivosus*	FT CDFW: SSC NABCI: RWL G3T3	*C. nivosus nivosus* need sandy, gravelly or friable soils for nesting. This species is located on sandy beaches, salt pond levees and shores of large alkali lakes in Great Basin standing waters, sandy shores and wetland habitats.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of this species.	**Not Present.** There are no recommendations for this species.
northern harrier *Circus hudsonius*	CDFW: SSC IUCN: LC USFWS: BCC G5 S3	*C. hudsonius* are year-long residents of Mendocino and Lake County. They frequent coastal salt and freshwater marshes in coastal scrub, Great Basin grassland, marsh & swamp, riparian scrub, valley & foothill grassland, and wetland habitats. They nest on the ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	**Low Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Unranked and Low (0.33) suitability for this species and does not provide the required habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT SE BLM: S NABCI: RWL USFS: S G5T2T3 S1	Western yellow-billed cuckoos breed in large blocks of riparian habitats (particularly woodlands with cottonwoods and willows). Dense understory foliage appears to be an important factor in nest site selection. This species makes their nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. often between 3 to 90 feet (1 to 28 meters).	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of this species.	**Not Present.** There are no recommendations for this species.
white-tailed kite *Elanus leucurus*	BLM: S CDFW: FP IUCN: LC G5 S3S4	*E. leucurus* forages in open grasslands, meadows, or marshes close to isolated, dense-topped trees for nesting and perching. This species is located in rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland within cismontane woodland, marsh and swamp, riparian woodland, valley and grassland, and wetland habitats.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33) and Medium (0.66) suitability for this species. The Study Area may provide suitable habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
yellow- breasted chat *Icteria virens*	CDFW: SSC IUCN: LC G5 S3	*I. virens* occurs within riparian forest, woodland, or scrub. I. virens are summer residents inhabiting riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian habitat often consisting of willow, blackberry, and wild grape within 10ft. of the ground.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of this species.	**Not Present.** There are no recommendations for this species.
Lewis' woodpecker *Melanerpes lewis*	IUCN: LC NABCI: YWL USFWS: BCC G4 S4	*M. lewis* often inhabit oak savannahs, broken deciduous, and coniferous habitats. Nests are made at the forest edge (especially ponderosa pine) or in groves or scattered trees and require snags for nest cavities. *M. lewis'* primary diet consists of insects, nuts, and fruits.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of this species.	**Not Present.** There are no recommendations for this species.
black-crowned night heron *Nycticorax nycticorax*	IUCN: LC G5 S4	*N. nycticorax* are colonial nester, usually in trees, occasionally in tule patches in marsh & swamp, riparian forest, riparian woodland, and wetland habitat. Rookery sites are located adjacent to foraging areas, such as, lake margins, mud-bordered bays, marshy spots.	**Low Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Unranked and Low (0.33) suitability for this species and does not provide the required habitat for this species.	**Not Present.** There are no recommendations for this species.
osprey *Pandion haliaetus*	CDF: S CDFW: WL IUCN: LC G5 S4	*P. haliaetus* occupies riparian forest habitat. They forage over ocean shores, bays, freshwater lakes and larger streams. They construct large nests in large trees, snags, and blown-out treetops within 15 miles of a good fish-producing body of water.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33) and Medium (0.66) suitability for this species. The Study Area may provide suitable habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
yellow warbler *Setophaga petechia*	CDFW: SSC IUCN: LC G5 S3S4	*S. petechia* often inhabits riparian forest, scrub and woodland habitats in summer in close proximity to water. Frequently found nesting and foraging in willows shrubs and thickets and in alders, ash, cottonwoods, and sycamores. This species will also nest in montane shrubbery in open conifer forest in the Cascades and Sierra Nevada.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.33) and Medium (0.66) suitability for this species. The Study Area may provide suitable habitat for this species.	**Not Observed**: See Section 6 for general recommendations for avifauna species.
Lawrence's goldfinch *Spinus lawrencei*	IUCN: LC NABCI: YWL USFWS: BCC G3G4 S4	*S. lawrencei* inhabit dry, open oak woodlands with chaparral, weedy fields with access to a water source. Nests are usually placed in a forked branch of California sycamore *(Plantanus racemosa)*, blue oak *(Quercus douglasii)*, interior live oak *(Q. wislizeni)*, canyon live oak *(Q. chrysolepis)* and coast live oak *(Q. agrifolia)*, sometimes in clumps of mistletoe or lace lichen approximately 10ft above ground.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of this species.	**Not Present.** There are no recommendations for this species.
northern spotted owl *Strix occidentalis caurina*	FT ST CDF: S NABCI: YWL G3G4T3 S2	*S. occidentalis caurina* are year-round residents in dense, structurally complex forests, primarily with old-growth conifers. Nests on snags and within tree cavities, and often is associated with existing structures (old raptor nests, squirrel nests and *A. pomo* nests).	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of this species.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Fish				
Clear Lake prickly sculpin *Cottus asper ssp.*	CDFW: SSC G5T1 SNR	*C. asper ssp.* is adaptable to environments ranging from fresh to saltwater, and from small cool stream to large warm rivers and lakes. *C. asper ssp.* has a variety of forms as some are coastal, others live in the valley, and some are limited to Clear Lake proper. The coastal forms rarely live in a stream without an estuary and rarely go farther than 50 km upstream though they have been found present over 120 km upstream. In the Central Valley of California these fish inhabit low elevation waters. The limitation to the spread of these fish. In streams these fish use a variety of habitats though good cover or overhanging vegetation is a common thread. Most spawning occurs between February and June. In lakes, juveniles forage around the lake shores and then gradually move into deeper water as they grow.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of the species.	**Not Present.** There are no recommendations for this species.
Pacific lamprey *Entosphenus tridentatus*	AFS: VU BLM: S CDFW: SSC IUCN: LC USFS: S G4 S3	*E. tridentatus* occur in aquatic habitats such as, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters, and South coast flowing waters. This species is anadromous, but also with a number of permanent freshwater resident populations. This species is parasitic as adults, feeding on blood and body fluids of its prey. To breed, *E. tridentatus* migrate into fresh water and dig nests. Adults die post-breeding. Larvae/juveniles live 5-6 years in soft sand or mud of freshwater before returning to the ocean.	**Low Potential.** According to the FSSC species' range map, the Study Area contains little habitat within the range for this species; however, required habitat for this species is not present within the Study Area.	**Not Present.** There are no recommendations for this species.
Tidewater goby *Eucyclogobius newberryi*	FE AFS: EN IUCN: NT CDFW: SSC G3 S3	*E. newberryi* occur in aquatic habitats such as, Klamath/North coast flowing waters, Sacramento/ San Joaquin flowing waters, and South coast flowing waters. This species is found in brackish water of shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels. Vegetation is generally sparse, consisting of several species of submerged or emergent plants including *Ruppia maritima, Scirpus* sp., and *Potomogeton* sp.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of the species.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
northern coastal roach *Hesperoleucus venustus navarroensis*	CDFW: SSC GNRT3 S3	This species found generally in a wide variety of habitats in the Navarro River and Russian River basins where there is cover (e.g. fallen trees) and where alien predators are absent. They are most abundant in tributaries with clear, well oxygenated water with dominant substrates of cobble and boulder, and shallow depths (average 10-50 cm) with pools up to 1 m deep.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of the species.	**Not Present.** There are no recommendations for this species.
Clear Lake tule perch *Hysterocarpus traskii lagunae*	CDFW: SSC G5T3 S3	*H. traskii lagunae* are endemic to three (3) highly altered lakes (Clear Lake, Lower Blue and Upper Blue Lake); however, it is expected that they are only commonly found in Upper Blue Lake now. Clear Lake and Lower Blue Lake are typically warm (summer temperatures 25-28°C) and shallow, with primarily sandy or soft bottom substrates. Upper Blue Lake is similar but is also clearer and colder. Tule perch are very tolerant of environmental variables; however, low water quality limits their distribution in their historic ranges. This species is found in small shoals in deep (3+ m) tule beds, among rocks (especially along steep rocky shores), or among the branches of fallen trees.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of the species.	**Not Present.** There are no recommendations for this species.
Russian River tule perch *Hysterocarpus traskii pomo*	AFS: VU CDFW: SSC G5T4 S4	*H. traskii pomo* inhabits the low elevation streams of the Russian River system. They require clear, flowing water with abundant cover. They also require deep (> 1 m) pool habitat. Mating occurs in July-Sept. In May-June the female bears 10- 60 live fish.	**Low Potential.** According to the FSSC species' range map, the Study Area contains little habitat within the range for this species; however, required habitat for this species is not present within the Study Area.	**Not Present.** There are no recommendations for this species.
hardhead *Mylopharodon conocephalus*	CDFW: SSC IUCN: LC USFS: S G3 S3	*M. conocephalus* are found within low to mid-elevation streams in the Sacramento-San Joaquin drainage and the Russian River. This species requires clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Hardheads are not found where exotic centrarchids predominate.	**Low Potential.** According to the FSSC species' range map, the Study Area contains little habitat within the range for this species; however, required habitat for this species is not present within the Study Area.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
coho salmon – southern Oregon/northern California ESU *Oncorhynchus kisutch pop. 2*	FT ST AFS: TH G5T2Q S2	The Federal listing refers to populations between Cape Blanco, Oregon and Punta Gorda, Humboldt County, California. State listing refers to populations between the Oregon border and Punta Gorda, California. O. kisutch are anadromous, migrating and spawning in streams that flow directly into the ocean or tributaries of larger rivers. Migration peaks around mid-May till mid-June. Coho lay egg masses (redds), often located between a pool and a riffle. This ESU includes naturally spawned coho salmon originating from coastal streams and rivers between Cape Blanco, Oregon, and Punta Gorda, California.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of the species.	**Not Present.** There are no recommendations for this species.
coho salmon – central California coast ESU *Oncorhynchus kisutch pop. 4*	FE SE AFS: EN G5T2Q S2	Coho are anadromous, migrating and spawning in streams that flow directly into the ocean or tributaries of larger rivers. Migration peaks mid-May till mid-June. The fish will spend two to three years at sea before migrating back to their natal stream to spawn. Coho lay egg masses (redds), often located between a pool and a riffle. This ESU, includes naturally spawned coho salmon originating from rivers south of Punta Gorda, Ca. to and including Aptos Creek, as well as such coho salmon originating from tributaries to San Francisco Bay.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the watercourses present in Study Area does not have the intrinsic potential for this species.	**Not Present.** There are no recommendations for this species
steelhead - central California coast DPS *Oncorhynchus mykiss irideus pop. 8*	FT AFS: TH G5T2T3Q S3	*O. mykiss irideus* are anadromous coastal rainbow trout. As adults, this species requires high flows, with depths of at least 18cm for passage. Clean well-aerated gravel beds, typically in steep, rocky reaches of upper tributaries are needed for spawning. This DPS includes naturally spawned anadromous *O. mykiss* originating below natural and manmade impassable barriers from the Sacramento and San Joaquin Rivers and their tributaries; excludes such fish originating from San Francisco and San Pablo Bays and their tributaries.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the watercourses present in Study Area does not have the intrinsic potential for this species.	**Not Present.** There are no recommendations for this species.
steelhead – northern California DPS *Oncorhynchus mykiss irideus pop. 16*	FT AFS: TH G5T2T3Q S1	*O. mykiss irideus* are anadromous fish located in coastal basins from Redwood Creek south to the Gualala River, inclusive. Does not include summer-run steelhead. As adults, this species requires high flows, with depths of at least 18cm for passage. Clean well-aerated gravel beds, typically in steep, rocky reaches of upper tributaries are needed for spawning.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of the species.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
summer-run steelhead trout *Oncorhynchus mykiss irideus pop. 36*	CDFW: SSC SCE G5T4Q S2	*O. mykiss irideus* are anadromous located in northern Calif coastal streams south to Middle Fork Eel River. Within range of Klamath Mtns province DPS and Northern California DPS. They require cool, swift, shallow water and clean loose gravel for spawning, and suitably large pools in which to spend the summer.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of the species.	**Not Present.** There are no recommendations for this species.
steelhead - northern California DPS summer- run *Oncorhynchus mykiss irideus pop. 48*	FT SE G5TNRQ S2	*O. mykiss irideus* are a naturally spawning population of the stream-maturing summer-run ecotype. From Redwood Creek watershed south to and inclusive of Gualala River watershed. Distribution within range more limited.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of the species.	**Not Present.** There are no recommendations for this species.
steelhead - northern California DPS winter- run *Oncorhynchus mykiss irideus pop. 49*	FT G5TNRQ S3	*O. mykiss irideus* are a naturally spawning population of the ocean-maturing winter-run ecotype. From Redwood Creek watershed south to and inclusive of Gualala River watershed. Distribution throughout range.	**Low Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is within the species' range, but there is not a watercourse that has enough flow to sustain the species.	**Not Present.** There are no recommendations for this species.
chinook salmon – California coastal ESU *Oncorhynchus tshawytscha pop. 17*	FT AFS: TH G5T2Q S2	The Federal listing refers to wild spawned, coastal, spring and fall runs between Redwood Cr, Humboldt Co and Russian River, Sonoma Co. Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temperatures greater than 27°C are lethal.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the range of the species.	**Not Present.** There are no recommendations for this species.
Insects				
obscure bumble bee *Bombus caliginosus*	IUCN: VU G2G3 S1S2	*Bombus caliginosus* inhabits open grassy coastal prairies and Coast Range meadows in coastal areas from Santa Barbara County to north to Washington state. Nesting occurs underground as well as above ground in abandoned bird nests. Males patrol circuits in search of mates. This species is classified as a medium long-tongued species, whose food plants include *Ceanothus, Cirsium, Clarkia, Keckiella, Lathyrus, Lotus, Lupinus, Baccharis, Rhododendron, Rubus, Trifolium,* and *Vaccinium*.	**Moderate Potential.** The Study Area may contain suitable habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for insect species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
western bumble bee *Bombus occidentalis*	SCE IUCN: VU USFS: S G3 S1	The habitat for this species is described as open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. typically nests underground in abandoned rodent burrows or other cavities Food plants of *Bombus occidentalis* include *Ceanothus, Centaurea, Chrysothamnus, Cirsium, Geranium, Grindellia, Lupinus, Melilotus, Monardella, Rubus, Solidago, and Trifolium.*	**Moderate Potential.** The Study Area may contain suitable habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for insect species.
monarch – California overwintering pop. *Danaus plexippus pop. 1*	FC IUCN: EN USFS: S G4T1T2 S2	*D. plexippus* are a migratory species, making massive migrations from August-October to hibernate along the California coast and central Mexico. They commonly occur in closed-cone coniferous forest habitat. This species roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. *D. plexippus* feeds on flower nectar from all milkweeds, dogbane, lilac, red clover, lantana, thistles, goldenrods, blazing stars, ironweed and tickseed sunflower. Most overwintering sites are found within 1.5 miles of the Pacific Ocean or San Francisco Bay with moderate temperatures. Sites are typically found at low elevations (200-300ft) and situated on slopes oriented to the south, southwest, or west which provide the most solar radiation, or in shallow canyons or gullies. Monarchs require very specific microclimatic conditions at overwintering sites including dappled sunlight, high humidity, fresh water, and an absence of freezing temperatures or high winds. Fall or winter-blooming flowers provide nectar which may be needed to maintain lipid levels necessary for spring migration.	**Moderate Potential.** The Study Area may contain suitable habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for insect species.
Mammals				
pallid bat *Antrozous pallidus*	BLM: S CDFW: SSC IUCN: LC USFS: S G4 S3	*A. pallidus* is found in chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley & foothill grassland habitats. Most common in open, dry habitats with rocky areas for roosting. This species forages along river channels. Roosts must protect bats from high temperatures. This species is very sensitive to disturbance of roosting sites.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.11) and Moderate (0.66) suitability, for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Sonoma tree vole *Arborimus pomo*	CDFW: SSC IUCN: NT G3 S3	*A. pomo* is distributed along the North Coast from Sonoma County north to the Oregon border, being practically restricted to the fog belt. They are found in Douglas-fir, redwood and montane hardwood conifer forests. This species feeds almost exclusively on Douglas-fir needles but will occasionally eat grand fir, western hemlock, and/or Sitka spruce needles as well. Nests are frequently found in trees along the bole, in branch crotches, or in the top of snags. Nests are most often found along roads, skid trails, or forest edges; however, they could exist further in the forest with dense canopies making nest identification difficult.	**Low Potential.** According to the CWHR Predicted Habitat Suitability Map, the majority of the Study Area falls within Unranked and Low (0.33) suitability, with small areas of High (1) suitability for this species and does not provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
northern California ringtail *Bassariscus astutus raptor*	CDFW: FP G5TNR SNR	This species will exploit a variety of habitats such as dry, rocky, brush-covered hillsides or riparian areas, typically near an open water source. Dens are most often located in rock crevices, boulder piles, or talus, but also tree hollows, root cavities, and rural buildings. They rarely use the same den for more than a few days. Females with litters change dens within 10 days of birth and almost daily after 20 days.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.67) suitability for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
tule elk *Cervus canadensis nannodes*	G5T3 S3	*C. canadensis nannodes* favors grasslands and oak woodlands. This species may also be found in freshwater wetlands, riparian forest, mixed conifer forest, scrublands, and irrigated agricultural lands. All extant populations are derived from reintroductions back into historic range.	**Low Potential.** The Study Area has a very limited watershed and aquatic pool but has sufficient oak woodland.	**Not Present.** There are no recommendations for this species.
Townsend's big-eared bat *Corynorhinus townsendii*	BLM: S CDFW: SSC IUCN: LC USFS: S G4 S3	*C. townsendii* inhabits mesic sites within broadleaved upland forest, chaparral, chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, lower montane coniferous forest, meadow & seep, Mojavean desert scrub, riparian forest, riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, upper montane coniferous forest, and valley & foothill grassland. Females form maternity colonies in buildings, caves, mines and in basal hollows in large conifer trees and males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.	**Low Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.11) suitability for this species and does not provide the required habitat for this species.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
North American porcupine *Erethizon dorsatum*	IUCN: LC G5 S3	*E. dorsatum* inhabit broadleaved upland forest, cismontane woodland, closed-cone coniferous forest, lower montane coniferous forest, North coast coniferous forest, and upper montane coniferous forest habitats. This herbivore eats leaves, twigs, and green plants like Skunk cabbage (*Symplocarpus foetidus*) and clovers (*Trifolium* sp.). This species makes its dens in hollow trees, decaying logs and caves in rocky areas. Recognized as primarily solitary and nocturnal, *E. dorsatum* may be seen foraging during daytime.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.67) suitability for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
western mastiff bat *Eumops perotis californicus*	BLM: S CDFW: SSC G4G5T4 S3S4	*E. perotis californicus* occurs in a wide variety of habitats, including chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland. Roosting sites occur in rocky outcrops, crevices and cliffs with 50-100% rocky slopes. Day roosts are established in crevices in rocky canyons and cliffs, trees, tunnels and buildings with a minimum 2-meter (6.5 foot) drop-off to provide a takeoff or launching area. The animals are strong, fast fliers, with a likely extensive foraging range, up to 15 miles from the nearest possible roosting site. Foraging occurs in broad, open areas, woodlands and forest, scrub, chaparral, grassland, riparian and agricultural areas and there is no evidence of this species being habitat specialists.	**High Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within High (1) suitability for this species and does provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
hoary bat *Lasiurus cinereus*	IUCN: LC G3G4 S4	*L. cinereus* prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding in broadleaved upland forest, cismontane woodland, lower montane coniferous forest, and North coast coniferous forest habitats. Hoary bats roost in dense foliage of medium to large trees. They feed primarily on moths and requires water.	**Moderate Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.4) suitability for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
western red bat *Lasiurus frantzii*	CDFW: SSC IUCN: LC G4 S3	*L. blossevillii* roosts primarily in trees, often 2-40ft above the ground from sea level through mixed conifer forests. Typical habitats include cismontane woodland, lower montane coniferous forest, riparian forests and woodlands. This species prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Moderate Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.55) suitability for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
long-eared myotis *Myotis evotis*	BLM: S IUCN: LC G5 S3	*M. evotis* is found in all brush, woodland and forested habitats from sea level to approximately 9,000 feet in elevation; however, prefers coniferous woodlands and forests. Foraging occurs along habitat edges, in open spaces and over water. Nursery colonies are often found within buildings, crevices, spaces under bark and snags. Caves are used primarily as night roosts.	**Moderate Potential**. The CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.11), Moderate (0.66) and High (1) suitability for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
Yuma myotis *Myotis yumanensis*	BLM: S IUCN: LC G5 S4	*M. yumanensis* commonly inhabits open forests and woodlands from British Columbia across the western U.S. and south into Baja and southern Mexico in lower montane coniferous forest, riparian forest, riparian woodland, and upper montane coniferous forest habitat. Foraging occurs almost exclusively over water. Typical roosting habitats are caves, mines, buildings, under bridges and in cliff and tree crevices. Maternity colonies are often in caves, mines, buildings and crevices.	**Low Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.22) suitability for this species and does not provide the required habitat for this species.	**Not Present.** There are no recommendations for this species.
fisher [West Coast DPS] *Pekania pennanti*	CDFW: SSC IUCN: LC USFS: S BLM: S G5 S2S3	*P. pennanti* inhabit forest stands with late-successional characteristics including intermediate-to-large tree stages of coniferous forest and deciduous-riparian areas with high percent canopy closure in North coast coniferous forest, old growth and riparian forest habitat. *P. pennanti* use cavities, snags, logs and rocky areas for cover and denning and require large areas of mature, dense forest. Fishers are primarily solitary, except during breeding season (February – April).	**Moderate Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls mostly within Unranked and small areas of Moderate (0.66) and High (0.88) suitability for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.
American badger *Taxidea taxus*	CDFW: SSC IUCN: LC G5 S3	*T. taxus* are found throughout most of California in a variety of habitats and are most abundant in drier open stages of most shrub, forest and herbaceous habitats, with friable soils. *T. taxus* dig burrows in the friable soils and frequently reuse old burrows and prey on burrowing rodents.	**Moderate Potential.** The CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.49) and High (1) suitability for this species and may provide the required habitat for this species.	**Not Observed.** See Section 6 for general recommendations for mammal species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Mollusks				
western ridged mussel *Gonidea angulata*	IUCN: VU G3 S1S2	*G. angulata* inhabits cold creeks and streams from low-to- mid elevations that are seasonally and not continuously turbid. *G. angulata* requires a host species to reproduce and disperse and can be found in diverse substrates from firm mud to coarse particles. Documented fish hosts for this species include hardhead (*Mylopharodon conocephalus*), pit sculpin (*Cottus pitensis*), and Tule perch (*Hysterocarpus traski*).	**No Potential.** The Study Area does not provide the required habitat for this species.	**Not Present.** There are no recommendations for this species.
Reptiles				
western pond turtle *Emys marmorata*	FC BLM: S CDFW: SSC IUCN: VU USFS: S G3G4 S3	*E. marmorata* are associated with permanent ponds, lakes, streams, stock ponds, marshes, seasonal wetlands, artificial areas including reservoirs or irrigation ditches, or permanent pools along intermittent streams in a wide variety of habitats. This species requires basking sites in the aquatic environment or upland, grassy openings with loose soil for nesting and overwintering. Nest sites can be found within 100 meters of aquatic habitat.	**Low Potential.** The Study Area does not provide the required habitat for this species.	**Not Present.** There are no recommendations for this species.
Plants				
Franciscan onion *Allium peninsulare* var. *franciscanum*	Rank 1B.2 G5T2 S2	Cismontane woodland, valley and foothill grassland, often in clay soils, sometimes on serpentine or volcanics. *A. peninsulare* var. *franciscanum* has a weak serpentine affinity of 1.8. The elevation ranges from 17 to 1050 feet (5 to 320 meters). A perennial herb (bulb), the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains valley and foothill grassland, cismontane woodlands, and serpentine soils. This may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for plant species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Raiche's manzanita *Arctostaphylos stanfordiana* ssp. *raichei*	Rank 1B.1 BLM: S G3T2 S2	Chaparral, lower montane coniferous forest (openings), rocky, serpentine sites, often on slopes and ridges. *A. stanfordiana ssp. raichei* has a strong serpentine affinity of 2.6. The elevation ranges from 1591 to 3511 feet (485 to 1070 meters). A perennial evergreen shrub, the blooming period is from Feb-Apr.	**Moderate Potential.** The Study Area contains chaparral and lower montane coniferous forest habitat and serpentine soil. The Study Area may provide suitable habitat for the species.	**Not Observed.** See Section 6 for general recommendations for plant species.
Brewer's milk-vetch *Astragalus breweri*	Rank 4.2 G3 S3	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland. Often in grassy flats, meadows moist in spring, and open slopes in chaparral. Commonly on or near volcanic or serpentine sites. *A. breweri* has a strong serpentine affinity of 3.2. The elevation ranges from 296 to 2395 feet (90 to 730 meters). An annual herb, the blooming period is from Apr-Jun.	**Moderate Potential.** The Study Area provides chaparral, cismontane forest and foothill grassland. The Study Area may provide suitable habitat for the species.	**Not Observed.** Please see Section 6 for plant recommendations.
Sonoma sunshine *Blennosperma bakeri*	Rank 1B.1 FE SE G1 S1	Vernal pools, swales (mesic areas), valley and foothill grasslands. The elevation ranges from 33 to 952 feet (10 to 290 meters). An annual herb, the blooming period is from Mar-May.	**Low Potential.** The Study Area contains grassland habitat, does not have the wetland habitat the species requires.	**Not Present.** There are no recommendations for this species.
watershield *Brasenia schreberi*	Rank 2B.3 IUCN: LC G5 S3	Freshwater marshes and swamps. Aquatic, known from water bodies both natural and artificial. The elevation ranges from 3 to 7152 feet (1 to 2180 meters). A perennial rhizomatous herb (aquatic), the blooming period is from Jun-Sep.	**No Potential.** The Study Area does not contain the wetland habitat requirements suitable for this species.	**Not Present.** There are no recommendations for this species.
bristly sedge *Carex comosa*	Rank 2B.1 ICCN: LC G5 S2	Marshes and swamps, coastal prairie, valley and foothill grasslands, lake margins, wetlands. The elevation ranges from 17 to 3314 feet (5 to 1010 meters). A perennial rhizomatous herb, the blooming period is from May-Sep.	**Low Potential.** The Study Area contains grassland habitat; however, does not have the wetland habitat the species requires.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Rincon Ridge ceanothus *Ceanothus confusus*	Rank 1B.1 BLM: S G1 S1	Closed-cone coniferous forest, chaparral, cismontane woodland, known from volcanic or serpentine soils, dry shrubby slopes. *C. confusus* has a weak serpentine affinity of 1.3. The elevation ranges from 492 to 4200 feet (150 to 1280 meters). A shrub, the blooming period is from Feb-Jun.	**Moderate Potential.** Study Area provides chaparral and cismontane forest habitats. The Study Area may provide suitable habitat for the species.	**Not Observed.** See Section 6 for general recommendations for species.
California lady's- slipper *Cypripedium californicum*	Rank 4.2 IUCN: EN G4 S4	Lower montane coniferous forest, bogs and fens (seeps and streambanks, usually serpentine). This species has a broad endemic serpentine affinity of 4.5. The elevation ranges from 99 to 9023 feet (30 to 2750 meters). A perennial herb (rhizomatous), the blooming period is from Apr-Aug.	**Low Potential.** The Study Area contains lower montane coniferous forest; however, does not have the wet habitat or serpentine soil that the species requires	**Not Present.** There are no recommendations for this species.
mountain lady's-slipper *Cypripedium montanum*	Rank 4.2 BLM: S IUCN: VU USFS: S G4 S4	Lower montane coniferous forest, broadleaved upland forest, cismontane woodland, north coast coniferous forest, often on dry, undisturbed slopes. The elevation ranges from 607 to 7300 feet (185 to 2225 meters). A perennial herb (rhizomatous), the blooming period is from Mar-Aug.	**High Potential.** The Study Area contains lower montane coniferous forest, cismontane woodland and broadleaved upland forest. The Study Area does contain suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Koch's cord moss *Entosthodon kochii*	Rank 1B.3 BLM: S G1 S1	Cismontane woodland, often growing on soil over riverbanks. The elevation ranges from 607 to 1198 feet (185 to 365 meters). A moss, there is no distinct blooming period.	**Low Potential.** The Study Area contains cismontane woodland with little actively flowing waterways that could provide the suitable habitat for this species.	**Not Present.** There are no recommendations for this species.
bare monkeyflower *Erythranthe nudata*	Rank 4.3 G4 S4	Chaparral, cismontane woodland, moist areas, often along drainages and roadsides in serpentine seeps. The elevation ranges from 820 to 2297 feet (250 to 700 meters). An annual herb, the blooming period is from May-Jun.	**Moderate potential.** The Study Area contains chaparral and cismontane woodland and may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
stinkbells *Fritillaria agrestis*	Rank 4.2 G3 S3	Cismontane woodland, chaparral, valley and foothill grassland, pinyon and juniper woodland, sometimes on serpentine, mostly found in non-native grassland or in grassy openings in clay soil. The elevation ranges from 33to 5102 feet (10 to 1555 meters). A perennial bulbiferous herb, the blooming period is from Mar-Jun.	**Moderate Potential.** The Study Area contains cismontane woodland, chaparral, and grassland habitats that may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Purdy's fritillary *Fritillaria purdyi*	Rank 4.3 G4 S4	Chaparral, cismontane woodland, lower montane coniferous forest, usually on serpentine. *F. fritillary* has a broad endemic serpentine affinity of 4.5. The elevation ranges from 574 to 7399 feet (175 to 2255 meters). A perennial bulbiferous herb, the blooming period is from Mar-Jun.	**High Potential.** The Study Area does provide the habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Roderick's fritillary *Fritillaria roderickii*	Rank 1B.1 SE G1Q S1	Coastal bluff scrub, coastal prairie, valley and foothill grassland, often on grassy slopes, mesas. The elevation ranges from 66 to 2002 feet (20 to 610 meters). A perennial herb (bulb), the blooming period is from Mar-May.	**Low Potential.** The Study Area contains grassland; however, not on the coast and it is unlikely this species will be present within the Study Area.	**Not Present.** There are no recommendations for this species.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	Rank 1B.2 SE BLM: S G2 S2	Marshes and swamps (freshwater), vernal pools, often found in clay soils, usually in vernal pools or sometimes lake margins. The elevation ranges from 13 to 7907 feet (4 to 2410 meters). An annual herb, the blooming period is from Apr-Aug.	**No Potential.** The Study Area does not contain the habitat requirements suitable for this species.	**Not Present.** There are no recommendations for this species.
Toren's grimmia *Grimmia torenii*	Rank 1B.3 G2 S2	Cismontane woodland, lower montane coniferous forest, chaparral, often found in openings, rocky, boulder and rock walls, carbonate, volcanic soils. The elevation ranges from 1067 to 3806 feet (325 to 1160 meters). A moss, no distinct blooming period.	**Moderate Potential.** The Study contains chaparral and cismontane woodland habitats. The Study Area may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Mendocino tarplant *Hemizonia congesta ssp. calyculata*	Rank 4.3 G5T4 S4	Cismontane woodland, valley and foothill grassland, open woods and forests, sometimes on serpentine. *H. congesta ssp. calyculata* has a weak serpentine affinity of 1.5. The elevation ranges from 738 to 4593 feet (225 to 1400 meters). An annual herb, the blooming period is from Jul-Nov.	**High Potential.** The Study Area does provide the habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Tracy's tarplant *Hemizonia congesta* ssp. *tracyi*	Rank 4.3 G5T4 S4	Coastal prairie, north coast coniferous forest, lower montane coniferous forest, often found in openings and sometimes on serpentine. *H. congesta* ssp. *tracyi* has a weak serpentine affinity of 1.8. The elevation ranges from 394 to 3937 feet (120 to 1200 meters). An annual herb, the blooming period is from May-Oct.	**Low Potential.** The Study Area contains lower montane coniferous forest; however, the species isn't tolerant of serpentine soils. This species is unlikely to be present within the Study Area.	**Not Present.** There are no recommendations for this species.
glandular western flax *Hesperolinon adenophyllum*	Rank 1B.2 BLM: S G2G3 S2S3	Chaparral, cismontane woodland, valley and foothill grassland, serpentine soils, generally found in serpentine chaparral. *H. adenophyllum* has a strict endemic serpentine affinity of 5.7. The elevation ranges from 1395 to 4413 feet (425 to 1345 meters). An annual herb, the blooming period is from May-Aug.	**High Potential.** The Study Area does provide the habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Bolander's horkelia *Horkelia bolanderi*	Rank 1B.2 BLM: S G1 S1	Lower montane coniferous forest, chaparral, meadows and seeps, valley and foothill grassland, often found in grassy margins of vernal pools and meadows. The elevation ranges from 1493 to 2805 feet (455 to 855 meters). A perennial herb, the blooming period is from Jun-Aug.	**Low Potential.** The Study Area contains lower montane coniferous forest and chaparral habitats; however, does not contain vernal pools that this species requires.	**Not Present.** There are no recommendations for this species.
small groundcone *Kopsiopsis hookeri*	Rank 2B.3 G4? S1S2	North coast coniferous forest, open woods, shrubby places, generally on *Gaultheria shallon.* The elevation ranges from 394 to 4708 feet (120 to 1435 meters). A perennial herb, the blooming period is from Apr-Aug.	**Moderate Potential.** The Study Area contains coniferous forests, shrubland and open woods, and may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Burke's goldfields *Lasthenia burkei*	Rank 1B.1 FE SE G1 S1	Vernal pools and swales, meadows and seeps. The elevation ranges from 49 to 1969 feet (15 to 600 meters). An annual herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not have vernal pools or wetlands to support this species.	**Not Observed.** See Section 6 for general recommendations for species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Colusa layia *Layia septentrionalis*	Rank 1B.2 BLM: S G2 S2	Chaparral, cismontane woodland, valley and foothill grassland, scattered colonies in fields and grassy slopes in sandy or serpentine soil. The elevation ranges from 49 to 3609 feet (15 to 1100 meters). An annual herb, the blooming period is from Apr-May.	**High Potential.** The Study Area does provide the habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for species.
bristly leptosiphon *Leptosiphon acicularis*	Rank 4.2 G4? S4?	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. The elevation ranges from 180 to 4920 feet (55 to 1500 meters). An annual herb, the blooming period is from Apr-Jul.	**Moderate Potential.** The Study Area contains chaparral, cismontane forests and valley and grassland habitats, and may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
broad-lobed leptosiphon *Leptosiphon latisectus*	Rank 4.3 G4 S4	Broadleaved upland forest, cismontane woodland. *L. latisectus* has a weak serpentine affinity of 2.0. The elevation ranges from 558 to 4922 feet (170 to 1500 meters). An annual herb, the blooming period is from Apr-Jun.	**Low Potential.** Th Study Area contains broadleaved upland forest and cismontane woodland habitats; however, this species is not tolerant of serpentine soils.	**Not Present.** There are no recommendations for this species.
woolly-headed lessingia *Lessingia hololeuca*	Rank 3 G2G3 S2S3	Coastal scrub, lower montane coniferous forest, valley and foothill grassland, broadleaved upland forests, often on clay or serpentine along fields and roadsides. *L. hololeuca* has a strong serpentine affinity of 2.5. The elevation ranges from 49 to 1001 feet (15 to 305 meters). An annual herb, the blooming period is from Jun-Oct.	**Moderate Potential.** The Study Area contains lower montane coniferous forest, broadleaved upland forest and grassland habitats, and may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
redwood lily *Lilium rubescens*	Rank 4.2 G3 S3	Chaparral, lower montane coniferous forest, broadleaved upland forest, upper montane coniferous forest, north coast coniferous forest, sometimes serpentine. *L. rubescens* has a weak serpentine affinity of 2. The elevation ranges from 99 to 6267 feet (30 to 1910 meters). A perennial herb (bulb), the blooming period is from Apr-Aug.	**Moderate Potential.** The Study Area contains chaparral, lower montane coniferous forest, and broadleaved upland forest habitats, and may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Baker's meadowfoam *Limnanthes bakeri*	Rank 1B.1 SR G1 S1	Marshes and swamps, valley and foothill grassland, meadows and seeps, vernal pools, seasonally moist or saturated sites within grassland, also in swales, roadside ditches and margins of freshwater marshy areas. The elevation ranges from 574 to 3002 feet (175 to 915 meters). An annual herb, the blooming period is from Apr-May.	**No Potential.** The Study Area does not contain wetlands or vernal pools that this species requires.	**Not Present.** There are no recommendations for this species.
Mendocino bush- mallow *Malacothamnus mendocinensis*	Rank 1A GXQ SX	Chaparral, open roadside banks. The elevation ranges from 1395 to 1887 feet (425 to 575 meters). A shrub, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains chaparral habitat and may provide suitable habitat for this species.	**N Not Observed.** See Section 6 for general recommendations for species.
green monardella *Monardella viridis*	Rank 4.3 G3 S3	Broadleaved upland forest, chaparral, cismontane woodland. The elevation ranges from 328 to 3314 feet (100 to 1010 meters). A perennial herb, the blooming period is from Jun-Sep.	**High Potential.** The Study Area does provide the habitat requirements for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Baker's navarretia *Navarretia leucocephala ssp. bakeri*	Rank 1B.1 G4T2 S2	Cismontane woodland, meadows and seeps, vernal pools and swales, valley and foothill grassland, lower montane coniferous forest, adobe or alkaline soils. The elevation ranges from 10 to 5512 feet (3 to 1680 meters). An annual herb, the blooming period is from Apr-Jul.	**Low Potential.** The Study Area does contain cismontane woodland; however, does not contain vernal pools that this species requires.	**Not Present.** There are no recommendations for this species.
California Gairdner's yampah *Perideridia gairdneri* ssp. *gairdneri*	Rank 4.2 G5T3T4 S3S4	Broadleaved upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools. Often found on adobe flats or grasslands, wet meadows and vernal pools, under *Pinus radiata* along the coast, and mesic sites. The elevation ranges from 0 to 2002 feet (0 to 610 meters). A perennial herb, the blooming period is from Jun-Oct.	**Low Potential.** The Study Area does contain lower coniferous forest and grassland habitats; however, does not contain vernal pools that this species requires.	**Not Present.** There are no recommendations for this species.
white-flowered rein orchid *Piperia candida*	Rank 1B.2 G3 S3	North Coast coniferous forest, lower montane coniferous forest, broadleaved upland forest, sometimes serpentine. Often found in forest duff, mossy banks, serpentine rock outcrops and muskeg. *P. candida* has a weak serpentine affinity of 1.2. The elevation ranges from 66 to 5299 feet (20 to 1615 meters). A perennial herb, the blooming period is from May-Sep.	**Low Potential.** Th Study Area contains broadleaved upland forest and lower monte coniferous forest habitats; however, this species is not tolerant of serpentine soils.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
North Coast semaphore grass *Pleuropogon hooverianus*	Rank 1B.1 ST G2 S2	Broadleaved upland forest, meadows and seeps, north coast coniferous forest, often found in wet, grassy, shady areas, sometimes freshwater marsh. Often associated with forest environments. The elevation ranges from 148 to 3806 feet (45 to 1160 meters). A perennial rhizomatous herb, the blooming period is from Apr-Jun.	**Low Potential.** The Study Area does contain broadleaved upland habitat; however, does not contain marsh habitat suitable for this species.	**Not Present.** There are no recommendations for this species.
angel's hair lichen *Ramalina thrausta*	Rank 2B.1 G5? S2S3	North coast coniferous forest, often on dead twigs and other lichens. The elevation ranges from 246 to 4561 feet (75 to 1390 meters). A lichen, there is no distinct blooming period.	**No Potential.** The Study Area does not contain north coast coniferous forest habitat suitable for this species.	**Not Present.** There are no recommendations for this species.
Lobb's aquatic buttercup *Ranunculus lobbii*	Rank 4.2 IUCN: LC G4 S3	Cismontane woodland, valley and foothill grassland, vernal pools, north coast coniferous forest (mesic sites). The elevation ranges from 50 to 1542 feet (15 to 470 meters). An annual herb (aquatic), the blooming period is from Feb-May.	**Low Potential.** The Study Area has the cismontane woodland and grassland habitats but does not have the vernal pools to support the species.	**Not Present.** There are no recommendations for this species.
Bolander's catchfly *Silene bolanderi*	Rank 1B.2 G2 S2	Cismontane woodland, lower montane coniferous forest, North Coast coniferous forest, meadows and seeps, chaparral (edges). Usually grassy openings, sometimes dry rocky slopes, canyons, or roadsides; sometimes serpentinite. The elevation ranges from 1380 to 3775 feet (420 to 1150 meters). A perennial herb, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains lower montane coniferous forest that may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Hoffman's bristly jewelflower *Streptanthus glandulosus* ssp. *hoffmanii*	Rank 1B.3 G4T2 S2	Chaparral, cismontane woodland, valley and foothill grassland, moist, steep rocky banks in serpentine and non-serpentine soils. The elevation ranges from 197 to 2510 feet (60 to 765 meters). An annual herb, the blooming period is from Mar-Jul.	**Moderate Potential.** The Study Area contains chaparral, cismontane woodland and grassland habitats that may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
beaked tracyina *Tracyina rostrata*	Rank 1B.2 USFS: S G2 S2	Cismontane woodland, valley and foothill grassland, chaparral, often observed in open grassy meadows commonly within oak woodland and grassland habitats. The elevation ranges from 492 to 2609 feet (150 to 795 meters). An annual herb, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains chaparral, cismontane woodland and grassland habitats that may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDA- TIONS
Santa Cruz clover *Trifolium buckwestiorum*	Rank 1B.1 BLM: S G2 S2	Coastal prairie, broadleaved upland forest, cismontane woodland, often found in moist grasslands along gravelly margins. The elevation ranges from 99 to 2641 feet (30 to 805 meters). An annual herb, the blooming period is from Apr-Oct.	**Moderate Potential.** The Study Area contains cismontane woodland and broadleaved upland forest habitats that may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.
Methuselah's beard lichen *Usnea longissima*	Rank 4.2 G4 S4	North coast coniferous forest, broadleaved upland forest. Often grows in the "redwood zone" on tree branches of a variety of trees, including bigleaf maple (*Acer macrophyllum*), various oaks (*Quercus spp.*), ash (*Fraxinus spp.*), Douglas-fir (*Pseudotsuga menziesii*) and California bay (*Umbellularia californica*). The elevation ranges from 148 to 4807 feet (45 to 1465 meters). A moss, no distinct blooming period.	**Low Potential.** The study area doesn't provide habitat with sufficient available water but does provide the species that host the moss.	**Not Present.** There are no recommendations for this species.
oval-leaved viburnum *Viburnum ellipticum*	Rank 2B.3 G4G5 S3?	Chaparral, cismontane woodland, lower montane coniferous forest. The elevation ranges from 706 to 4593 feet (215 to 1400 meters). A shrub, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains chaparral, cismontane woodland and lower montane coniferous forest habitats that may provide suitable habitat for this species.	**Not Observed.** See Section 6 for general recommendations for species.

TERRESTRIAL OR AQUATIC COMMUNITY	HABITAT DESCRIPTIONS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Northern Interior Cypress Forest Holland 1986 83220	Description: An open, fire-maintained scrubby "forest" like Knobcone Pine Forest but dominated by one of several Cupressus species. These stands may be as much as 15 m tall, but usually are lower. Characteristic species: *Cupressus Abramsiana* (Santa Cruz Mountains, on sandstone), *C. backeri* (Cascade and northern sierra Nevada, on serpentine or aerated basic sites), *C. Macnabiana* (North Coast Ranges and northern Sierra Nevada, on serpentine), *C. sargentii* (North and South Coast Ranges, on serpentine), *Pinus attenuata, Quercus durata*. Distribution: Scattered through the Siskiyou Mountains, North and south coast Ranges, cascades and northern Sierra Nevada. Combining the four species into a single element is open to question but does reflect a common pattern of occurring on serpentine or other sterile substrate and moisture status intermediate between mesic Coastal Closed Cone conifer Forests and xeric southern Interior Cypress Forests.	**No Potential.** The Study Area does not contain this type of forest community.	**Not Present:** This community is not located within or adjacent to the Study Area. There are no further recommendations for this community.
Serpentine Bunchgrass Holland 1986 42130	Description: Not all serpentinite outcrops support distinct vegetation; only those with very low Ca:Mg ratios impact biotic composition. In this system, native bunchgrass dominates, though typically in less dense cover than other perennial bunchgrass types. Site Factors: Restricted to serpentine soils. Characteristic species: Characteristic species include *Calamagrostis ophitidis, Eschscholzia californica, Vulpia microstachys var. ciliata, Poa secunda, Hemizonia congesta ssp. luzulifolia, Nassella cernua, and Nassella pulchra*. Distribution: This system is found in the Coast Ranges, Sierra Nevada, and Transverse Ranges of California on deep soils with serpentine-rich parent material. It may also occur on serpentine in the Klamath Mountains of southern Oregon.	**No Potential.** The Study Area does not contain this type of forest community.	**Not Present:** This community is not located within or adjacent to the Study Area. There are no further recommendations for this community.

Abbreviation	Organization
FC	Federal Candidate
FE	Federal Endangered
FT	Federal Threatened
FPE	Federally Proposed for listing as Endangered
FPT	Federally Proposed for listing as Threatened
FPD	Federally Proposed for delisting
FD	Federally Delisted
SE	State Endangered
ST	State Threatened
SR	State Rare
SCE	State Candidate for listing as Endangered
SCT	State Candidate for listing as Threatened
SCD	State Candidate for delisting
SD	State Delisted
AFS_EN	American Fisheries Society - Endangered
AFS_TH	American Fisheries Society - Threatened
AFS_VU	American Fisheries Society – Vulnerable
BLM_S	Bureau of Land Management – Sensitive
BCC	USFWS Birds of Conservation Concern
CDF_S	Calif. Dept. of Forestry & Fire Protection – Sensitive
CDFW_SSC	Calif. Dept. of Fish & Wildlife – Species of Special Concern
CDFW_FP	Calif. Dept. of Fish & Wildlife – Fully Protected
CDFW_WL	Calif. Dept. of Fish & Wildlife – Watch List
IUCN_CD	IUCN – Conservation Dependent
IUCN_CR	IUCN – Critically Endangered
IUCN_DD	IUCN – Data Deficient
IUCN_EN	IUCN – Endangered
IUCN_EW	IUCN – Extinct in the Wild
IUCN_EX	IUCN – Extinct
IUCN_LC	IUCN – Least Concern
IUCN_NE	IUCN – Not Evaluated
IUCN_NT	IUCN – Near Threatened
IUCN_VU	IUCN – Vulnerable
NABCI_RWL	North American Bird Conservation Initiative – Red Watch List
NABCI_YWL	North American Bird Conservation Initiative – Yellow Watch List
NMFS_SC	National Marine Fisheries Service – Species of Concern
USFS_S	U. S. Forest Service – Sensitive
USFWS_BCC	U. S. Fish & Wildlife Service – Birds of Conservation Concern
WBWG_H	Western Bat Working Group – High Priority

Abbreviation	Organization
WBWG_MH	Western Bat Working Group – Medium-High Priority
WBWG_M	Western Bat Working Group – Medium Priority
WBWG_LM	Western Bat Working Group – Low-Medium Priority
Xerces: CI	Xerces Society – Critically Imperiled
Xerces: IM	Xerces Society – Imperiled
Xerces: VU	Xerces Society – Vulnerable
Xerces: DD	Xerces Society – Data Deficient
CA Rare Plant Rank (CRPR)	California Native Plant Society (CNPS)

California Rare Plant Ranks (CRPRs) are a ranking system developed by the California Native Plant Society (CNPS) to define and categorize rarity in the California flora. All plants that are assigned to a California Rare Plant Rank category are tracked by the CNDDB; however, element occurrence (EO) information is only maintained for CRPR 1 and 2 plants, and some CRPR 3 plants. Most CRPR 3 and 4 plants that have EO information in this Inventory and the CNDDB were previously assigned to CRPR 1 or 2; their EO data reflect their prior rank and have generally not been updated since the date of their change to CRPR 3 or 4.

Rank 1A	CRPR Rank 1A: Presumed Extirpated or Extinct — Plants presumed extirpated in California and either rare or extinct elsewhere. These plants have not been seen or collected in the wild in California for many years. A plant is extinct if it no longer occurs anywhere. A plant that is extirpated from California has been eliminated from California but may still occur elsewhere in its range.
Rank 1B	CRPR Rank 1B: Rare or Endangered — Plants rare, threatened, or endangered in California and elsewhere. These plants are rare throughout their entire range with the majority also being endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century.
Rank 2A	CRPR Rank 2A: Extirpated in California — Plants presumed extirpated in California but common elsewhere. These plants are presumed extirpated because they have not been observed or documented in California for many years. This list only includes plants that are presumed extirpated in California but are common elsewhere in their range outside of the state.
Rank 2B	CRPR Rank 2B: Rare or Endangered in California — Plants rare, threatened, or endangered in California but common elsewhere. Except for being common beyond the boundaries of California, 2B plants would have been ranked 1B.
Rank 3	CRPR Rank 3: Needs Review — Plants about which more information is needed. These plants are united by one common theme—we lack the necessary information to assign them to one of the other ranks or to reject them. Nearly all of the plants constituting California Rare Plant Rank 3 are taxonomically problematic, yet if taxonomically valid would demonstrably qualify for rank 1B or 2B.
Rank 4	CRPR Rank 4: Uncommon in California — Plants of limited distribution, a watch list. These plants are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly.

Threat Rank
California Rare Plant Ranks at each level also include a threat rank (e.g., CRPR 4.3) and are assigned as follows:

THREAT RANK	DESCRIPTION
0.1	Seriously threatened in California — Over 80% of occurrences threatened / high degree and immediacy of threat.
0.2	Moderately threatened in California — 20-80% of occurrences threatened / moderate degree and immediacy of threat.
0.3	Not very threatened in California — Less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known.

Global Rank

The Global Rank (G-rank) is an indication of the overall condition and imperilment of an element throughout its global range. It is a letter+number score that reflects a combination of Rarity, Threat and Trend factors, with weighting being heavier on the rarity factors. The Global Ranks are assigned by NatureServe in coordination with the state program(s) where the element occurs.

GLOBAL RANK	DEFINITION
GX	Presumed Extinct — Not located despite intensive searches and virtually no likelihood of rediscovery.
GH	Possibly Extinct — Known from only historical occurrences but still some hope of rediscovery. There is evidence that the species may be extinct or the ecosystem may be eliminated throughout its range, but not enough to state this with certainty.
G1	Critically Imperiled — At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, very restricted range, very severe threats, or other factors.
G2	Imperiled — At high risk of extinction due to restricted range, very few populations or occurrences (often 20 or fewer), steep declines, severe threats, or other factors.
G3	Vulnerable — At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, threats, or other factors.
G4	Apparently Secure — At fairly low risk of extinction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
G5	Secure — At very low risk of extinction due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
GNR	Unranked — Global rank not yet assessed.
GU	Unrankable — Currently unrankable due to a lack of information or due to substantially conflicting information about status or trends.
G#G#	Range Rank — A numeric range rank (e.g., G2G3) is used to indicate the range of uncertainty about the exact status of a taxon or community.
G#T#	Infraspecific Taxon — The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' Global Rank.
?	Qualifier: Inexact Numeric Rank — A question mark represents a rank qualifier, denoting an inexact or uncertain numeric rank.
Q	Qualifier: Questionable Taxonomy — The distinctiveness of this entity as a taxon or community at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or inclusion of this taxon or type in another taxon or type, with the resulting taxon having a lower-priority (numerically higher) conservation status rank.
C	Qualifier: Captive or Cultivated Only — The taxon or community at present is presumed or possibly extinct or eliminated in the wild across its entire native range but is extant in cultivation, in captivity, as a naturalized population (or populations) outside its native range, or as a reintroduced population or ecosystem restoration, not yet established.

State Rank

The State Rank (S-rank) is an indication of the condition and imperilment of an element throughout its range within the state. As with the G-rank, it is a letter+number score that reflects a combination of Rarity, Threat and Trend factors, weighted more heavily on rarity. The State Ranks are assigned by the CNDDB biologists using standard natural heritage methodology.

STATE RANK	DESCRIPTION
SX	Presumed Extirpated — Species is believed to be extirpated from the state. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
SH	Possibly Extirpated (Historical) — Species occurred historically in the state, and there is some possibility that it may be rediscovered. All sites are historical; the element has not been seen for at least 20 years, but suitable habitat still exists.
S1	Critically Imperiled — Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
S2	Imperiled — Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state.
S3	Vulnerable — Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4	Apparently Secure — At a fairly low risk of extirpation in the state due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
S5	Secure — At very low or no risk of extirpation in the state due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
SNR	Unranked — State conservation status not yet assessed.
SU	Unrankable — Currently unrankable due to a lack of information or due to substantially conflicting information about status or trends.
S#S#	Range Rank — A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community.
?	Qualifier: Inexact or Uncertain — A question mark represents a rank qualifier, denoting an inexact or uncertain numeric rank.

Ultramafic (serpentine) Affinity:

≥ 5.5		strict endemic	taxa with 95% of their occurrences on ultramafics
< 5.5	≥ 4.5	broad endemic	taxa with 85-94% of their occurrences on ultramafics
< 4.5	≥ 3.5	transition from broad endemic to strong indicator	taxa with 75-84% of their occurrences on ultramafics
< 3.5	≥ 2.5	strong indicator	taxa with 65-74% of their occurrences on ultramafics
< 2.5	≥ 1.5	weak indicator	taxa with 55-64% of their occurrences on ultramafics
< 1.5	≥ 1.0	weak indicator / indifferent	taxa with 50-54% of their occurrences on ultramafics

National Wetland Plant List Indicator Rating Definitions

OBL (Obligate Wetland Plants)—Almost always occur in wetlands.

FACW (Facultative Wetland Plants)—Usually occur in wetlands but may occur in non-wetlands.

FAC (Facultative Wetland Plants)—Occur in wetlands and non-wetlands.

FACU (Facultative Upland Plants)—Usually occur in non-wetlands but may occur in wetlands.

UPL (Upland Plants)—Almost never occurs in wetlands.

Potential to Occur:

No Potential. Habitat on and within 100 feet adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Low Potential. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and within 100 feet adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or within 100 feet adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or within 100 feet adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Results and Recommendations:
Present. Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.
Not Present. Species is assumed to not be present due to a lack of key habitat components.
Not Observed. Species was not observed during surveys

Appendix B: List of Species Observed

SCIENTIFIC NAME	COMMON NAME
Plants	
Acmispon glaber	deerweed
Acmispon parviflorus	short flower deervetch
Adelinia grandis	Pacific hounds tongue
Adenocaulon bicolor	California trailplant
Adenostoma fasciculatum	chamise
Adiantum jordanii	California maidenhair fern
Aesculus californica	California buckeye
Anagallis arvensis	scarlet pimpernel
Anisocarpus madioides	woodland madia
Aralia californica	California spikenard
Arbutus menziesii	Pacific madrone
Arctostaphylos manzanita	common manzanita
Arnica discoidea	rayless arnica
Athyrium filix-femina	lady fern
Baccharis pilularis	coyote bush
Briza maxima	greater quaking grass
Bromus madritensis	red brome
Calochortus amabilis	Diogenes' lantern
Calochortus tolmiei	Tolmie's pussy ears
Cardamine californica	milkmaids
Cardamine hirsuta	hairy bittercress
Carduus pycnocephalus	Italian thistle
Caucalis platycarpos	bur parsley
Centaurea solstitialis	yellow star thistle
Cerastium glomeratum	sticky mouse ear chickweed
Chlorogalum pomeridianum	wavy-leaf soap plant
Cirsium vulgare	bull thistle
Claytonia parviflora	streambank springbeauty
Clinopodium Douglasii	yerba buena
Collinsia heterophylla	purple Chinese houses
Collomia heterophylla	variable leaf collomia
Crocanthemum scoparium	peak rush rose
Cyperus eragrostis	tall flat sedge

SCIENTIFIC NAME	COMMON NAME
Cytisus scoparius	scotch broom
Daucus pusillus	American wild carrot
Delphinium nudicaule	red larkspur
Dichelostemma capitatum	blue dicks
Diplacus aurantiacus	sticky monkey flower
Dittrichia graveolens	stinkwart
Dryopteris arguta	coastal wood fern
Equisetum telmateia	great horsetail
Eriodictyon californicum	California yerba santa
Eriophyllum lanatum	common woolly sunflower
Erodium cicutarium	red stem stork's bill
Erosion moschatum	musk storks bill
Erythronium californicum	California fawn lily
Eucalyptus globulus	blue gum eucalyptus
Fraxinus latifolia	Oregon ash
Fritillaria affinis	checker lily
Galium californicum	California bedstraw
Galium soaring	catchweed bedstraw
Genista monspessulana	French broom
Geranium molle	dove's foot crane's bill
Helichrysum luteoalbum	Jersey cudweed
Heteromeles arbutifolia	toyon
Hibiscus syriacus	rose of Sharon
Hieracium albiflorum	white hawkweed
Holodiscus discolor	ocean spray
Hypericum concinnum	goldwire
Hypochaeris glabra	smooth cats ear
Iris douglasiana	Douglas iris
Iris purdyi	Purdy's iris
Jacobaea vulgaris	common ragwart
Juncus bufonius	toad rush
Lathyrus vestitus	Pacific pea
Lepidium lasiocarpum	hairypod pepperweed
Lepidium nitidum	shining pepperweed
Leptosiphon bicolor	true babystars
Lewisia leeana	quill-leaf lewisia
Lilium rubescens	redwood lily
Lithophragma heterophyllum	hillside woodland star

SCIENTIFIC NAME	COMMON NAME
Lonicera hispidula	pink honeysuckle
Medicago polymorpha	bur clover
Mentha pulegium	penny royal
Micropus californicus	q-tips
Nemophila menziesii var. atomaria	white nemophila
Nemophila parviflora	small flowered nemophila
Nerium oleander	oleander
Notholithocarpus densiflorus	tan oak
Pedicularis densiflora	warriors plume
Pentagramma triangularis	goldback fern
Petrorhagia dubia	hairypink
Pinus muricata	Bishop pine
Pinus ponderosa	Ponderosa pine
Pinus sabiniana	gray pine
Plagiobothrys tenellus	Pacific popcornflower
Poa annua	annual meadow grass
Polypodium calirhiza	nested polypody
Polypodium glycyrrhiza	licorice fern
Polystichum munitum	sword fern
Primula hendersonii	Henderson’s shooting star
Prosartes hookeri	Hooker’s fairy bells
Pseudotsuga menziesii	Douglas fir
Psilocarphus brevissimus	woolly marbles
Psilocarphus tenellus	slender woolly marbles
Pteridium aquilinum	common Bracken fern
Quercus berberidifolia	California scrub oak
Quercus douglasii	Blue oak
Quercus garryana	Oregon white oak
Quercus velutina	black oak
Ranunculus abortivus	small flowered buttercup
Ranunculus occidentalis	western buttercup
Rhinotropis californica	California milkwort
Rosa gymnasia	baldhip rose
Rubus leucodermis	whitebark raspberry
Rubus ursinus	trailing blackberry
Sanicula bipinnatifida	purple sanicle
Sanicula crassicaulis	Pacific sanicle
Scutellaria lateriflora	blue skullcap

JACOBSZOON & ASSOCIATES, INC.

SCIENTIFIC NAME	COMMON NAME
Sequoia sempervirens	coast redwood
Sidalcea diploscypha	fringed checkerbloom
Silybum marianum	milk thistle
Sisyrinchium bellum	western blue eyed grass
Soliva sessili	common Soliva
Sonchus asper	prickly sow thistle
Stachys ajugoides	bugle hedgenettle
Symphoricarpos albus	common snowberry
Symphoricarpos mollis	creeping snowberry
Taraxacum californicum	California dandelion
Thlaspi arvense	field penny-cress
Tonella tenella	lesser baby innocence
Torilis arvensis	common hedge parsley
Toxicodendron diversilobum	poison oak
Trientalis latifolia	western starflower
Trifolium bifidum	notch leaf clover
Trifolium hirtum	rose clover
Umbellularia californica	California bay laurel
Verbena lasiostachys	western vervain
Vicia hirsuta	hairy vetch
Vicia sativa	common vetch
Viola ocellata	western heart's ease
Whipplea modesta	modesty
Woodwardia fimbriata	giant chain fern
Wyethia glabra	smooth mule's ears
Mammals	
Lepus californicus	jack rabbit
Sciurus griseus	western grey squirrel
Ursus americanus	black bear
Avifauna	
Buteo jamaicensis	red-tailed hawk
Cathartes aura	California quail
Turdus migratorius	scrub jay
Insects	
Eriodictyon chalcedona	variable checkerspot

Appendix C: Photographs

Photo 1:

East view off existing road

Date:

May 22nd, 2024

Photo 2:

Chaparral and Oak Woodland

Date:

May 22nd, 2024

Photo 3:

Proposed Trail Location

Date:

May 22nd, 2024

Photo 4:

Proposed Trail Location

Date: July 18th, 2024

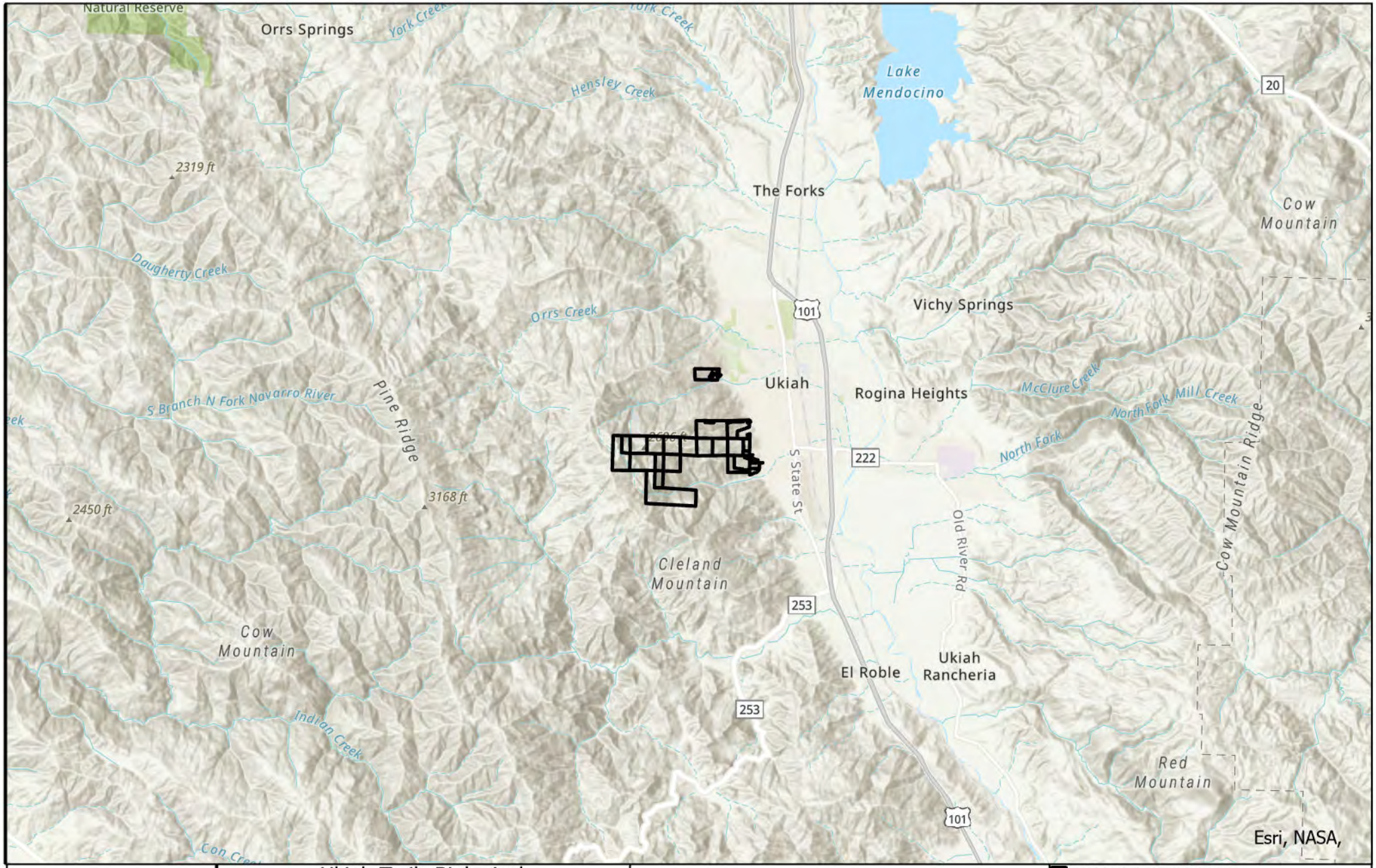
Photo 5:

Variable Checkerspot (*Euphydryas chalcedona*) on California Yerba Santa (*Eriodictyon californicum*)

Date:

July 18th, 2024

Appendix D: Maps



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Ukiah Trails Biological Vicinity Map

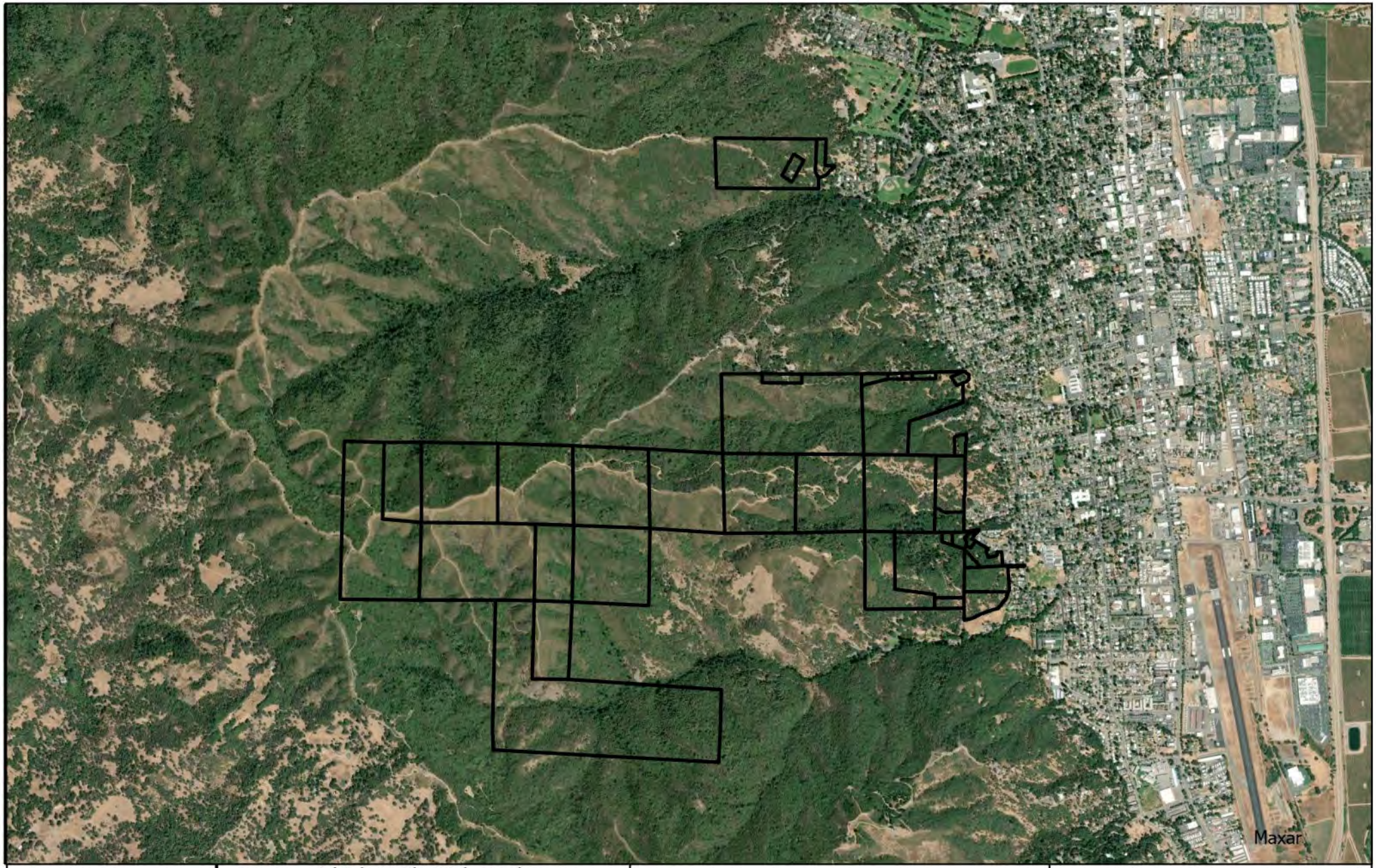
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

PLSS: Section 30, T15N, R12W, MDBM
Elledge Peak 7.5 minute quad

Drawn By: j.rivas on 8/13/2024

☐ Ukiah Valley Trails Parcels



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Ukiah Trails Biological Study Area (Imagery)

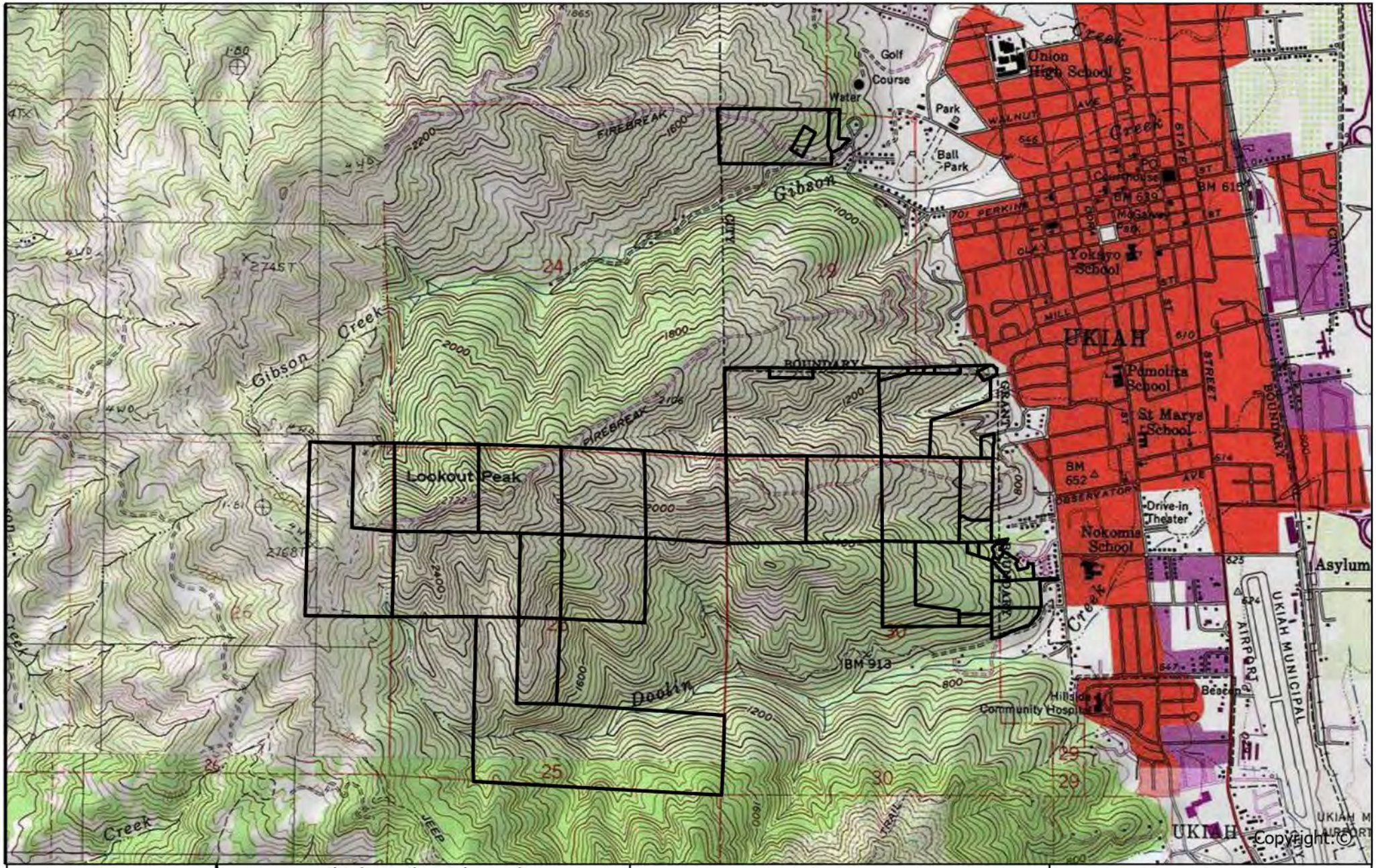
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

PLSS: Section 30, T15N, R12W, MDBM
Elledge Peak 7.5 minute quad

Drawn By: j.rivas on 8/13/2024

Ukiah Valley Trails Parcels



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Ukiah Trails Biological Study Area (Topographic)

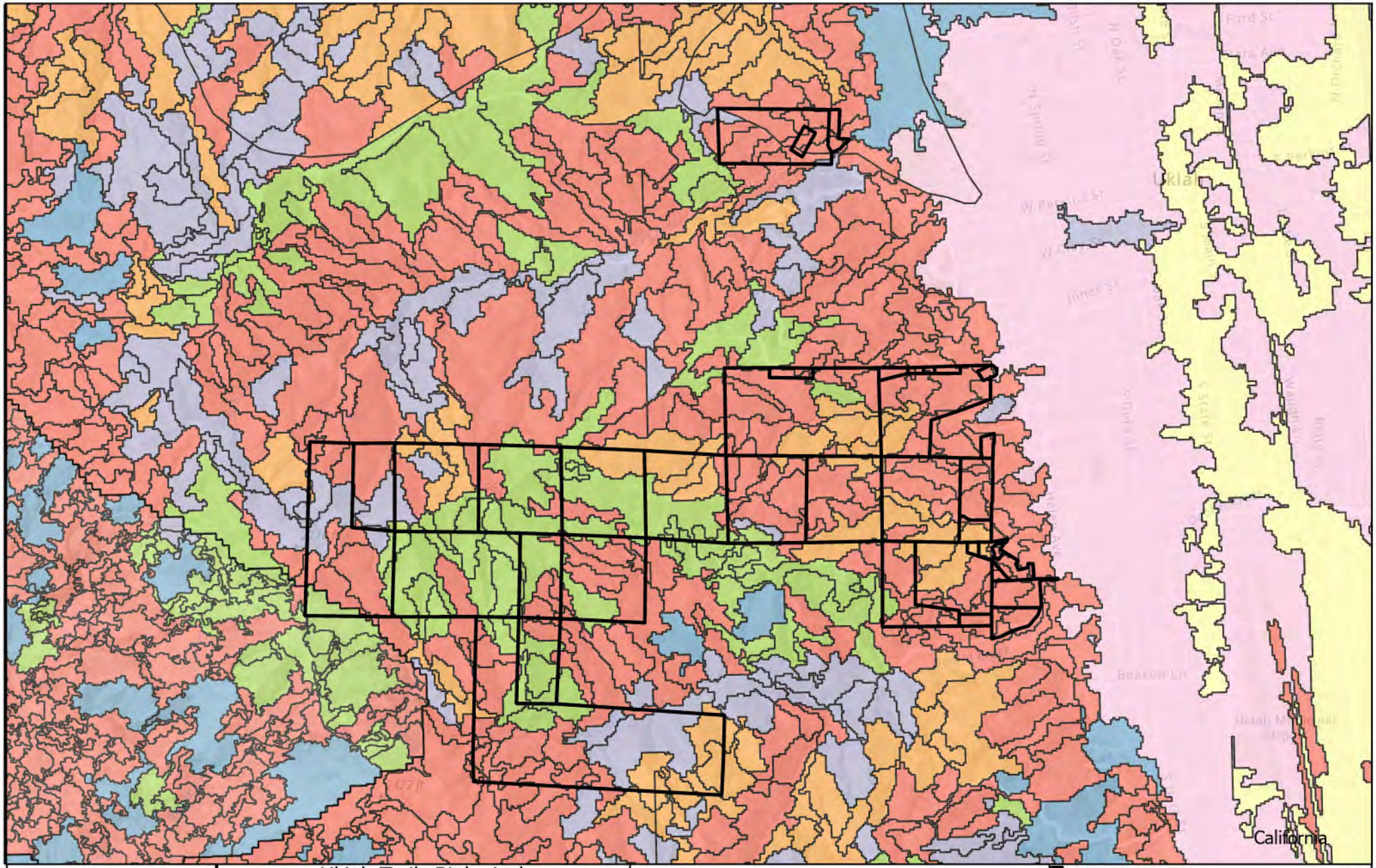
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

PLSS: Section 30, T15N, R12W, MDBM
Elledge Peak 7.5 minute quad

Drawn By: j.rivas on 8/13/2024

Ukiah Valley Trails Parcels



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Ukiah Trails Biological
CAL Vegetation Cover Map

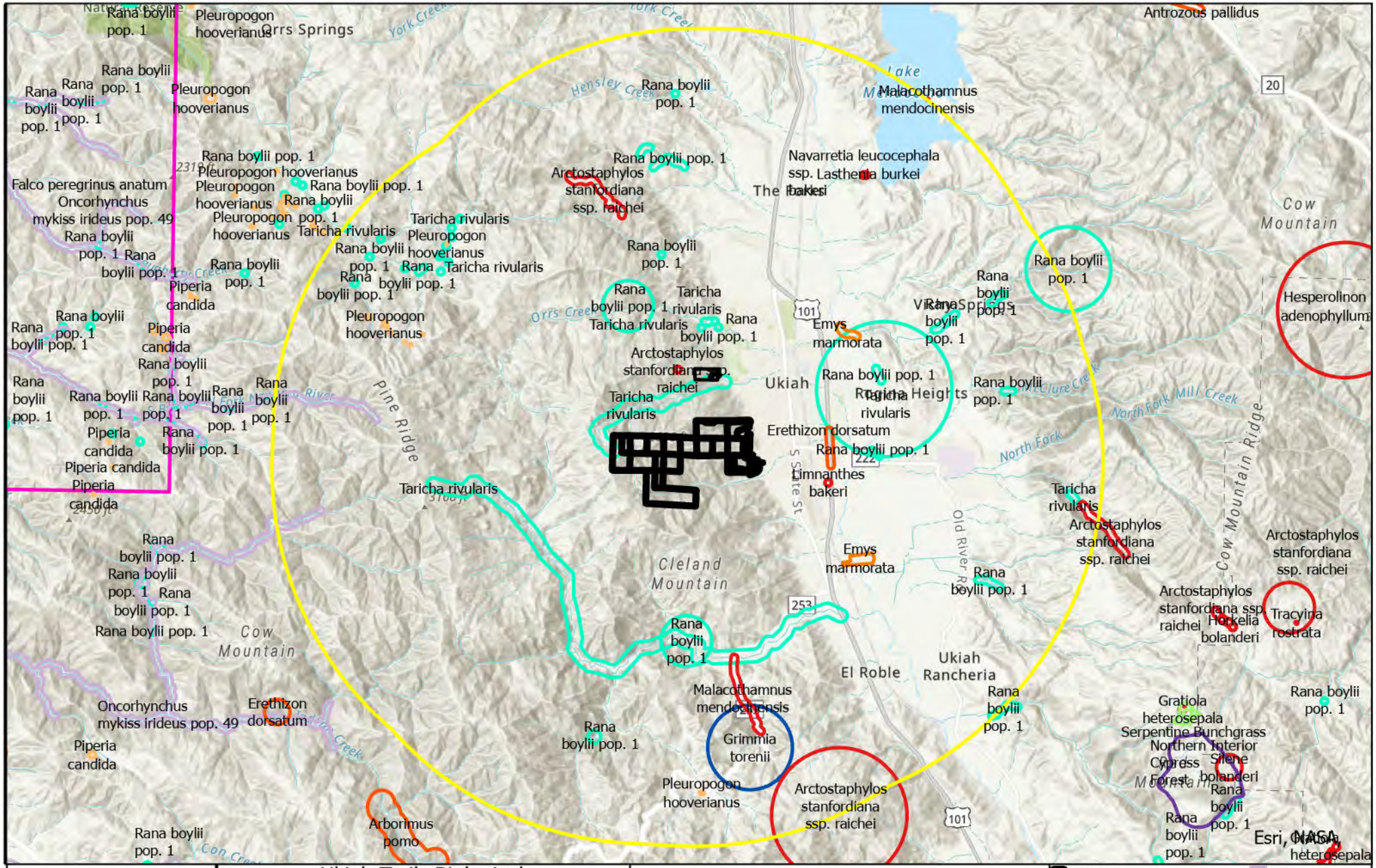
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

PLSS: Section 30, T15N, R12W, MDBM
Elledge Peak 7.5 minute quad

Drawn By: j.rivas on 8/13/2024

- Ukiah Valley Trails Parcels
- Agriculture
- Barren [Rock/Soil/Sand/Snow]
- Conifer forest/woodland
- Hardwood forest/woodland
- Herbaceous
- Mixed conifer and hardwood forest/woodland
- Shrub
- Urban



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Ukiah Trails Biological CNDDB Vicinity Map

Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

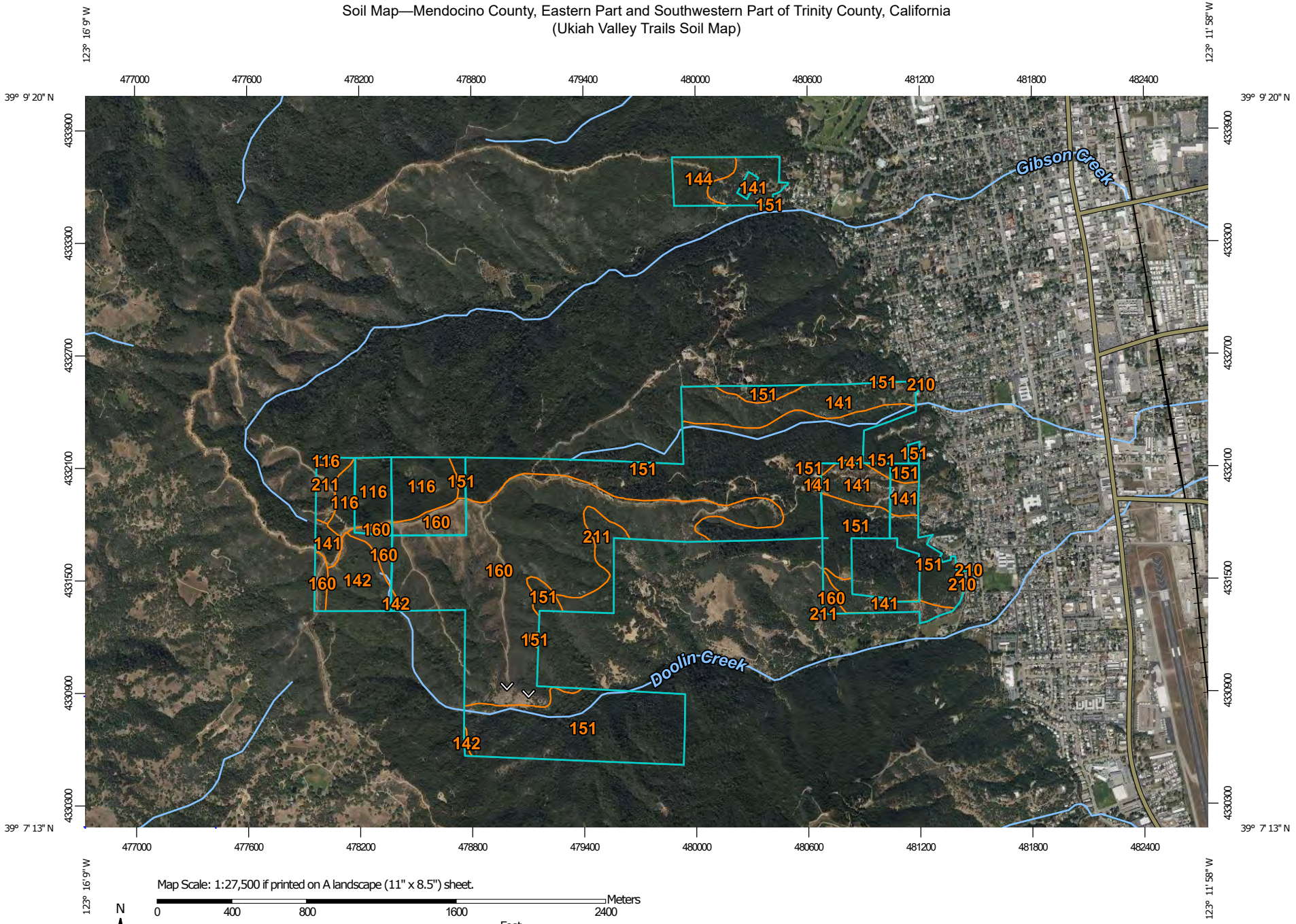
JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

PLSS: Section 30, T15N, R12W, MDBM
Elledge Peak 7.5 minute quad

Drawn By: j.rivas on 8/13/2024

- Parcels
- Ukiah Valley Trails Parcels
- Amphibians
- Birds
- Bryophytes
- Dicots
- Fish
- Forest
- Herbaceous
- Mammals
- Monocots
- Reptiles

Soil Map—Mendocino County, Eastern Part and Southwestern Part of Trinity County, California
(Ukiah Valley Trails Soil Map)



MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

Soil Survey Area: Mendocino County, Eastern Part and Southwestern Part of Trinity County, California
Survey Area Data: Version 19, Aug 28, 2023

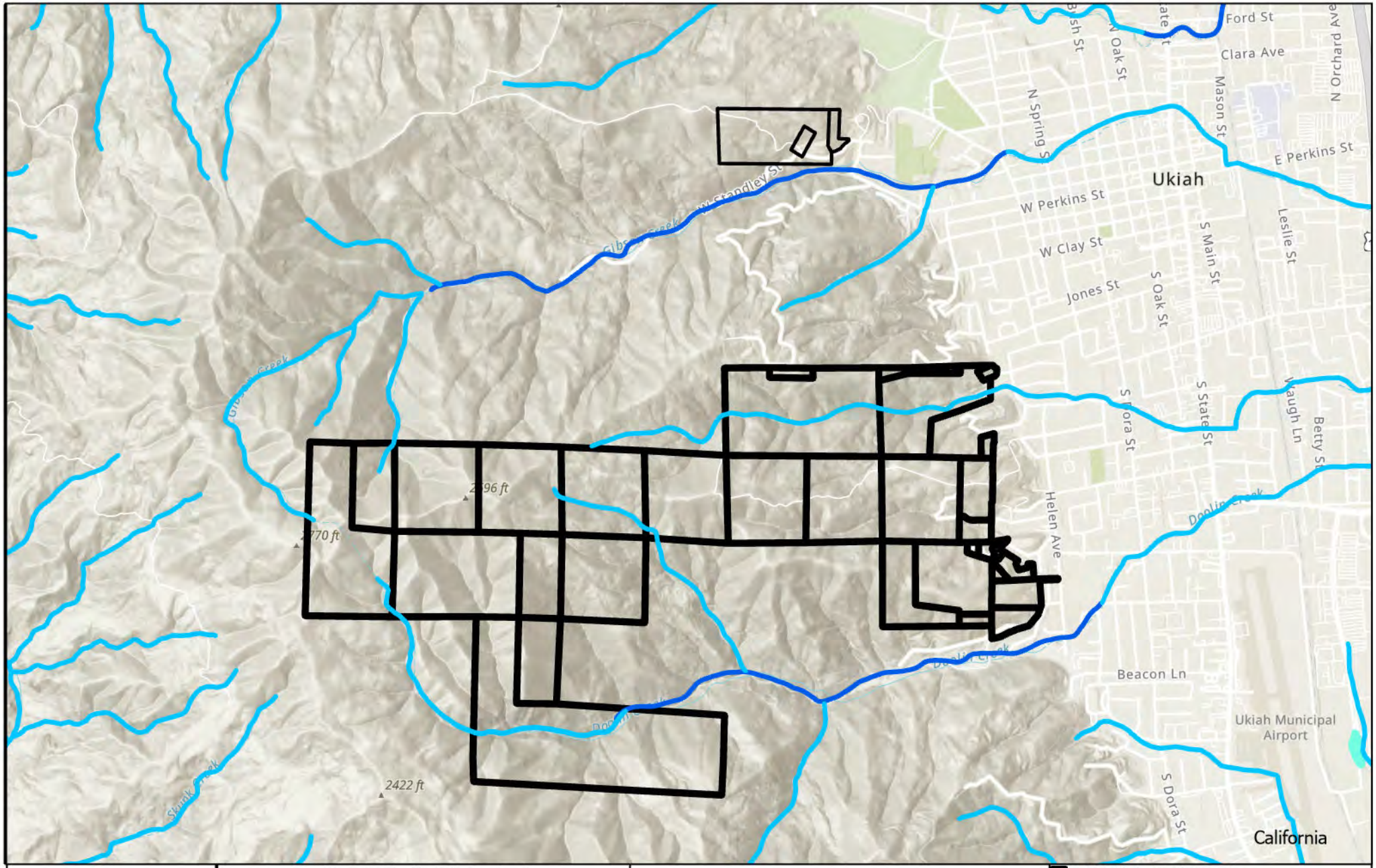
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 7, 2022—May 31, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
116	Cummiskey gravelly loam, 30 to 75 percent slopes	53.4	6.4%
141	Hopland loam, 30 to 50 percent slopes, high ffd	109.0	13.1%
142	Hopland loam, 50 to 75 percent slopes, high ffd	28.1	3.4%
144	Hopland-Maymen-Etsel complex, 50 to 75 percent slopes	16.8	2.0%
151	Hopland-Wohly loams, 50 to 75 percent slopes	332.2	39.9%
160	Maymen-Etsel-Snook complex, 30 to 75 percent slopes, high ffd	266.1	31.9%
210	Urban land	0.2	0.0%
211	Witherell-Hopland-Ashokawna complex, 50 to 75 percent slopes, high ffd	27.2	3.3%
Totals for Area of Interest		**833.0**	**100.0%**



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Ukiah Trails Biological National Watershed Inventory

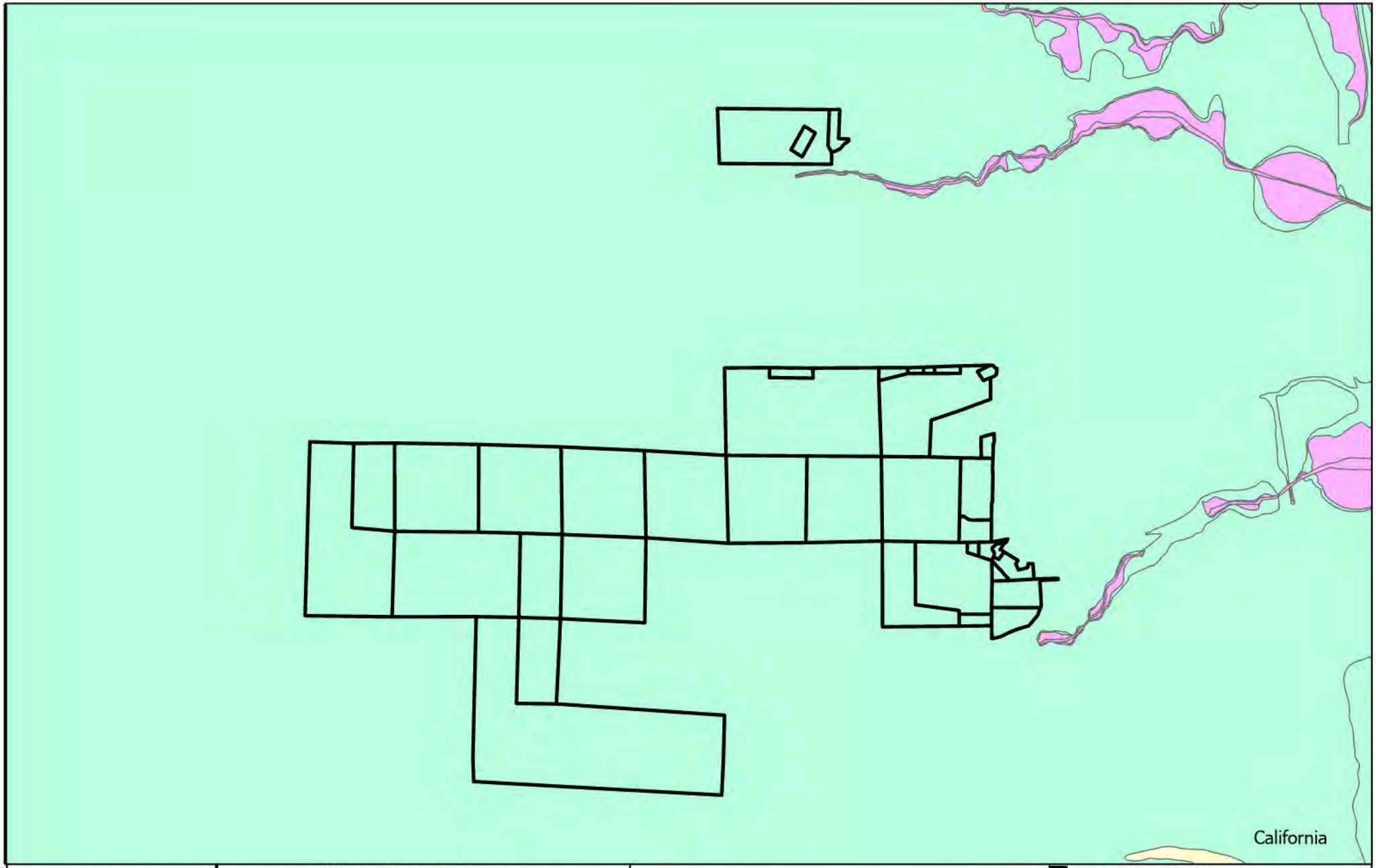
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

PLSS: Section 30, T15N, R12W, MDBM
Elledge Peak 7.5 minute quad

Drawn By: j.rivas on 8/13/2024

- Ukiah Valley Trails Parcels
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riverine



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Ukiah Trails Biological
National Floodplain Hazard Rating

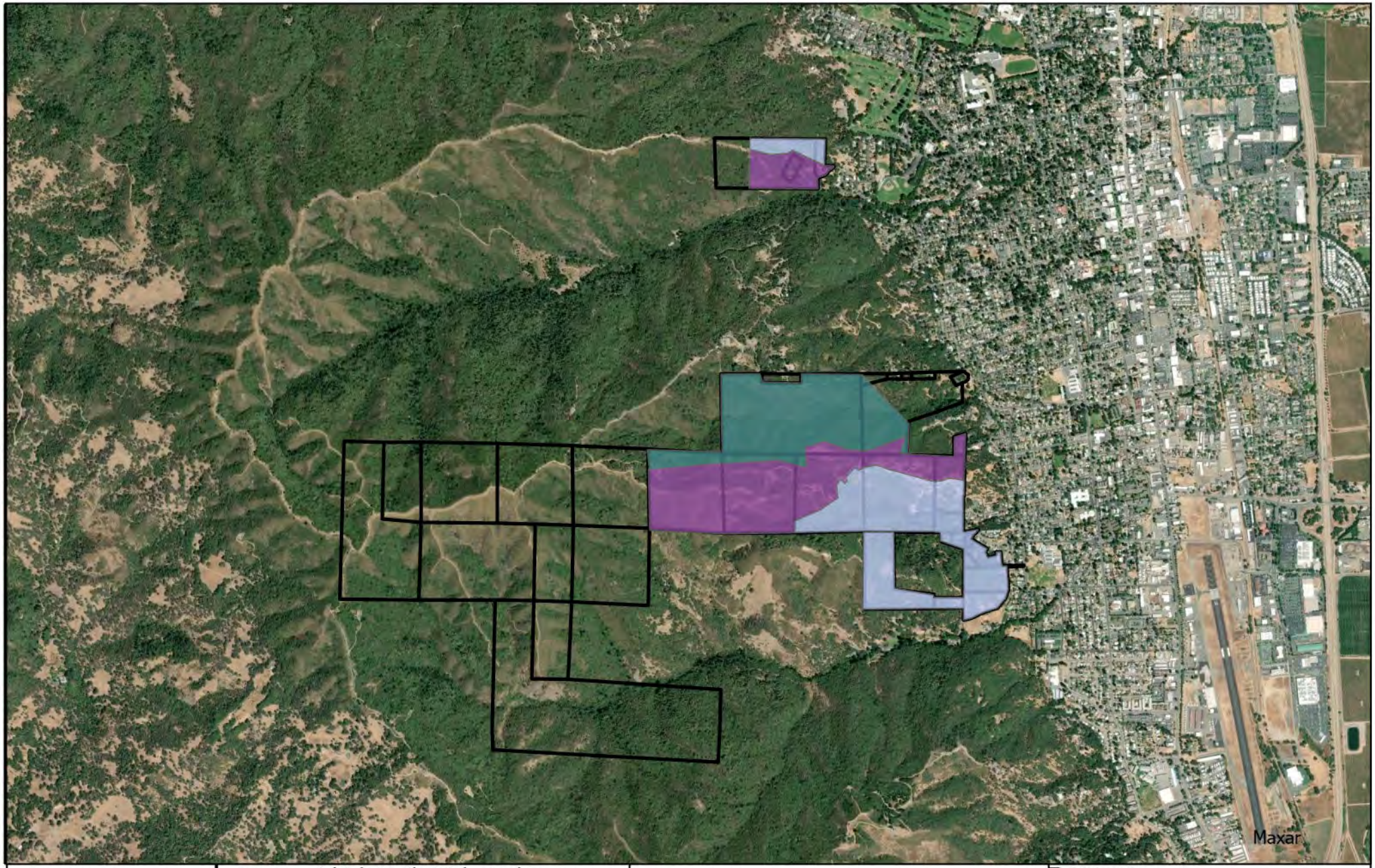
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

PLSS: Section 30, T15N, R12W, MDBM
Elledge Peak 7.5 minute quad

Drawn By: j.rivas on 8/13/2024

- Ukiah Valley Trails Parcels
- High
- Base Flood
- Moderate



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Ukiah Trails Biological MCV2 Map

Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

PLSS: Section 30, T15N, R12W, MDBM
Elledge Peak 7.5 minute quad

Drawn By: j.rivas on 8/13/2024

- Ukiah Valley Trails Parcels
- Quercus wislizeni-Quercus chrysolepis (shrub) Shrubland Alliance
- Arctostaphylos Shrubland Alliance
- Pinus sabiniana Woodland Alliance

Appendix E: Supporting Documents

United States Department of the Interior

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

In Reply Refer To: 06/12/2024 17:30:37 UTC
Project Code: 2024-0103128
Project Name: Ukiah Valley Trails- Doolin Ridge Trails

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

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

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

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

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

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

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

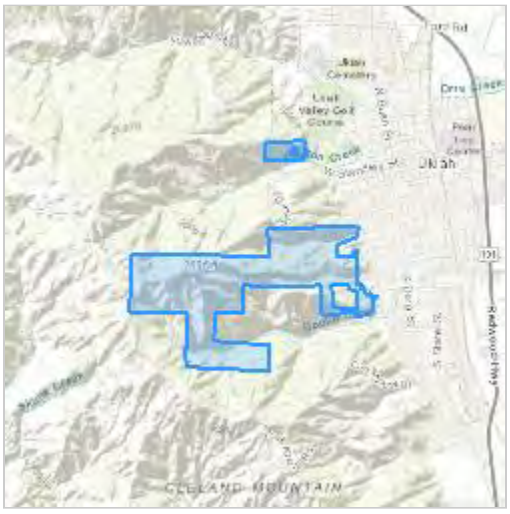
This species list is provided by:

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

PROJECT SUMMARY

Project Code: 2024-0103128
Project Name: Ukiah Valley Trails- Doolin Ridge Trails
Project Type: Clearing Forest
Project Description: Creating trails for recreational purposes
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.132544949999996,-123.24574172896402,14z



Counties: Mendocino County, California

ENDANGERED SPECIES ACT SPECIES

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

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

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

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

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

BIRDS

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

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

FISHES

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

INSECTS

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

FLOWERING PLANTS

NAME	STATUS
Burke's Goldfields *Lasthenia burkei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Contra Costa Goldfields *Lasthenia conjugens* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7058	Endangered

NAME	STATUS
Lassics Lupine *Lupinus constancei* Population: There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7976	Endangered
Showy Indian Clover *Trifolium amoenum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6459	Endangered

CRITICAL HABITATS

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

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

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE

SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

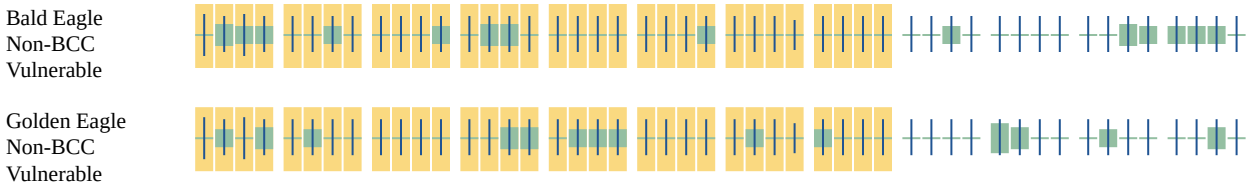
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort – no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9458	Breeds Mar 21 to Jul 25
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955	Breeds Mar 1 to Jul 31
California Thrasher *Toxostoma redivivum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9436	Breeds Jan 1 to Jul 31
Cassin's Finch *Haemorhous cassinii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10575	Breeds Jun 1 to Aug 31
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch *Spinus lawrencei* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20

NAME	BREEDING SEASON
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Northern Harrier *Circus hudsonius* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Nuttall's Woodpecker *Dryobates nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Santa Barbara Song Sparrow *Melospiza melodia graminea* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5
Tricolored Blackbird *Agelaius tricolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Western Gull *Larus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11969	Breeds Apr 21 to Aug 25
Western Screech-owl *Megascops kennicottii cardonensis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11923	Breeds Mar 1 to Jun 30

NAME	BREEDING SEASON
Wrentit *Chamaea fasciata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10668	Breeds Mar 15 to Aug 10

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

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Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
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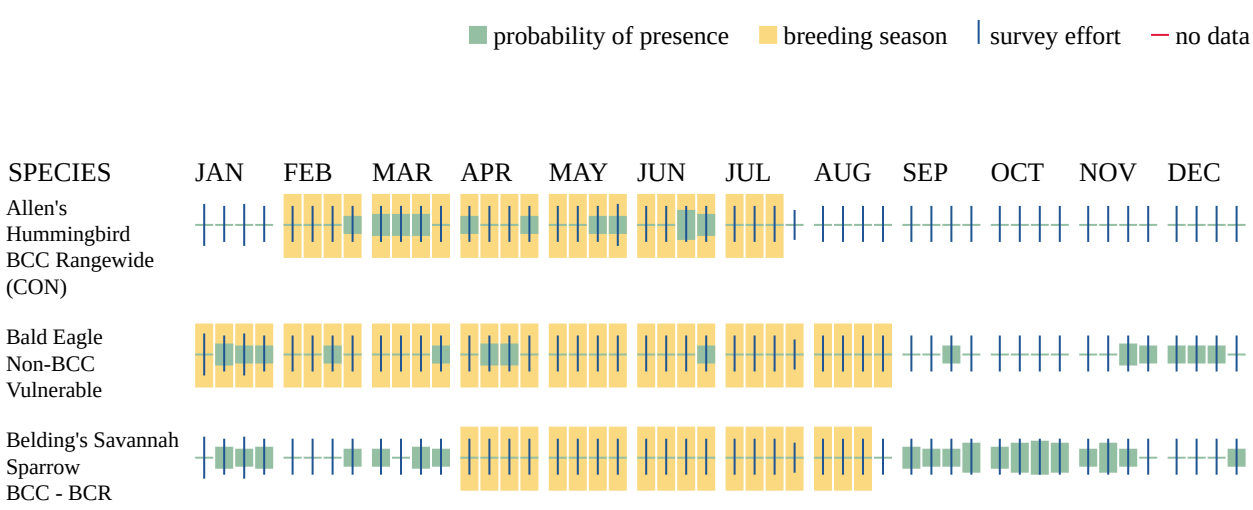
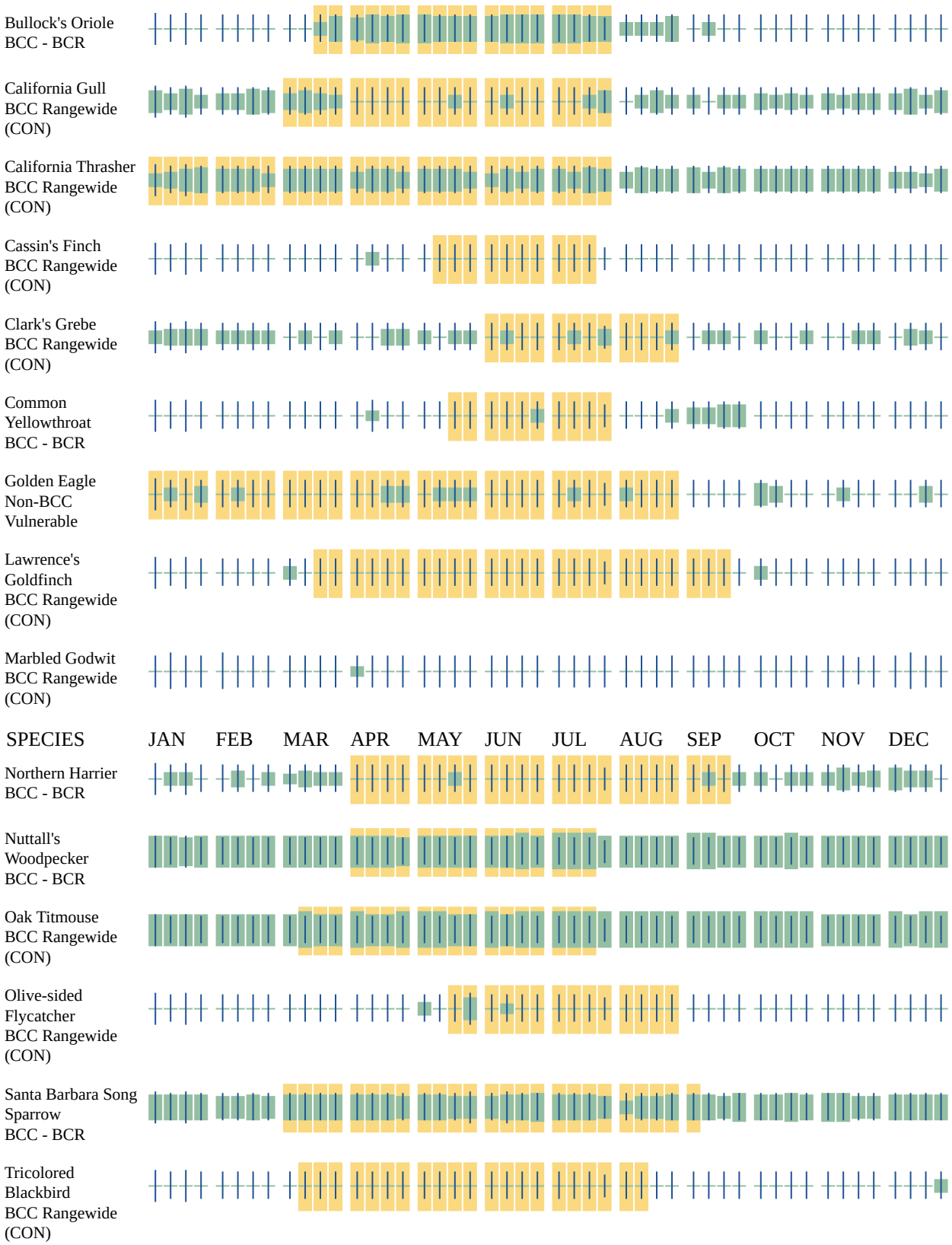
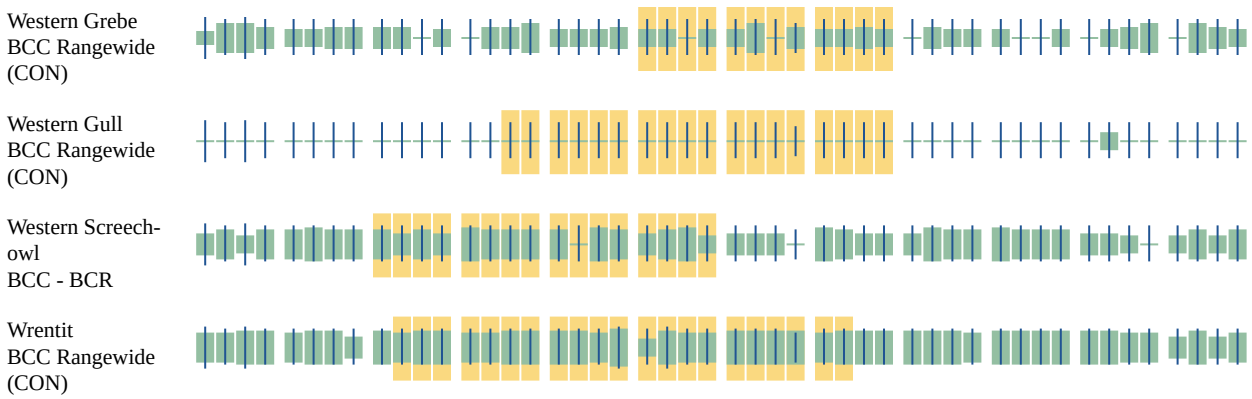



Bullock's Oriole
BCC - BCR
California Gull
BCC Rangewide
(CON)
California Thrasher
BCC Rangewide
(CON)
Cassin's Finch
BCC Rangewide
(CON)
Clark's Grebe
BCC Rangewide
(CON)
Common
Yellowthroat
BCC - BCR
Golden Eagle
Non-BCC
Vulnerable
Lawrence's
Goldfinch
BCC Rangewide
(CON)
Marbled Godwit
BCC Rangewide
(CON)
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Northern Harrier
BCC - BCR
Nuttall's
Woodpecker
BCC - BCR
Oak Titmouse
BCC Rangewide
(CON)
Olive-sided
Flycatcher
BCC Rangewide
(CON)
Santa Barbara Song
Sparrow
BCC - BCR
Tricolored
Blackbird
BCC Rangewide
(CON)



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- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
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WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R4SBA
- R4SBC
- R4SBAx

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Jessenya Rivas
Address: 117 Clara Ave
City: Ukiah
State: CA
Zip: 95482
Email j.rivas@jaforestry.com
Phone: 7074855544

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Quad IS (Potter Valley (3912331) OR Cow Mountain (3912321) OR Purdys Gardens (3912311) OR Orrs Springs (3912323) OR Ukiah (3912322) OR Redwood Valley (3912332) OR Laughlin Range (3912333) OR Boonville (3912313) OR Elledge Peak (3912312))

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Accipiter atricapillus	American goshawk	Birds	ABNKC12061	433	1	None	None	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	960	5	None	Threatened	G1G2	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland
Ammodramus savannarum	grasshopper sparrow	Birds	ABPBXA0020	27	1	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Valley & foothill grassland
Antrozous pallidus	pallid bat	Mammals	AMACC10010	420	1	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Chaparral, Coastal scrub, Desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Riparian woodland, Sonoran desert scrub, Upper montane coniferous forest, Valley & foothill grassland
Arborimus pomo	Sonoma tree vole	Mammals	AMAFF23030	222	3	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	North coast coniferous forest, Oldgrowth, Redwood
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Dicots	PDERI041G2	13	7	None	None	G3T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_USDA-US Dept of Agriculture	Chaparral, Lower montane coniferous forest, Ultramafic
Blennosperma bakeri	Sonoma sunshine	Dicots	PDAST1A010	24	1	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Valley & foothill grassland, Vernal pool, Wetland
Bombus caliginosus	obscure bumble bee	Insects	IIHYM24380	181	2	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
Bombus occidentalis	western bumble bee	Insects	IIHYM24252	306	1	None	Candidate Endangered	G3	S1	null	IUCN_VU-Vulnerable, USFS_S-Sensitive	null
Brasenia schreberi	watershield	Dicots	PDCAB01010	43	1	None	None	G5	S3	2B.3	IUCN_LC-Least Concern	Marsh & swamp, Wetland
Carex comosa	bristly sedge	Monocots	PMCYP032Y0	31	1	None	None	G5	S2	2B.1	IUCN_LC-Least Concern	Coastal prairie, Freshwater marsh, Marsh & swamp, Valley & foothill

												grassland, Wetland
Ceanothus confusus	Rincon Ridge ceanothus	Dicots	PDRHA04220	33	1	None	None	G1	S1	1B.1	BLM_S-Sensitive, SB_SBBG-Santa Barbara Botanic Garden	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Ultramafic
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	635	2	None	None	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Broadleaved upland forest, Chaparral, Chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, Lower montane coniferous forest, Meadow & seep, Mojavean desert scrub, Riparian forest, Riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, Upper montane coniferous forest, Valley & foothill grassland
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1559	10	Proposed Threatened	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Entosthodon kochii	Koch's cord moss	Bryophytes	NBMUS2P050	6	1	None	None	G1	S1	1B.3	BLM_S-Sensitive	Cismontane woodland
Erethizon dorsatum	North American porcupine	Mammals	AMAFJ01010	523	4	None	None	G5	S3	null	IUCN_LC-Least Concern	Broadleaved upland forest, Cismontane woodland, Closed-cone coniferous forest, Lower montane coniferous forest, North coast coniferous forest, Upper montane coniferous forest
Fritillaria roderickii	Roderick's fritillary	Monocots	PMLIL0V0M0	8	1	None	Endangered	G1Q	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub, Coastal prairie, Valley & foothill grassland
Gonidea angulata	western ridged mussel	Mollusks	IMBIV19010	158	1	None	None	G3	S2	null	IUCN_VU-Vulnerable	Aquatic
Gratiola heterosepala	Boggs Lake hedge-hyssop	Dicots	PDSCR0R060	99	2	None	Endangered	G2	S2	1B.2	BLM_S-Sensitive	Freshwater marsh, Marsh & swamp, Vernal pool, Wetland
Grimmia torenii	Toren's grimmia	Bryophytes	NBMUS32330	13	2	None	None	G2	S2	1B.3	BLM_S-Sensitive	Chaparral, Cismontane woodland, Limestone, Lower montane coniferous forest

Hesperolinon adenophyllum	glandular western flax	Dicots	PDLIN01010	48	4	None	None	G2G3	S2S3	1B.2	BLM_S-Sensitive	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Horkelia bolanderi	Bolander's horkelia	Dicots	PDROS0W011	13	1	None	None	G1	S1	1B.2	BLM_S-Sensitive	Cismontane woodland, Lower montane coniferous forest, Meadow & seep, Valley & foothill grassland
Hysterocarpus traskii lagunae	Clear Lake tule perch	Fish	AFCQK02013	3	2	None	None	G5T3	S3	null	CDFW_SSC-Species of Special Concern	Aquatic
Kopsiopsis hookeri	small groundcone	Dicots	PDORO01010	21	1	None	None	G4?	S1S2	2B.3	null	North coast coniferous forest
Lasthenia burkei	Burke's goldfields	Dicots	PDAST5L010	36	1	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Meadow & seep, Vernal pool, Wetland
Layia septentrionalis	Colusa layia	Dicots	PDAST5N0F0	69	4	None	None	G2	S2	1B.2	BLM_S-Sensitive, SB_UCBG-UC Botanical Garden at Berkeley	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Limnanthes bakeri	Baker's meadowfoam	Dicots	PDLIM02020	21	1	None	Rare	G1	S1	1B.1	SB_UCBG-UC Botanical Garden at Berkeley, SB_USDA-US Dept of Agriculture	Freshwater marsh, Marsh & swamp, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Malacothamnus mendocinensis	Mendocino bushmallow	Dicots	PDMAL0Q0D0	2	2	None	None	G1Q	S1	1B.1	null	Chaparral, Cismontane woodland
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Dicots	PDPLM0C0E1	64	3	None	None	G4T2	S2	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Cismontane woodland, Lower montane coniferous forest, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Northern Interior Cypress Forest	Northern Interior Cypress Forest	Forest	CTT83220CA	22	1	None	None	G2	S2.2	null	null	Closed-cone coniferous forest
Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	Fish	AFCHA0213P	10	1	Threatened	Endangered	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic, Estuary, Klamath/North coast flowing waters
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	Fish	AFCHA0213Q	96	5	Threatened	None	G5T3Q	S3	null	AFS_TH-Threatened, CDFW_SSC-Species of Special Concern	Aquatic, Estuary, Klamath/North coast flowing waters
Pandion haliaetus	osprey	Birds	ABNKC01010	504	2	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest
Pekania pennanti	Fisher	Mammals	AMAJF01020	555	2	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest
Piperia candida	white-flowered rein orchid	Monocots	PMORC1X050	222	2	None	None	G3?	S3	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Broadleaved upland forest, Lower montane coniferous forest, North coast coniferous

												forest, Ultramafic
Plagiobothrys lithocaryus	Mayacamas popcornflower	Dicots	PDBOR0V0P0	2	1	None	None	GX	SX	1A	null	Chaparral, Cismontane woodland, Valley & foothill grassland
Pleuropogon hooverianus	North Coast semaphore grass	Monocots	PMPOA4Y070	34	11	None	Threatened	G2	S2	1B.1	SB_BerrySB-Berry Seed Bank, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Broadleaved upland forest, Meadow & seep, North coast coniferous forest, Wetland
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	Amphibians	AAABH01051	1608	56	None	None	G3T4	S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters, Riparian forest, Riparian scrub, Riparian woodland
Serpentine Bunchgrass	Serpentine Bunchgrass	Herbaceous	CTT42130CA	22	1	None	None	G2	S2.2	null	null	Valley & foothill grassland
Silene bolanderi	Bolander's catchfly	Dicots	PDCAR0U2L0	30	6	None	None	G2	S2	1B.2	null	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest, Ultramafic
Streptanthus glandulosus ssp. hoffmanii	Hoffman's bristly jewelflower	Dicots	PDBRA2G0J4	16	1	None	None	G4T2	S2	1B.3	SB_UCSC-UC Santa Cruz	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Taricha rivularis	red-bellied newt	Amphibians	AAAAF02020	136	17	None	None	G2	S2	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Broadleaved upland forest, North coast coniferous forest, Redwood, Riparian forest, Riparian woodland
Tracyina rostrata	beaked tracyina	Dicots	PDAST9D010	15	3	None	None	G2	S2	1B.2	USFS_S-Sensitive	Chaparral, Cismontane woodland, Valley & foothill grassland
Trifolium buckwestiorum	Santa Cruz clover	Dicots	PDFAB402W0	64	1	None	None	G2	S2	1B.1	BLM_S-Sensitive, SB_SBBG-Santa Barbara Botanic Garden, SB_UCSC-UC Santa Cruz, SB_USDA-US Dept of Agriculture	Broadleaved upland forest, Cismontane woodland, Coastal prairie
Usnea longissima	Methuselah's beard lichen	Lichens	NLLEC5P420	206	1	None	None	G4	S4	4.2	BLM_S-Sensitive	Broadleaved upland forest, North coast coniferous forest, Oldgrowth, Redwood
Viburnum ellipticum	oval-leaved viburnum	Dicots	PDCPR07080	39	1	None	None	G4G5	S3	2B.3	null	Chaparral, Cismontane woodland, Lower montane coniferous forest

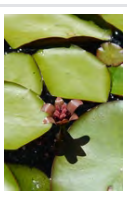
CALIFORNIA NATIVE PLANT SOCIETY

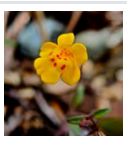
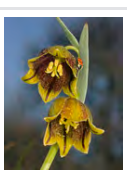
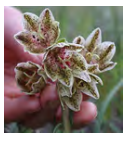
CNPS Rare Plant Inventory

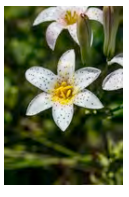
Search Results

43 matches found. Click on scientific name for details

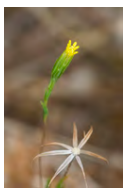
Search Criteria: 9-Quad include [**3912331:3912321:3912311:3912323:3912322:3912332:3912333:3912313:3912312**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Allium peninsulare var. *franciscanum*	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G4G5T2	S2	1B.2	Yes	2001-01-01	 © 2019 Aaron Arthur
Arctostaphylos stanfordiana ssp. *raichei*	Raiche's manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	None	None	G3T2	S2	1B.1	Yes	1988-01-01	No Photo Available
Astragalus breweri	Brewer's milk-vetch	Fabaceae	annual herb	Apr-Jun	None	None	G3	S3	4.2	Yes	1974-01-01	No Photo Available
Blennosperma bakeri	Sonoma sunshine	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	None	None	G5	S3	2B.3		2010-10-27	 ©2014 Kirsten Bovee
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	None	None	G5	S2	2B.1		1994-01-01	 Dean Wm. Taylor 1997
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Jun	None	None	G1	S1	1B.1	Yes	1980-01-01	 © 2012 Jake Ruygt
Cypripedium californicum	California lady's-slipper	Orchidaceae	perennial rhizomatous herb	Apr-Aug(Sep)	None	None	G3	S4	4.2		1980-01-01	 © 2012 Barry Rice

Cypripedium montanum	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	None	None	G4G5	S4	4.2		1980-01-01	 ©2021 Scot Loring
Entosthodon kochii	Koch's cord moss	Funariaceae	moss		None	None	G1	S1	1B.3	Yes	2001-01-01	No Photo Available
Erythranthe nudata	bare monkeyflower	Phrymaceae	annual herb	May-Jun	None	None	G4	S4	4.3	Yes	1974-01-01	 John Doyen 2015
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	Yes	1980-01-01	 © 2016 Aaron Schusteff
Fritillaria purdyi	Purdy's fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G4	S4	4.3		1974-01-01	 Aaron Schusteff, 2004
Fritillaria roderickii	Roderick's fritillary	Liliaceae	perennial bulbiferous herb	Mar-May	None	CE	G1Q	S1	1B.1	Yes	1974-01-01	No Photo Available
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2		1974-01-01	 ©2004 Carol W. Witham
Grimmia torenii	Toren's grimmia	Grimmiaceae	moss		None	None	G2	S2	1B.3	Yes	2014-05-14	 ©2021 Scot Loring
Hemizonia congesta ssp. *calyculata*	Mendocino tarplant	Asteraceae	annual herb	Jul-Nov	None	None	G5T4	S4	4.3	Yes	1974-01-01	 © 2015 John Doyen
Hemizonia congesta ssp. *tracyi*	Tracy's tarplant	Asteraceae	annual herb	(Mar-Apr)May-Oct	None	None	G5T4	S4	4.3	Yes	1974-01-01	 © 2016 Steve Matson

Hesperolinon adenophyllum	glandular western flax	Linaceae	annual herb	May-Aug	None	None	G2G3	S2S3	1B.2	Yes	1974-01-01	 © 2002 John Game
Horkelia bolanderi	Bolander's horkelia	Rosaceae	perennial herb	(May)Jun-Aug	None	None	G1	S1	1B.2	Yes	1988-01-01	 © 2012 Barry Rice
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	None	None	G4?	S1S2	2B.3		1994-01-01	 ©2016 Vernon Smith
Lasthenia burkei	Burke's goldfields	Asteraceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 © 2015 Neal Kramer
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.2	Yes	1994-01-01	 © 2013 Jake Ruygt
Leptosiphon aureus	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Yes	1994-01-01	 © 2007 Len Blumin
Leptosiphon latisectus	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3	Yes	2001-01-01	 © 2015 Steve Matson
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3	Yes	1994-01-01	 © 2015 Aaron Schusteff
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	(Mar)Apr-Aug(Sep)	None	None	G3	S3	4.2	Yes	1974-01-01	 Gerald and Buff Corsi © 2022 California Academy of Sciences

Limnanthes bakeri	Baker's meadowfoam	Limnanthaceae	annual herb	Apr-May	None	CR	G1	S1	1B.1	Yes	1974-01-01	 © 2019 Zoya Akulova
Malacothamnus mendocinensis	Mendocino bushmallow	Malvaceae	perennial deciduous shrub	Jun-Aug	None	None	G1Q	S1	1B.1	Yes	1974-01-01	 © 2021 Keir Morse
Monardella viridis	green monardella	Lamiaceae	perennial rhizomatous herb	Jun-Sep	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G4T2	S2	1B.1	Yes	1994-01-01	 © 2018 Barry Rice
Perideridia gairdneri ssp. *gairdneri*	Gairdner's yampah	Apiaceae	perennial herb	Jun-Oct	None	None	G5T3T4	S3S4	4.2	Yes	1974-01-01	 ©2007 Neal Kramer
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar-Apr)May-Sep	None	None	G3?	S3	1B.2		1994-01-01	 ©2016 Barry Rice
Plagiobothrys lithocaryus	Mayacamas popcornflower	Boraginaceae	annual herb	Apr-May	None	None	GX	SX	1A	Yes	1974-01-01	No Photo Available
Pleuropogon hooverianus	North Coast semaphore grass	Poaceae	perennial rhizomatous herb	Apr-Jun	None	CT	G2	S2	1B.1	Yes	1974-01-01	No Photo Available
Ramalina thrausta	angel's hair lichen	Ramalinaceae	fruticose lichen (epiphytic)		None	None	G5?	S2S3	2B.1		2014-03-01	 © 2013 Scot Loring
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2		1974-01-01	No Photo Available
Silene bolanderi	Bolander's catchfly	Caryophyllaceae	perennial herb	May-Jun	None	None	G2	S2	1B.2		2021-07-30	No Photo Available
Streptanthus glandulosus ssp. *hoffmanii*	Hoffman's bristly jewelflower	Brassicaceae	annual herb	Mar-Jul	None	None	G4T2	S2	1B.3	Yes	1980-01-01	No Photo Available

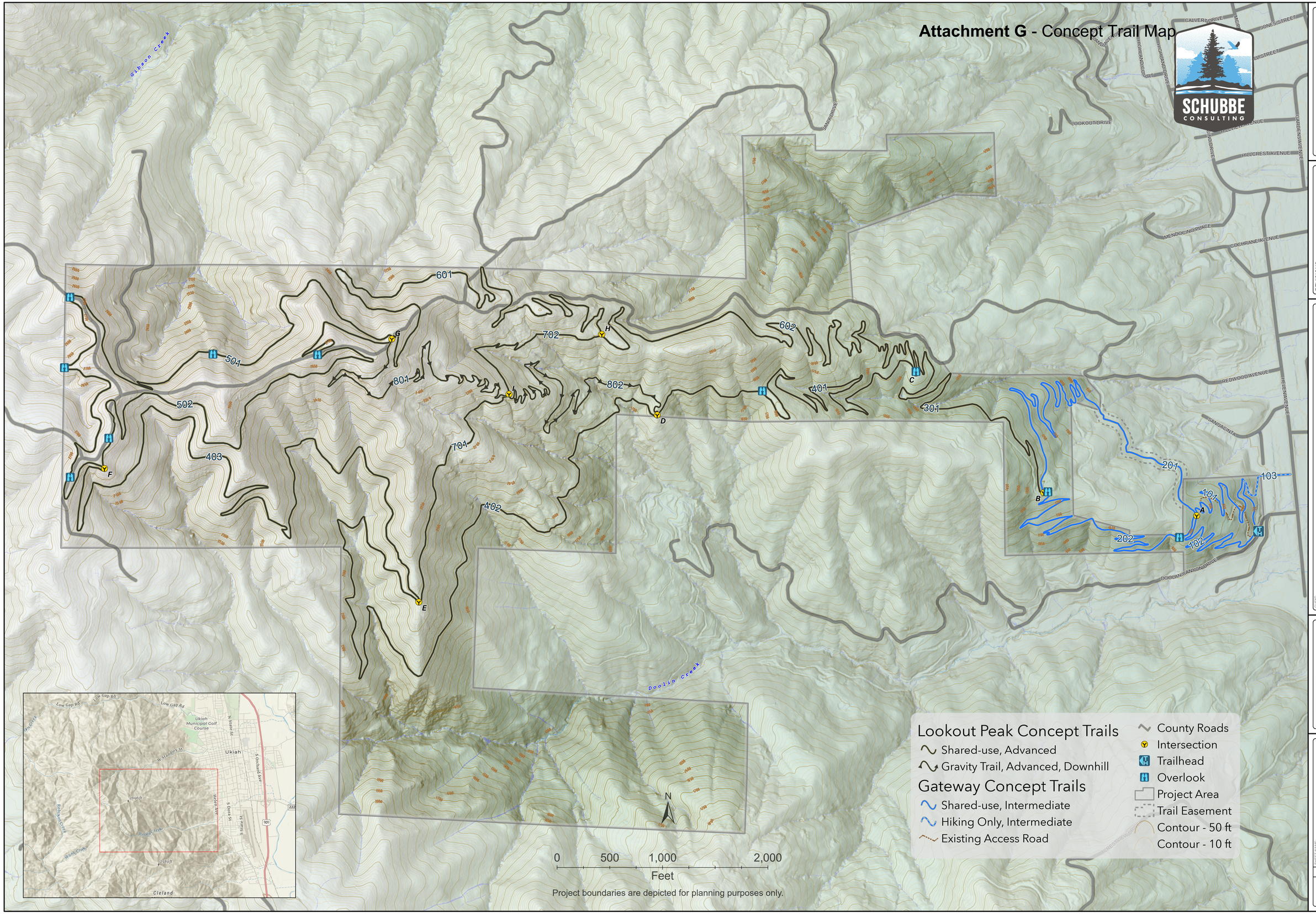
Tracyina rostrata	beaked tracyina	Asteraceae	annual herb	May-Jun	None	None	G2	S2	1B.2	Yes	1974-01-01	 ©2018 John Game
Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.1	Yes	1994-01-01	No Photo Available
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		None	None	G4	S4	4.2		2014-03-01	 © 2021 Scot Loring
Viburnum ellipticum	oval-leaved viburnum	Viburnaceae	perennial deciduous shrub	May-Jun	None	None	G4G5	S3	2B.3		1974-01-01	 © 2006 Tom Engstrom

Showing 1 to 43 of 43 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 12 June 2024].

Attachment G - Concept Trail Map



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REVISIONS:		
NO.	ISSUED FOR	DATE
1.	CONCEPT V1 - DRAFT	3/21/25
2.	CONCEPT V2 - DRAFT	5/30/25
3.	CONCEPT V2 - FINAL	7/02/25

CLIENT: CITY OF UKIAH, CA

PROJECT: **LOOKOUT PEAK SHARED-USE TRAILS - CONCEPT V2**

PROJECT NUMBER:	DATE
CONCEPT BY: JAS	7/2/2025

SHEET NAME: **CONCEPT TRAIL OVERVIEW**

SHEET NUMBER: **V2**